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## **Set in Stone? Change and Innovation in Consumer Standard Form Contracts\***

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This article studies the rate, direction, and determinants of change in consumer standard form contracting. We examine what changed between 2003 and 2010 in the terms of 264 mass-market consumer software license agreements. Thirty-nine percent of contracts materially changed at least one term, and some changed as many as fourteen terms. The average contract became more pro-seller as well as several hundred words longer. Younger, larger, growing firms, and firms with in-house counsel were more likely to change existing terms and to introduce new terms to take advantage of technological and market developments. While the average contract became more pro-seller, contracts with unusually pro-seller or pro-buyer terms in 2003 moved toward the 2010 average. Contracts appeared to respond to litigation outcomes: Terms that were increasingly enforced by courts were more frequently used in contracts, and vice-versa. The results indicate that software license agreements are relatively dynamic and shaped by multiple factors over time.

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## I. Introduction

Change is hard. Look at a handful of consumer standard form contracts and you are likely to see many similarities in their standard terms. Most consumer products are sold with limited warranties, disclaimers of implied warranties, limitations of damages, and dispute resolution clauses, among other terms. Standardization is pervasive because it confers network and learning benefits. Terms that become well known are easy to interpret by contracting parties and courts alike. Frequently-used terms are also likely to acquire a particular meaning, facilitating exchanges in negotiated transactions. However, standardization can also make change difficult and hamper incentives to innovate.

A rich literature identifies the ways in which standard form contracting hinders innovation. Weak property rights in contract terms and resistance to deviate from terms that have become customary in the community, among other factors, might create “stickiness” that could retard change and innovation in contracting.<sup>1</sup> The structure of law firms is also believed to contribute to this problem, as their hierarchical structure and hourly billing reduce incentives to innovate.<sup>2</sup> There is evidence of this in the corporate and sovereign bond covenant context, where several studies find that after a surprising and negative “interpretive shock” by courts, contracts were slow to adapt their language to the new interpretation, exposing contracting parties to risk during the interim.<sup>3</sup>

There is evidence that high volume players, such as investment banks and the issuers’ counsel, can overcome the obstacles and foster change in the aforementioned environments. In the consumer credit context, Oren Bar-Gill and Ryan Bubb found that after the CARD Act of 2009, credit card issuers altered only those terms in credit card agreements whose revision was mandated by the Act but failed to revise any other terms as an alternative mechanism to price risk.<sup>4</sup> Beyond these few settings, we know little about actual change in innovation in standard

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<sup>1</sup> See generally *infra* Part II.

<sup>2</sup> G. Mitu Gulati & Robert E. Scott, *The Three and a Half Minute Transaction: Boilerplate and the Limits of Contract Design*, (U. Chicago Press, 2012).

<sup>3</sup> See, e.g., Stephen Choi & Mitu Gulati, *Innovation in Boilerplate Contracts*, 53 EMORY L. J. 929 (2004); Marcel Kahan & Michael Klausner, *Standardization and Innovation in Corporate Contracting* (or “the Economics of Boilerplate”), 83 VA. L. REV. 713 (1997). See also *infra* Part II.

<sup>4</sup> The authors conjecture that this may be the result of credit card companies having market power, where issuers might prefer to keep low salient prices to maintain demand high. See *infra* Part II for a more detailed review of the theoretical and empirical literature on innovation.

terms, especially in non-negotiated agreements.<sup>5</sup> This form of fine print is the engine of the mass-market economy, yet we know very little about what drives it and what factors are associated with its evolution.

Understanding innovation in standard form contracts is an important task. To the extent terms are sticky, identifying sources of friction could help design institutional arrangements to better encourage the supply and revision of terms. This is particularly important in the consumer context, as contracts are offered on a take-it-or-leave basis and rarely read by consumers.<sup>6</sup> Stickiness might be even more pronounced in this area, as the sophisticated law firms that are typically involved in the sovereign debt contract drafting process rarely negotiate these terms. That said, there might be factors encouraging change in consumer agreements. For instance, the stickiness created by learning and network benefits may be attenuated in mass-market transactions because contracts are drafted by one party but rarely read by another (especially in the case of consumer goods and services). In-house counsel, who are likely to develop expertise in the market, technology, and case law of the company's goods and services, might be heavily involved in drafting and revising product agreements. More generally, the parties responsible for creating and revising fine print are different than those involved in the creation of standard, yet sophisticated agreements between parties represented by counsel. Kevin Davis explains that actors such as trade associations and for-profit producers of stock agreements might have sufficient incentives to create and innovate.<sup>7</sup> But the extent to which various market forces,

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<sup>5</sup> Frame & White review the existing empirical literature on financial innovation and find only 24 studies since the year 2000. Only a handful of these involve contract terms. See W. Scott Frame & Lawrence J. White, *Empirical Studies of Financial Innovation: Lots of Talk, Little Action?*, 42 J. ECON. LIT. 116 (2004). See Zev Eigen, *Empirical Studies of Contracts*, 8 ANN. REV. OF L. & SOC. SCI. \_\_\_ (2012) (discussing how we know very little about contract change and innovation).

<sup>6</sup> See, e.g., Yannis Bakos, Florencia Marotta-Wurgler & David R. Trossen, *Does Anyone Read the Fine Print? Testing a Law and Economics Approach to Standard Form Contracts* (NYU Law and Economics Research Paper No. 09-40 2009), available at <http://ideas.repec.org/p/net/wpaper/0904.html> (last visited April 9, 2012).

<sup>7</sup> Kevin Davis, *Contracts as Technology* (working draft). In addition, recent scholarship has identified innovation in the absence of strong property rights in open source software, the fashion industry, and food recipes. See, e.g., KAL RAUSTIALA & CHRIS SPRIGMAN, *THE KNOCKOFF ECONOMY* (forthcoming 2012) (presenting cases studies where innovation occurred without property rights, such as recipes, standup comedian jokes, magic tricks, etc.); Brett M. Frischmann, Michael J. Madison & Katherine Strandburg, *Constructing Commons in the Cultural Environment*, 95 CORNELL L. REV. 657 (2010); Scott Hemphill & Jeannie Suk, *The Law, Culture, and Economics of Fashion*, 61 STAN L. REV. 1147 (2009) (explaining innovation in the absence of property rights in the fashion industry); Dotan Oliar & Christopher Sprigman, *There's No Free Laugh (Anymore): The Emergence of Intellectual Property Norms and the Transformation of Stand-Up Comedy*, 94 VA. L. REV. 1787 (2008) (innovation and lack thereof in stand-up comedy); Yochai Benkler, *Coase's Penguin, or, Linux and The Nature of the Firm*, 112 YALE L.J. 369 (2002) (explaining how open source software was developed as a collaborative process without many property rights in innovations).

actors, and exogenous shocks contribute to the creation and development of real-world standard terms is ultimately an empirical question.

This article examines the change, innovation, and evolution of mass-market consumer standard form contracts between 2003 and 2010 in a 264-firm sample of software End User License Agreements (EULAs). We track changes to 32 common terms that assign rights and risks between buyers and sellers. We measure the relative buyer-friendliness of each term relative to the default rules of Article 2 of the Uniform Commercial Code (UCC) and examine how the pro-seller bias of EULAs changes over time. We measure changes in contract length and readability. We explore the firm, product, and market characteristics that are associated with contract changes. Finally, we record relevant court decisions around the sample period to evaluate whether the sample contracts are sensitive to changes in enforceability of terms.

There are a number of interesting results. Thirty-nine percent of the sample firms made material changes to their contracts during the seven-year period, despite the fact that the product being licensed was held as constant as possible. In our study, a material change occurs when a EULA changes at least one of the 32 terms that we track. The list of terms is fairly comprehensive, as explained in Section III. Contracts have also gotten considerably longer on average, but no easier to read; despite being ostensibly written for the consumer, the average license agreement remains, by standard textual analysis criteria, as hard to read as a scientific journal article.

Most of the terms that changed have become more pro-seller relative to the original contract. Firms' opting out of UCC Article 2 default rules in favor of relatively more pro-seller terms is behind many changes. Clauses that changed the most are forum selection and arbitration clauses, restrictions on reverse engineering, and restrictions on transfer. While most terms are likely to change away from the default rules, terms that are more pro-seller relative to the default rules are almost twice as likely to change than terms that benefit buyers relative to these same rules, all else equal. In addition, new and largely pro-seller terms have been introduced—even in the absence of strong property rights. In particular, seven terms that were virtually absent in 2003 emerged by 2010. These relate to remote disablement of software, firms' ability to collect users' information, and allowing third parties to access users' computers. Note that these terms allow sellers to increase control over users and are possible because of technological innovation. We find that younger, growing, and large firms, as well as firms with legal departments are more

likely to innovate. We test the hypothesis that these changes might have been shaped by increased legal certainty on the enforceability of such terms. We find that the terms that have become more enforceable during the sample period were more likely to be used in a pro-seller sense, consistent with this hypothesis.

The paper proceeds as follows. Part II summarizes the theoretical and empirical literature on innovation and stickiness of standard terms. Part III introduces the sample and explains our methodology. Parts IV and V present our main results. Part VI concludes and notes some implications of the results.

## **II. Innovation and Stickiness in Standard Forms: Theories and Prior Evidence**

Standardization is of course a defining characteristic of standard form contracts. The use of a “one-size fits all” agreement allows sellers to mass-market their products and services and to save on drafting costs. Law firms that draft boilerplate agreements also benefit from standardization because it allows them to spread the cost among many clients. Indeed, the use of similar terms confers various spillover effects, such as increased certainty of legal interpretation, which might reduce parties’ incentives to innovate or diverge from the norm. Below we review the literature that suggests why standard terms might be hard to change and why innovation may still be possible. We also summarize the modest body of empirical evidence on these questions.

### *Sources of Stickiness*

In theory, contracting parties should revise their agreements when doing so enhances the value of their transaction.<sup>8</sup> In the consumer context, mass-market sellers might revise terms that have proved unpopular with consumers to regain consumer interest.<sup>9</sup> In addition, parties might find it in their best interest to revise their terms to adapt to changes in product, market, or business structure or to take advantage of new technologies.

Several characteristics of boilerplate contracting present challenges to innovation, however. Marcel Kahan and Michael Klausner, among others, have noted that using the same terms create network and learning externalities that confer benefits to those parties using them

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<sup>8</sup>Lisa Bernstein, *Social Norms and Default Rules Analysis*, 3 S. CAL. INTERDISC. L. J. 59 (1993). Kahan & Klausner, *supra* note 3, 718; Omri Ben-Shahar & John A.E. Pottow, *On the Stickiness of Default Rules*, 33 FLA. ST. U. L. REV. 651, 655-660 (2006).

<sup>9</sup> Robert Taylor, *Consumer-Driven Changes to Online Form Contracts*, 67 N.Y.U. ANN. SUR. AM. L. 371 (2011).

but which might also hinder innovation.<sup>10</sup> Terms that become familiar in particular communities tend to acquire predictable meanings over time, making them easier to understand and to price by firms and individuals. Similarly, terms that have been widely used may have been given clear meanings by courts, reducing the legal risk associated with their use. For these reasons, contracting parties might be reluctant to revise familiar terms.

Similar externalities operate within law firms. Switching costs deter law firms that draft them from deviating from current terms.<sup>11</sup> Reluctance to change might result in parties selecting suboptimal terms.<sup>12</sup> Furthermore, absence of strong property rights in contractual innovation might further reduce incentives to innovate. Avery Katz posited that because innovations in standard terms are public goods, the absence of intellectual property rights diminishes the incentive to innovate.<sup>13</sup> Mitu Gulati and Robert Scott posit that law firm structure and existing agency costs within firms further dilute incentives to innovate.<sup>14</sup>

The sources of stickiness that are present in negotiated boilerplate agreements are likely to be attenuated in mass-market transactions because buyers are unlikely to read. To the extent that individual firms copy one another's terms, however, standardization retains its benefits. The same is the case of court interpretation of terms. Another difference is that the parties responsible for creating and revising fine print are different and operate under different institutional arrangements than those involved in the creation of agreements such as bond

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<sup>10</sup> Kevin Davis, *The Role of Non-profits in the Production of Boilerplate*, 104 MICH. L. REV. 1075 (2006); Choi & Gulati, *supra* note 3, 930–1006 (2004); Kahan & Klausner, *supra* note 3; Michael Klausner, *Corporations, Corporate Law, and Networks of Contracts*, 81 VA. L. REV. 757 (1995); Jason Scott Johnston, *Strategic Bargaining and the Economic Theory of Contract Default Rules*, 100 YALE L. J. 615 (1990); Avery Katz, *Standard Form Contracts*; Charles J. Goetz & Robert E. Scott, *The Limits of Expanded Choice: An Analysis of the Interactions Between Express and Implied Contract Terms*, 73 CAL. L. REV. 261, 289–305 (1985); Hank Greely, *Contracts as Commodities: The Influence of Secondary Purchasers on the Form of Contracts*, 42 VAND. L. REV. 133 (1989); Clayton Gillette, *Lock-In Effects in Law and Norms*, 78 BOSTON U. L. REV. 813 (1998).

<sup>11</sup> Claire A. Hill, *Why Contracts are Written in "Legalese"*, 77 CHI. KENT L. REV. 59, 60, 80–81 (2001); Kahan & Klausner, *supra* note 3, at 721–29; Goetz & Scott, *supra* note 10, at 278.

<sup>12</sup> Others have identified additional sources of stickiness. *See, e.g.*, Ben-Shahar & Pottow, *supra* note 8 (arguing that deviations from known terms might raise suspicions and scare away potential counter parties); Russell Korobkin, *The Status Quo Bias and Contract Default Rules*, 83 CORNELL L. REV. 608 (1998) (identifying various behavioral biases that might deter parties to move away from default rules or established terms); Lisa Bernstein, *Social Norms and Default Rules Analysis*, 3 S. CAL. INTERDISC. L.J. 59 (1993) (explaining how social norms and negotiation strategy might lead parties to stick to default rules); Jason Scott Johnston, *Strategic Bargaining and the Economic Theory of Contract Default Rules*, 100 YALE L.J. 615 (1990).

<sup>13</sup> AVERY KATZ, *STANDARD FORM CONTRACTS*, NEW PALGRAVE DICTIONARY OF ECONOMICS AND THE LAW (Peter Newman, ed. 1998). *See* Gulati & Scott, *supra* note 2; Goetz & Scott, *supra* note 10 at 286. *But see* note 7.

<sup>14</sup> Gulati & Scott, *supra* note 2, at 10. *See also* Claire Hill, *supra* note 10 (arguing that junior associates might be reluctant to change terms for fear of making mistakes).



covenants. Kevin Davis proposes that a variety of actors such as trade associations and for-profit producers of stock agreements may have sufficient incentives to innovate.

### *The Language of Standard Form Contracting Over Time*

Standardization might cause other problems, such as increased contract complexity. The modularity of boilerplate makes it particularly susceptible to overlaying of legal jargon. In addition, multiple iterations of contracts obscure and complicate language, making them harder to understand for contracting parties and courts alike. She explains that this is likely because the typical practice is not to draft contracts from scratch, but to revise existing forms.<sup>15</sup>

### *Overcoming Obstacles to Change and Innovation*

Various actors can aid in the creation and evolution of new terms in spite of these hurdles. Kevin Davis explained how trade associations supply and revise default rules to members of their industries.<sup>16</sup> Others have noted that states aid in this endeavor by supplying off-the-rack or default rules, such as those in the UCC, that facilitate use and coordination among contracting parties.<sup>17</sup> Parties who enjoy these benefits might be reluctant to opt-out of known terms, hampering contractual innovation.<sup>18</sup>

Private actors, including legal advisors, can also play a role. Marcel Kahan and Michael Klausner have argued that large repeat players, such as law firms and investment banks, might find it profitable to invest in innovation even in the absence of strong property rights by spreading their cost among many clients. In the mass-market product context, however, in-house counsel might be particularly well-suited to revise terms in consumer boilerplate.<sup>19</sup> Law firms

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<sup>15</sup> See Hill, *supra* note 11.

<sup>16</sup> Davis, *supra* note 10; Goetz & Scott, *supra* note 10, at 303; Gillette, *supra* note 10.

<sup>17</sup> This has been generally done through the creation of default rules, such as Article 2 of the Uniform Commercial Code. See Ben-Shahar & Pottow, *supra* note 8; Davis, *supra* note 10; Choi & Gulati, *supra* note 3; Goetz & Scott, *supra* note 10; Avery Katz, *supra* note 13. Charles Goetz and Robert Scott argue that state-supplied default terms might crowd out private investment on innovation. They write that “[t]he enhanced status of state supplied terms has the perverse effect of reducing contractors’ incentives to innovate. Over time, the state-supplied preformulations will themselves fail to evolve because the flow of innovative formulations, express and implied, will dwindle.” Goetz & Scott, *supra* note 10, at 264–89.

<sup>18</sup> Klausner, *supra* note 10; Gillette *supra* note 10; Davis, *supra* note 10; Gulati, *supra* note [CITE]

<sup>19</sup> Stewart Macaulay observed in 1966 that the fine print of large corporations was drafted by in-house counsel and that the ones of small firms would obtain theirs from trade associations or by copying those from other firms. Stuart Macaulay, *Private Legislation and the Duty to Read -- Business by IBM Machine, the Law of Contracts and Credit Cards*, 19 VAND. L. REV. 1051 (1966).

tend to become involved on unique occasions, such as debt restructuring, tender offers, or mergers. In-house counsel may be more likely to develop expertise in the laws and case law pertinent to their particular market and might thus be better able to revise agreements to reflect changes in the law. In-house counsel also work closely with management and might be able to revise agreements in response to technological and market changes in their industry and might also be better informed about changing consumer preferences. Moreover, any agency costs might operate in a different manner for in-house counsel. While the structure of law firms might cloud lawyers' incentives to revise agreements, in-house lawyers might be induced to revise their agreements *too much* as a way of securing their employment.

Recent years have seen an increase in *user-generated* innovation resulting from collaborative processes.<sup>20</sup> Open software is a notable example of how innovation can be generated despite the absence of property rights. Here, users innovate for their own use rather than for financial gain or protection.<sup>21</sup> George Triantis has argued that the inherent modularity of standard terms makes creation and innovation in this sphere a good fit for collaborative contract design, much in the spirit of open-source software.<sup>22</sup> Moreover, individual lawyers can revise and customize commercial boilerplate to satisfy specific needs. In the mass-market market context, they can also adopt and revise the agreements of other firms, as these are easily available. Given these differences, innovation and change might work differently in our setting.

Finally, some authors have suggested that actors with market power can drive innovation that protects them because their profits are insulated from competitive pressures.<sup>23</sup> Alternatively, it may be that the small firms in competitive markets are especially likely to invest in innovation because it may increase their chances of survival.<sup>24</sup>

Regardless of who the innovators are, many scholars have pointed out that innovation can be spurred by “shocks,” such as changes in legal interpretation of terms, laws, or markets and

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<sup>20</sup> See YOCHAI BENKLER, *THE WEALTH OF NETWORKS: HOW SOCIAL PRODUCTION TRANSFORMS MARKETS AND FREEDOM* 1–2 (2006). See also Katherine Strandburg, *Evolving Paradigms and the Global Intellectual Property Regime*, 41 CONN. L. REV. 861 (2009) (survey of the literature (arguing for the need for broader-based innovation policy regimes to accommodate new modes of innovation).

<sup>21</sup> Strandburg, *supra* note 20, at 875.

<sup>22</sup> George Triantis, *Contract Innovation and Collaborative Contract Design* (RIETI talk, Oct. 23, 2008); Benkler, *supra* note 20.

<sup>23</sup> Frame & White, *supra* note 5, at 125.

<sup>24</sup> Josh Lerner, *The New Financial Thing: The Origin of Financial Innovation*, 79 J. FIN. ECON. 223 (2006).

technology.<sup>25</sup> The next subsection reviews existing empirical work on how contracts adapt to such shocks. Even absent exogenous change, parties might consider revising terms if their original contracts include sub-optimal state-supplied default rules that later become entrenched once they become customary.<sup>26</sup>

### *Prior Evidence*

Most of the empirical evidence on contract change and innovation comes from studies of bond covenants and financial products. Marcel Kahan and Michael Klausner found evidence of switching and learning costs in a study of the emergence and adoption of event risk covenants, terms designed to protect bondholders in event of a leveraged acquisition.<sup>27</sup> Stephen Choi and Mitu Gulati found that terms were slow to change after courts interpreted a term in a new and unfavorable way. When change occurred, high-volume issuers' counsel spurred it.<sup>28</sup>

Doron Teichman found that contracting parties in the Israeli real estate market were reluctant to deviate from a dollarization norm despite significant changes in the structure of the Israeli currency market that severed the connection between dollar and local inflation.<sup>29</sup> In the consumer credit context, Oren Bar-Gill and Ryan Bubb found that after the CARD Act of 2009, credit card issuers revised only those terms that were mandated by the Act but not other terms, evidence of stickiness in this particular market.<sup>30</sup> Robert Taylor found that only large firms revise their terms after receiving negative feedback, such as bad media coverage, about a particular term.<sup>31</sup>

Mitu Gulati and Robert Scott found that lawyers in law firms failed to revise terms even after acquiring ambiguous meaning that increases litigation risk. In the handful of cases where terms were indeed revised, this was often achieved by including additional terms and not by correcting the perceived errors in existing ones. The authors reason that financial pressures

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<sup>25</sup> Kahan & Klausner, *supra* note 3; Goetz & Scott, *supra* note 10; Gulati, *supra* note [CITE]; Choi & Gulati, *supra* note 3; Gulati & Scott, *supra* note 2 (reviewing literature). *See also* Stephen Choi, Mitu Gulati & Eric Posner, *Pricing Terms in Sovereign Debt Contracts: A Greek Case Study with Implications for the European Crisis Resolution Mechanism*, (U. Chicago L. & Econ. Working Paper 2011), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1713914](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1713914) (how sovereign bond terms change in reactions to changes in the political risk of sovereigns).

<sup>26</sup> Goetz & Scott, *supra* note 10.

<sup>27</sup> Kahan & Klausner, *supra* note 3.

<sup>28</sup> Choi & Gulati, *supra* note 3.

<sup>29</sup> Doron Teichman, *Old Habits are Hard to Change*, 44 L. & SOC'Y REV. 299 (2010).

<sup>30</sup> Oren Bar-Gill & Ryan Bubb, *Credit Card Pricing: The CARD Act and Beyond*, 97 CORNELL L. REV. \_\_ (2012)

<sup>31</sup> Robert Taylor, *Consumer-Driven Changes to Online Form Contracts*, 67 N.Y.U. ANN. SUR. AM. L. 371 (2011).

“contribute[s] to an array of conflicts that are largely hidden from the individual lawyers charged with drafting responsibility.”<sup>32</sup>

Mitu Gulati and Robert Scott explore this further by looking at law firm structure and argue that their hierarchical structure and existing agency costs within firms further dilute incentives to innovate. Instead of revising agreements when appropriate, the authors find that individual lawyers follow the herd and use terms that are familiar, and that lawyers in law firms believe that clients reward them for getting deals done rather than innovating.<sup>33</sup>

In summary, relative to the extraordinary importance of standard form contracts in modern commerce, there has been surprisingly little study of the evolution of contract terms and complexity over time—especially outside the sovereign debt and financial product contexts.<sup>34</sup> To the best of our knowledge, this is the first study that explores systematic change in non-negotiated mass market agreements. The following sections present an empirical study of change and innovation in mass-market software End User License Agreements. Software represents a continuously growing and evolving product market where numerous aspects of contracts may be more fluid than in long-established financial settings. We document the extent to which contracts and individual terms change over time, and we relate them to firm, product, and market characteristics, as well as to changes in the legal environment. Some of the results are consistent with prior studies, while others are new and suggest new directions for both research and policy.

### **III. Sample of Software License Agreements: 2003 and 2010**

The standard form contracts we analyze are software End User License Agreements (EULAs). We focus on the EULAs found with typical “prepackaged” (i.e., non-customized) software products and compare their content in 2003 and 2010. These contracts present a rich set of standard terms that have been the subject of recent regulatory efforts including the Uniform Computer Information Transactions Act (UCITA) and the American Law Institute’s *Principles of the Law of Software Contracts*.<sup>35</sup>

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<sup>32</sup> *Id.* at \_\_\_\_.

<sup>33</sup> Gulati & Scott, *supra* note 2, at 10. *See also* Claire Hill, *supra* note 10 (arguing that junior associates might be reluctant to change terms for fear of making mistakes).

<sup>34</sup> *See, e.g.*, Eigen, *supra* note 5 (reviewing the empirical contract literature since and noting that insufficient attention has been given to the question of how terms change over time).

<sup>35</sup> AM. LAW INST., *PRINCIPLES OF THE LAW OF SOFTWARE CONTRACTS* (2010).

The EULAs used in this study are a subsample of those in a previous study of contracts as of 2003.<sup>36</sup> That study examined 647 EULAs from 598 companies that sell their software on their corporate Internet site. These included well-known software publishers as well as smaller companies. For each of the companies, the EULA of a representative product was collected, as was data on various market, product, and company characteristics.

We repeated the data collection effort in 2010. Of the original 598 companies, 22 went out of business during the sample period and 45 were acquired. These dropped out of the sample. Firms that remained in business but changed their line of business or discontinued the product associated with the 2003 EULA were also dropped. This further reduced the sample by 68 firms. We made an exception for firms that discontinued the sample product but always used the same EULA for all products, some of which were still being offered in 2010.<sup>37</sup> While we easily collected the EULAs that were posted on the web site of the sample companies, it took more effort to obtain those that were available only after purchase (“pay now, terms later” contracts). For a handful of companies, we were unable to obtain their EULAs, and for others we were unable to collect detailed company, product, and market characteristics. This led to a final sample of 264 firms with comparable data from both 2003 and 2010.

For each EULA in each cohort, we tabulate the presence of various standard terms noting the extent to which the terms are biased, relative to the appropriate default rules, in favor of the seller or the buyer. This methodology is discussed further below. To measure change over time, we perform this scoring for both the 2003 EULA and the 2010 EULA. We also note whether new terms have emerged. Finally, we also collect data on all cases involving software EULAs litigated before 2010 to examine litigation as a possible driver of change and innovation.

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<sup>36</sup> Florencia Marotta-Wurgler, *Are “Pay Now, Terms Later” Contracts Worse for Buyers? Evidence from Software License Agreements*, 38 J.L. STUD. 309 (2009); Florencia Marotta-Wurgler, *Competition and Quality of Standard Form Contracts: An Empirical Analysis of Software License Agreements*, 4 J. EMP. L. STUD. 667 (2008). As the current sample overlaps heavily with that used in the aforementioned papers, we refer the reader to those papers for further details on the data collection procedure.

<sup>37</sup> We understand that the firm we study might be biased because they are the ones that did not get acquired, did not go out of the business, or discontinued their signature products. We kept the data of the firms that went out of business and collected and grades the EULAs of the acquired firms. Almost all acquired firms adopted the EULA of the acquirer. We discuss this in more detail *infra*.

### *Summary Statistics*

Panel A of Table 1 summarizes company characteristics for the sample firms. Average revenue in 2003 was \$287.5 million but median revenue was only \$1.7 million, thus very large companies drive the mean. Average and median revenue in 2010 were \$539.1 million and \$2.2 million respectively. Note that this is a sample of surviving companies, so it is not entirely surprising that firms grew on average. The percentage of public companies grew moderately during the sample period, from 11% in 2003 to 14% in 2010. The average age of companies in 2010 (years since incorporation) was 20 years.

We gathered data on legal sophistication in 2010. Based in part on direct communication with the sample companies, we determined whether they have in-house counsel, at least one internal lawyer, or routinely hire outside counsel. We assumed that public companies received sophisticated legal advice. In total, 74% of firms for which we could gather these data received relatively intensive legal advice. This does not imply that other firms did not receive legal advice; many firms did not respond to our requests. Thirty percent of sample firms are headquartered in states generally identified as being relatively more pro-consumer, such as California, Illinois, Iowa, Massachusetts, and North Carolina.<sup>38</sup> Firms in more seller-friendly states (and with choice of law clauses of such states) might be more inclined to revise their terms in a self-serving manner due to a higher expectation of enforcement.

Panel B lists product and market characteristics in 2003 and 2010. The average price of the products in the sample was \$812 in 2003 and \$841 in 2010; the median prices somewhat lower. 36% of the products are oriented toward consumers, or small home businesses, rather than businesses. One percent of the products in the sample were discontinued but used the same EULA for all their products both in 2003 and 2010. The last row reports the Herfindahl-Hirschman index (HHI) at the market level for sample firms. The HHI is the sum of the squares of the individual market shares of the firms in a given market. Higher concentrations result in higher HHIs.<sup>39</sup> We classify firms into 114 distinct software markets, ranging from anti-virus to

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<sup>38</sup> For a description of the taxonomy, see Florencia Marotta-Wurgler, *'Unfair' Dispute Resolution Clauses: Much 'Ado About Nothing?* in *BOILERPLATE: FOUNDATIONS OF MARKET CONTRACTS* (Omri Ben-Shahar, ed. 2007).

<sup>39</sup> To put these figures in context, FTC merger guidelines suggest that an “unconcentrated” industry is one in which HHI is less than 0.1. Markets with an HHI between 0.1 and 0.18 are defined as “moderately concentrated,” while markets with an HHI above 0.18 are deemed “concentrated.” See U.S. DEPT. JUSTICE & FED. TRADE COMM’N, *HORIZONTAL MERGER GUIDELINES* (1997), available at <http://www.usdoj.gov/atr/public/guidelines/hmg.htm>.

word processing, as classified by Amazon.com, the largest Internet software retailer.<sup>40</sup> The average HHI is 0.37, indicating that software markets tend to be concentrated. The least concentrated software market is has an HHI of 0.064, indicating a high degree of competition.

Panel C reports contract characteristics. We first record whether at least one of the 32 terms we track was revised in any way during the sample period. Of the entire sample, 40% of contracts changed at least one substantive term. The result contrasts with a common belief that these contracts are mere boilerplate and rarely revised because they address generally low-probability events. Figure 1 shows how many terms changed. The left figure uses the entire sample and shows that 60%, or 159 out of 264, left their terms substantively unchanged. The right figure focuses on the 103 contracts that had at least one change. For 40% of these, change was limited to one or two terms, but a few firms changed more than ten terms. Recall that the sample excludes companies that were acquired, so that the changes do not reflect a change of contract but revisions of the 2003 terms.

Panel C also reports the length of EULAs in 2003 and 2010. The average EULA grew by 27%, from 1,517 words in 2003 to 1,938 in 2010. (421 words is roughly the length of an *NYU Law Review* page.) The Flesch-Kinkaid readability score, a common measure of the difficulty of comprehending text, was unchanged, averaging 33.3 in 2003 and 33.4 in 2010. Flesch-Kinkaid scores range from 0 to 100, with higher scores indicating easier texts. To put this in context, texts with scores of 60 to 70 can be understood with an 8th grade education, whereas texts with scores of 0 to 30 can be comprehended by individuals with college degrees. EULAs are comparable to articles in scientific journals, which typically have Flesch scores of around 30.<sup>41</sup> Contracts are getting longer, but remain difficult to read.

To further understand the nature of the changes in length and readability of EULAs that changed materially during the sample period, we explore change in length and readability in those EULAs that did not experience any material change. Flesch-Kinkaid scores remained at unchanged average of around 33 for all EULAs. The median word increase in contracts with no material changes was one word, whereas the median word change in the EULAs with material changes was 435 words. This is not to say that EULAs with no material changes were left

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<sup>40</sup> For a detailed account of these variables and the methodology used, see Florencia Marotta-Wurgler, *Competition and the Quality of Standard Form Contracts*, 5 J. EMP L. STUD. 447 (2008).

<sup>41</sup> See WILLIAM H. DUBAY, THE PRINCIPLES OF READABILITY, at \*26 (2004), available at <http://www.impact-information.com/impactinfo/readability02.pdf>.

untouched. Many were revised for spelling errors, rewordings, or minor re-formatting. The average change was 88 words. The difference in change of length between the two groups EULAs suggests that changes in 32 terms that we track might help explain a significant portion of changes in length of the contract.

### *Measuring Contract Bias, Change, and Innovation*

We now explore the nature of the changes in EULAs during the sample period. We used the methodology of Marotta-Wurgler (2007) to measure the relative buyer-friendliness of each contract.<sup>42</sup> We tracked a broad number of common EULA terms that allocate rights and risks between buyers and sellers against the relevant default rules, Article 2 of the UCC. These govern contracting parties' relationships when the licenses fail to specify a term that is relevant to the dispute.

The 23 terms followed in Marotta-Wurgler (2007)'s 2003 sample fall into seven relatively familiar categories: *acceptance of the license, scope, restrictions on transfer, warranties and disclaimers of warranties, limitations of liability, maintenance and support, and conflict resolution*. See Marotta-Wurgler (2007) for an extensive discussion of these categories and terms. While this list was fairly comprehensive as of 2003, we decided to follow an additional term to the category related to scope of license, which asks whether the software restricts the user's ability to reverse engineer the product. We also created a *consumer protection* category that includes a term measuring whether the EULA include a term informing consumers of any additional state or federal law right they may have.

We also tracked seven terms that were rare at the beginning of the sample period but became somewhat more common by 2010. We classify these terms as contractual innovations. They involve three new categories: *modification and termination of the license, information collection, and third party access to users' computers*. We went back to the 2003 contracts to look for these terms, so that both the 2003 and 2010 contracts were ultimately examined on a total of 32 terms.

We describe the terms in the three new categories. One of the terms in the *modification and termination* category is one that gives the drafter unilateral power to modify the agreement.

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<sup>42</sup> See Florencia Marotta-Wurgler, *What's in a Standard Form Contract?*, 4 J. EMP. L. STUD. 667 (2008) [hereinafter *What's in a Standard Form Contract?*].



Commonly referred to as “change of terms” clauses, these terms have become increasingly pervasive over the past decade, and mass-market software has been no exception.<sup>43</sup> The second term in this category involves termination of the contract and allows the licensor to disable the software remotely if the licensor believes the user breached the EULA. Remote disablement of software has been possible by technological development and changes in the way companies offer software to users, most notably the rise of electronic licensing, which have given companies more control over the use of their product.<sup>44</sup> The drafters of the *Software Principles* have also noted this trend and have recommended that courts void remote disablement terms in mass-market consumer agreements.<sup>45</sup>

The next category, *information collection*, includes two terms that allow companies to collect personally identifiable information from the user. Again, changes in technology have resulted in most software being delivered electronically, thus increasing opportunities for vendors to monitor users more closely.<sup>46</sup> The final category, *third parties*, includes three terms mandating that the user agree to the EULAs of third party software that might be integrated with the licensed product, disclaiming liability for losses caused by third party software, and allowing third party providers to install software on the users’ computers. During the last decade, some software products began integrating third party software to perform certain functions or increase functionality.<sup>47</sup> Note that with the exception of the “Change of Terms” clause, all other new terms reflect changes in the technology of delivering software to users.

Each contract was given a “Bias Index” score based on its overall buyer-friendliness across these 32 terms. Specifically, a term is given a score of 0 if it matches the default rules or is absent from the contract; a score of -1 if the term deviates from the default rule in a way that benefits sellers, all else equal; and a score of 1 if the term is more pro-buyer relative to the default rule. For example, a term disclaiming implied warranties would be scored -1 because, all else equal, a disclaimer of warranties is more pro-seller relative to the default rules, which

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<sup>43</sup> For a thorough analysis of this clause, its enforceability, and a review of the literature, see Oren Bar-Gill & Kevin Davis, *Empty Promises*, 84 S. CAL. L. REV. 1 (2010). See also Peter A. Alces & Michael M. Greenfield, *They Can Do What!? Limitations on the Use of Change-of-Terms Clauses*, 26 GA. ST. U. L. REV. 1099 (2010).

<sup>44</sup> See, e.g., THE SIIA GUIDE TO LICENSING SOFTWARE AS A SERVICE, available at <http://www.siaa.net/estore/pubs/GLS-01.pdf>.

<sup>45</sup> See Section 4.03, PRINCIPLES OF THE LAW OF SOFTWARE CONTRACTS, *supra* note 35, at 268.

<sup>46</sup> See, e.g., *supra* note 44.

<sup>47</sup> For a more detailed explanation of third party software bundling see [http://www.us-cert.gov/reading\\_room/EULA.pdf](http://www.us-cert.gov/reading_room/EULA.pdf).

include implied warranties of merchantability and fitness for particular purpose. The overall contract bias was obtained by summing the scores of the individual terms. While rough, this methodology allows us to measure the general tone of the contract relative to relevant default rules. We also relax the assumption that all terms matter equally to buyers by examining groups of related terms.

#### **IV. Results**

We now examine contract change. Table 2 presents the 32 terms of the EULA Bias Index as well as the scores in 2003 and 2010 for each of the eleven categories of related terms. The first three columns number, define, and explain the scoring system for each term. For example, the first term regards the *acceptance* of the license, which measures whether the contract notifies the consumer that the product can be returned if the user declines the terms. The possible scores for each term are explained in the next column.

The right columns report the mean and standard deviation for each term in 2010 and 2003. We also report the mean change, its standard error, and an indication of the statistical significance of the change. Going back to our example of “Acceptance” of license, Table 2 shows that in 2003, 47% of EULAs notified users that the license could be returned if the user disagreed with the terms. In 2010, the percentage of EULAs including that notification changed very little, to 46%, which was statistically insignificant. Most changes favor the seller. The end of Table 2 shows the net change. The mean bias of contracts in 2003 was -5.26, meaning that on average EULAs had a little more than five pro-seller terms than pro-buyer terms. The mean bias of terms in 2010 was -5.85, indicating that terms have become on average a little over half a term more pro-seller during the period from 2003 to 2010. Note also that standard deviation of the index, a measure of spread, has increased from 2003 to 2010, indicating that variation in contract bias has somewhat gotten larger over time. (However, as we document below, extremely biased contracts converge toward the norm somewhat upon controlling for the overall trend and other factors.)

As suggested by the direction of change overall, most individual terms have become more pro-seller over time relative to the default rules. The last column shows that 25 of the 32 terms became relatively more pro-seller. Of these, 19 changes are common enough to be statistically significant. The two categories where terms have changed the most relate to *scope of*

*the license and limitations on liability.* EULAs have increased restrictions in users' ability to modify the program, create derivative works, and reverse engineer the software. They also increasingly restrict the particular uses of the software. Another term that has become increasingly restrictive is users' ability to transfer the program. All these terms are substantive inasmuch as they limit the possible uses as well as the interoperability of the product.

It is noteworthy that the terms that have changed the most are those seeking to extend the rights awarded by federal intellectual property laws. In particular, they seek to override fair use exceptions, such as reverse engineering in particular instances. There has been heated debate among intellectual property scholars as to whether producers of information goods such as software should be entitled to circumvent these laws, such as through limiting users' ability to reverse engineer and to transfer the product, through standard form contracts.<sup>48</sup> This practice has increased over time, and later in the paper we explore whether this may be due to favorable court decisions that enforce these clauses.

New terms appeared by 2010, such as those relating to the ability of sellers to unilaterally change terms and allowing sellers to disable the software remotely in cases where the seller considers the user violated the agreement. The same is true for terms relating to sellers' ability to track users' activity and terms that mandate acceptance to the EULAs of third parties.

Of the six terms that become relatively more pro-buyer over time (one was unchanged), three are statistically significant. Two are not substantive but help users become better informed about the transaction. One term notifies users of any state and federal law rights they might have in addition to those awarded by the license; the other disclaims warranties conspicuously. The only substantive pro-buyer term is one that states that the user is entitled to regular updates of the software.

It is easier to see broader trends if we group terms by category. Table 2 reports summary statistics for each category and shows that seven out of the eleven categories became more pro-seller at a statistically significant level. Only one category, *consumer protection*, has become more pro-buyer to a statistically significant degree. The probability that a EULA informs consumers of their state and federal law rights rose by 5.7%. While the overall Bias Index is only a relative measure of contract bias (i.e., relative to the default rules) and cannot speak to the absolute buyer or seller-friendliness of the given contract, it is striking that almost all terms have

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<sup>48</sup> See e.g., Mark Lemley [CITE]; Michael Madison [CITE]; Margaret Jane Radin [CITE].

become on average more pro-seller over time. (We can reasonably assume that consumer preferences for terms have not changed much, but we would still need information about price changes to make any precise inferences about the consumer welfare effects.)

Figure 2 shows the distribution of the net change in overall bias for those contracts that had at least one change. The x-axis measures the change in net bias for each contract during the sample period. Contracts that had a net change of zero had offsetting pro-seller and pro-buyer changes. As can be seen, the majority of contracts that changed did so in a pro-seller direction. Of these, the most common change was a net of one pro-seller term, followed by a net of two and a net of three pro-seller terms. A handful of contracts had revisions resulting in more than six and up to thirteen terms that were more pro-seller than their 2003 agreement. Fewer contracts changed in a net pro-buyer direction; of these, most changed by only one or two terms.

One way for a contract to become more pro-seller is to change the language of terms already included in the contract. Another way is to add new, pro-seller terms. Opting out of a Article 2 default rule generally introduces a pro-seller term—when contracts “scale up” and become longer and more complex, the relative number of pro-seller terms tends to increase.<sup>49</sup>

To shed light on how the change in overall bias arises, we can decompose the average change -0.58 into the change due to a worsening of all potentially pro-seller terms (such as restrictions on transfer), which is -0.69, and the change due to the general improvement of all pro-buyer terms (maintenance and support), which is 0.11. The *average* contribution of a potentially pro-seller term to the overall change is -0.027 (-0.69/25), and the *average* contribution of a potentially pro-buyer term is 0.016 (0.11/7). Firms are therefore about 68% more likely to opt out of a default if doing so tilts the issue in their favor; the overall change in bias cannot be fully understood as an increased propensity to opt out of default rules of whatever type.

### *Determinants of Change, Growth, and Convergence*

While most terms and contracts changed in a pro-seller direction, Figure 2 shows that there is substantial variation in the amount of change. Before examining the determinants of changes in contract bias, however, we start by understanding the determinants of the overall level

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<sup>49</sup> We thank Ryan Bubb for this point.

of bias. Regressions (1a) and (1b) model overall contract bias as a function of firm, product, and market characteristics.

Specifically, the independent variables are product price, dummy variables for whether the license is directed to general public consumers (as opposed to businesses) and whether the license is for multiple users and for developers. We also include firm characteristics such as the natural log of revenue and the natural log of company age (as measured by years since incorporation). To examine whether firms headquartered in relatively more seller-friendly states (which are more likely to enforce their terms) are more likely to offer and revise terms in a way that benefits sellers, we include a dummy for state friendliness.<sup>50</sup> Finally, we include the Herfindahl-Hirschman Index as a measure of competitive conditions; perhaps competition compels companies to offer more pro-buyer terms. Note that in (1a), all variables are measured as of 2003, and in (1b) all variables are measured as of 2010.<sup>51</sup>

Broadly speaking, the determinants of contract bias remained similar from 2003 and 2010. In both periods, larger and younger companies impose relatively more pro-seller terms. The presence of in-house lawyers also has a negative effect of contract bias, but we leave the effect of lawyers on bias, change, and innovation for Table 4. These are the only statistically significant factors associated with contract bias, all else equal. There is no robust relationship between EULA bias and state consumer friendliness, perhaps because these firms operate in national markets and are likely to be sued anywhere.<sup>52</sup> Also, as noted in earlier work, there is no relationship between competitive conditions and contract bias. This result is consistent with economic theory predicting that sellers with market power will use their influence over price, not terms.<sup>53</sup>

Turning to changes in contract bias, the dependent variable in (2) is *Any Terms Changed*, a dummy indicating whether a given EULA changed at least one term during the sample period. The independent variables are the same as before with the addition of two variables measuring

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<sup>50</sup> Several studies have identified states with relatively more seller-friendly attitudes, such as Delaware, Maryland, New York, and Virginia. For a detailed analysis of the methodology and review of the literature, see Marotta-Wurgler, *supra* note 38.

<sup>51</sup> The exception is the H-H Index, which is measured as of 2003 in both columns.

<sup>52</sup> Marotta-Wurgler, *supra* note 38 (finding that firms that used choice of law and forum selected the laws of the states where the companies were headquartered).

<sup>53</sup> *Id.* Our competitive conditions measures are from 2003 so they might not accurately reflect current market characteristics, in which case the measures would be too noisy to capture any relationship in a meaningful way. We are collecting current data on this variable and hope to have it ready for a later draft.

changes in price and revenue. Inclusion of these variables allows us to examine whether changes in company or product characteristics are associated with term changes. We report the marginal effects from a logit specification. The results indicate that larger and growing companies are more likely to revise their contract, other factors equal. Size is the single most important driver of change; a one-standard-deviation increase in log revenue increases the probability of changing terms by 11% ( $2.28 \times .047$ ). Growth is also very important; a one-standard-deviation increase in log growth is associated with a 8% increase in the probability of change ( $1.04 \times .086$ ). One possibility is that large firms, and firms that are becoming large, face a special need to tune their contracts to the current market environment, as more is at stake in dollar terms.

What factors are associated with change toward more pro-seller bias? Regression (3) explores the determinants of net changes in bias. The dependent variable is *Net Change Overall Bias*, which as Figure 2 shows has a range from -12 to +8.

The results show that all else equal, growing and younger companies revised their terms in a more self-serving way. It is difficult to know exactly why these patterns emerge, but growing companies might be increasing their degree of sophistication and thus better protect their interests by revising their contracts accordingly. Younger companies might also be less constrained by reputation and thus more willing to make revisions that help them control the use of their products better. As we will see, in-house counsel also contribute to change in bias.

In addition to the independent variables from before, this model includes the Overall Bias level in 2003 to test for mean reversion. The coefficient is -0.157 and statistically significant. This suggests a degree of convergence for the extremely biased contracts in 2003. For example, a hypothetical contract that was 10 terms more pro-seller in 2003 would have moved 1.57 terms toward the buyer by 2010, all else equal. In particular, this “improvement” is relative to the trend toward increased bias (which is captured in the constant term), the company characteristics, and other market and product characteristics. Roughly speaking, since the average contract became more pro-seller by .58 terms (Table 2), the highly pro-seller contract would—after this secular change was taken into account—improve by an average of roughly 1 term. Similarly, contracts that were 10 terms more pro-buyer in 2003 would on average have become more than 2 terms pro-seller once the mean reversion was added to the pro-seller trend. It is again not possible to be sure, but this sort of mean reversion might reflect reputational constraints that began to bind on

the most egregious contracts.<sup>54</sup> Because buyers might not care about all terms equally, we looked at net changes for individual categories of related terms and found similar results.

### *Innovative Terms*

Next we explore the appearance and adoption of innovative terms. We identified seven terms that were rare or absent at the beginning of the period. These fall in the categories *modification and termination, information collection, and third parties*. As noted earlier, most of these terms take advantage of technological changes (such as electronic licensing) that allow sellers to exercise more control over buyers' use of the product. We do not mean to imply that the terms that we designate "innovative" are economically efficient or good in any welfare sense. All we can say for sure is that they are novel.

Who are the innovators and who are those who adopt the terms later on? The dependent variable in regression (4) is *Number of Innovative Terms 2003*, which ranges from zero to seven and measures the number of innovative terms in the EULA in 2003. The independent variables include company, product, state, and market concentration controls, in addition to *Number of Common Terms*, a variable measuring the number of non-innovative terms in a particular EULA. This allows us to control for the somewhat uninteresting fact that a contract that has more terms in general is also more likely to have "innovative" terms regardless of other factors.

Controlling for contract length, the results show that young and larger companies are more likely to adopt innovative terms. A possible explanation for this finding is that larger firms are more likely to be aware of technological changes that present opportunities to revise EULAs, or receive more cutting-edge legal advice. Younger firms might be more sophisticated and also more attuned to technological innovations.

Regression (5) explores the factors associated with the takeup of innovative terms. The dependent variable is *Change in Innovative Terms 2010*, which measures the change in the number of innovative terms in the EULA between 2003 and 2010.<sup>55</sup> The independent variables are as before, including a control for changes in the number of non-innovative terms. Again, we want to control for sweeping changes that might include innovative terms. Who adopts the innovative terms? Growing firms, large firms, and younger firms. Firms located in states with

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<sup>54</sup> The authors thank Oren Bar-Gill for this point.

<sup>55</sup> We report least squares regression results. Tobit models that explicitly account for the limited dependent variables in (4) and (5) are available upon request; they lead to similar inferences.

relatively more consumer friendly laws are also more likely to adopt innovative terms. This result may be driven by the number of firms headquartered in Santa Clara County, a hub for technological innovation.

While previous literature has focused on the role of competitive conditions in innovation, we find no such relation in this setting. Market structure appears to be unrelated to the introduction or subsequent adoption of innovative standard form terms.

We now explore the role of in-house counsel in the evolution of fine print. Table 4 uses identical specifications and controls as those found in Table 3 but adds a dummy that equals one if the sample company has a legal department or at least one lawyer (doing legal work) employed. We study the effect of lawyers on contract bias and innovation separately because, at the moment, we have collected information for the presence of lawyers in one third of the sample, spanning all types of firms. As in Table 3, regressions 1(a) and 1(b) model overall contract bias as a function of company, product, and market characteristics, and includes the lawyer dummy. In both 2003 and 2010, the presence of lawyers is associated with more pro-seller bias at the 1% level of significance. Regressions (2) and (3) examine the relationship of change in terms and bias and the presence of lawyers, controlling for firm and product, market characteristics. Again, lawyers are associated, not with change in terms per se, but with a negative change in bias over the sample period. All else equal, the presence of company lawyers is associated with a -2.16 change in bias (or a little over two terms that favor sellers) over the sample period. Of course, firm size and the presence of legal counsel are highly correlated, so it might be hard to identify the contribution of legal counsel to change in terms. We assume that firms with legal departments are likely to assign the job of revising and drafting terms to lawyers.

Regression (4) shows that lawyers are also associated with innovation, as firms with lawyers are more likely to adopt innovative terms at the beginning of the sample period. Regression (5) shows no effect between the presence of lawyers and adoption of the innovative terms at the end of the period. This might be partly due because such firms adopted them earlier. Firms without legal departments might look at the contracts of other firms and copy the innovative terms. This possibility is consistent with accounts of various sample firms with whom we communicated.

In contrast to previous studies, we find that lawyers (at least those that work in-house) appear to be involved in revising and innovating in mass-market agreements.



## V. Litigation and Contractual Evolution

Next, we explore how the external legal environment shapes standard form contracts. Previous studies of bond terms showed resistance to adapt to new legal interpretations.<sup>56</sup> Here we explore the relationship between changes in contractual enforcement of specific terms by courts and companies' propensity to revise EULAs to reflect such changes.

### *Key Cases and Trends in Enforcement*

We begin by surveying the legal landscape and how it changed over the sample period. We reasoned that parties writing their EULAs prior to and including 2003 might have relied on court decisions, among other sources, when deciding what to include in their contracts. We attempted to measure changes in enforceability of each of the terms that we follow as well as of mass-market software EULAs in general.

We relied on several sources. First, we ran Westlaw searches on all federal and state law cases using general terms, such as "End User License Agreement," "License Agreement," "EULA," "software," "terms of use," "clickwrap," and "browsewrap." We also ran searches for particular terms such as "reverse engineering," and "forum selection clause." These searches generated approximately 350 cases. We narrowed this down by examining each case individually and determining whether the litigation was relevant to EULA terms. To make sure we did not miss any important case, we examined the cases cited in various software licensing handbooks, software licensing law textbooks, and the *Software Principles*.<sup>57</sup> This resulted in the consideration of 60 cases for the period 1993 to 2002 and 80 cases for the period 2003 to 2009. We stopped searching for cases after the end of 2009 as we began collecting our 2010 sample at the beginning of 2010.<sup>58</sup>

For each case, we recorded the court level, circuit, state, and year, as well which of the EULA Bias Index terms were litigated. Some cases involved only one term, such as restrictions of reverse engineering. Others involved multiple terms, such as challenges to the forum selection

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<sup>56</sup> See, e.g., Choi & Gulati, *supra* note 3.

<sup>57</sup> MARK LEMLEY, *SOFTWARE AND INTERNET LAW* (4th ed. 2011); RONALD MANN & JANE WINN, *ELECTRONIC COMMERCE* (2d ed. 2005); ALI PRINCIPLES, *supra* note 35.

<sup>58</sup> See Kimberly Krawiec & Kathryn Zeiler, *Common Law Disclosure Duties and the Sin of Omission: Testing Meta-Theories*, 91 VA. L. REV. 1795 (2005) (using a similar methodology to study what factors affect court enforcement of common law disclosure duties).

or arbitration clause, as well as a limitation on damages. Others challenged the enforceability of the contract based on the presentation of the contract. We recorded whether the particular term involved was upheld. We also recorded the amount of times a case had been followed as well as the amount of time it had been cited in secondary sources such as legal periodicals. These are imperfect measures of influence, especially because controversial cases of weak legal precedent could be cited frequently. We also categorized the reasoning behind each decision, such as whether the court considered the defendant had provided sufficient notice of the terms or whether the forum selection clause was not unconscionable.

The case law is summarized in Table 5. The table breaks down cases by individual terms, per the first four columns. Fifteen of the thirty-two terms that we track had been litigated at least once between 1993 and 2009. Some terms are litigated much more frequently than others, e.g. forum selection clauses. These were litigated in 24 cases in the pre-2003 period and in 41 cases in the later period. This is not surprising, as parties would want to litigate only those terms that might prevent recovery or result in larger economic damage. Dispute resolution clauses usually make litigation prohibitively expensive so it is common to see plaintiffs challenging their validity.

We calculated the probability that a given term was upheld in the two periods. We obtain this by dividing the number of times this particular term was upheld over the total number of cases where it was disputed. While crude, this probability gives a reasonable sense of a term's enforceability. We also calculate the *change* in the probability of a term being upheld across the two time intervals. Going back to the *forum selection clause* example, the probability of a court enforcing this term increased from 0.63 in 1993–2002 to 0.85 in 2003–2010. If firms are paying attention, they may have increased the use of forum selection clauses.

The probability of being upheld has in fact increased for a number of terms during the sample period. This is consistent with various accounts of legal trends in the software industry.<sup>59</sup> The “highlight” cases as the rightmost column also illustrate this point. Courts are now more willing to enforce restrictions on reverse engineering, use, and transfer. On the other hand, courts have been stricter in policing non-substantive terms that might improve notice to users. For

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<sup>59</sup> See also Michael J. Madison, *Legal-Ware: Contract and Copyright in the Digital Age*, 67 *FORDHAM L. REV.* 1025, 1026 & n.3, 1028–29, 1142 (1998) (predicting a future of increase enforceability of software terms that bypass federal intellectual property laws and urging caution if such trend indeed develops).

example, courts have become less likely to enforce disclaimers that are not in capital letters or conspicuously placed.

There are obvious limitations to this approach. While we have attempted to record all litigated cases from 1993 until 2009, the number of litigated cases per term is in many instances small. Moreover, each case is unique and complex and it can be hard to predict how a court would rule in each particular circumstance. Our methodology is an effort to capture general trends in enforceability of particular term.<sup>60</sup> Imperfections in the methodology and noise in our measures of changes in enforceability make it less likely that we will detect a statistical association between litigation outcomes and contract terms.

### *Enforcement and the Adoption of Terms*

Table 6 explores changes in individual terms over the sample period as a function of changes in enforceability. Change can occur by adding a new term to the agreement or by removing an existing term. We consider these two cases separately. In the first regression, we analyze a dummy dependent variable that equals one if a term that was neutral or pro-buyer—as UCC defaults tend to benefit buyers, all else equal—(0) in 2003 changed to pro-seller (-1) in 2010. In the second regression, we analyze the reverse case. We construct a dummy dependent variable that equals one if a term that was previously pro-seller went back to neutral. To be clear, the only terms we consider in these regressions are those that have been litigated at least once and have a theoretical range from -1 to 0.

The independent variables include company, product, market, and state characteristics as controls. We focus on *Uphold Probability*, the probability that a term was upheld given that it was litigated; and *Change in Uphold Probability*, which is the change between the probabilities that a term was enforced in 2003–2009 cases versus in 1993–2002 cases. We report marginal effects of logit specifications, with standard errors clustered by company. We ran fixed effects models in unreported regressions (available upon request) and found similar results.

The results suggest that contracts respond significantly to trends in enforcement. When terms are enforced frequently, and when the trend in enforcement is positive, companies are

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<sup>60</sup> Other legal developments aside from court decisions might have had an effect on EULA terms, but their impact is largely attenuated. In 2000, Maryland and Virginia became the only two states to adopt the Uniform Computer Information and Transactions Act, a body of law designed to govern transactions in information goods such as software. Only two cases in our sample cite UCITA as authoritative source. As noted earlier, the ALI enacted its *Software Principles*, but courts do not appear to have relied on them yet.

more likely to revise their contracts and adopt new restrictive terms. In particular, in the first column if the probability that a pro-seller term is enforced is 0.50 across all periods, then the probability that a firm that does not have the term in 2003 will add it by 2010 increases by 0.042 ( $0.50 \times 0.0841$ ). If the probability that a pro-seller term is enforced *rises* by 0.50 over the two periods, the probability that the firm will add the term increases by 0.046 ( $0.50 \times 0.0919$ ).

Firms also notice decreasing trends in enforcement. They are more likely to drop a term that has a lower probability of enforcement in general, and when its enforcement is declining. Comparing the magnitude of the coefficients in the second column with those in the first, it appears that firms are less sensitive to litigation trends when they have already adopted a term than when they are newly considering it. In other words, terms are sensitive to litigation, but once they are adopted they become somewhat less sensitive.

Figure 3 illustrates the results graphically. The x-axis measures changes in the probability that a term is upheld over the two periods. The y-axis measures the average change in the bias score of a particular term. All terms under consideration take the value 0 or -1, so positive changes indicate the probability that a term disappeared while negative changes indicate the probability that a term appeared. The figure demonstrates the sensitivity of term usage to changes in enforcement. This is particularly apparent in the terms related to intellectual property, such as restrictions on reverse engineering, or license grant restrictions. Forum selection and arbitration clauses have also become more enforceable. It is striking that all terms plot in either the second or fourth quadrants; there is no case in which a term became less common while enforcement became more likely or vice-versa.

What explains this relationship? One possibility is that in-house counsel and specialized legal advisors closely follow case law in the mass-market software industry and revise terms accordingly. A perhaps more plausible mechanism is that changes in the enforceability of some terms, such as forum selection clauses and restrictions on modification or reverse engineering clauses, generate commentary in specialized periodicals that is noticed by drafters.<sup>61</sup>

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<sup>61</sup> For example *Davidson Associates v. Jung*, 422 F.3d 630 (8th Cir. 2005), a case where users of a popular game violated the EULA's prohibition of reverse engineering clause by creating their own free servers to enjoy the game without many of the interferences of the original software (among other issues), attracted a lot of attention of legal and technology blogs, especially after the court enforced the restriction against the users. *See, e.g.*, Kenneth Hwang, *Note, Blizzard versus bnetd: A Looming Ice Age for Free Software Development?*, 92 CORNELL L. REV. 1043 (2007); PATENT ARCADE, CASE: DAVIDSON ASSOC. V. INTERNET GATEWAY, *available at* <http://www.patentarcade.com/2006/07/case-davidson-assoc-v-internet-gateway.html> (last visited April 9, 2012);

We cannot infer causation from these regressions as factors that we do not control that are associated with increased probability of enforcement might be driving the change. Still, while other studies witness stickiness, our results are consistent with litigation affecting contracts.<sup>62</sup>

## VI. Conclusions

Conventional wisdom suggests that standard form contracts are essentially static given they are rarely read by consumers, are not negotiated, and not protected by property rights. This study, however, finds change and innovation in several aspects of a common consumer standard form contract. Contrary to studies of innovation in law firms, it finds that in-house lawyers are associated with new terms.

We examine changes to 32 standard terms in software end-user license agreements between 2003 and 2010. Almost forty percent of the contracts saw at least one material change over this period; some changed more than ten terms. Contracts have become longer, but no simpler to read. On average, EULAs accumulate more terms over time, a process consistent with the observation that the process of contract creation involves overlaying of terms without much revision. Drafters might be thinking myopically about the effect of the particular term being added as opposed to the meaning of the contract as a whole. The implication of this trend is that, to the extent consumers read terms to comparison shop, the cost of becoming informed about terms has increased. The cost is also higher for would-be intermediaries such as ratings websites and non-profits such as Consumer Reports. Consumer advocates, who have been lobbying for plain language laws in consumer agreements for some time, may have picked up this trend.<sup>63</sup>

Terms themselves have changed in a variety of ways, even in the absence of strong property rights. Some companies revised only a handful of terms, while others altered their EULAs fairly comprehensively. One consistent pattern is that terms have become somewhat more pro-seller over time. This is especially true for terms that restrict scope and uses of the product, limitations on liability, and conflict resolution. Because our methodology measures *relative* contract bias, we cannot offer any conclusions as to the welfare implication of these changes. All else equal, however, the direction of change tends to benefit sellers over consumers.

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CASE SUMMARY: DAVIDSON V. INTERNET GATEWAY, CYBERLAW CENTRAL, *available at* <http://www.cyberlawcentral.com/2005/09/17/case-summary-davidson-v-internet-gateway> (last visited April 9, 2012).

<sup>62</sup> See, e.g., Choi & Gulati, *supra* note 3.

<sup>63</sup> See, e.g., 20 ILCS 4090/5 (providing for “plain language task force”); Florida Stats. Ann. § 627.4145 (plain language statute mandating a minimum Flesch score of 45 for insurance policies).

Even if we cannot determine whether terms are changing “optimally,” we do see evidence of change and innovation. This contrasts somewhat with studies of standard terms in other settings.

While EULAs are becoming more pro-seller on average, there is a degree of mean reversion in the extremes. Contracts that were highly pro-seller or highly pro-buyer in 2003 tended to shift back toward the 2010 norm. Reputational forces might constrain sellers presenting the most egregious terms, while other sellers may have come to realize they were giving buyers a comparatively free lunch. On the whole, however, there is no obvious evidence of increased standardization over time. The variance of contract length has grown, as has the variance in overall pro-seller bias. To the extent that the terms we track capture large fractions of terms in the sample contracts, the results suggest that the number of words per term has increased. This does not provide support for the standard prediction that terms will tend to become more similar to one another over time to benefit from various network effects. A possible reason for this is that network benefits might not be very significant in this market. Increased variance increases choice for consumers but also, to the extent that contract terms are part of their decision-making process, makes it harder for them to ascertain contract quality and make optimal purchase decisions. We also document the effect of in-house counsel in revising agreements and innovating. This finding suggests that lawyers outside law firms

We document the emergence of seven new terms that we subjectively classify as innovations and find that the very early 2003 adopters are young and large firms that are perhaps more likely to be advised by sophisticated counsel (we did not have the data to design a compelling test of this hypothesis). Young, large, and growing firms are also relatively more likely to adopt the innovative terms by 2010. Firms are paying attention to technological change and revising their contracts to take advantage of that, including in particular terms that allow them to control the other party’s performance through technological means, as opposed to threats of litigation.

Finally, we find that changes in enforceability may help to explain some of the changes in terms that we observe. Increases in the probability of a term becoming enforced are associated with increases in the probability of including such terms in EULAs. Similarly, decreases in the probability of enforcement of a term decreases in the incidence of a term. That said, most EULA terms have become increasingly enforceable over time. This includes arbitration clauses and restrictions on reverse engineering, which used to be controversial but are increasingly enforced.

The same can be said about EULAs themselves, as courts have become more comfortable with clickwraps and online contracting. These changes may also partially explain why EULAs have become more pro-seller over time in general. Thus legal changes, changes in technology, and changing firm, product, and market characteristics all appear to play roles in the evolution of boilerplate.

**Table 1. Company, Product, Market, and Contract Characteristics**

	Obs	Mean	SD	Min	Median	Max
Panel A. Company Characteristics						
Revenue 2003 (\$000)	259	287,499	2,490,751	30	1700	36,800,000
Revenue 2010 (\$000)	259	539,091	4,225,384	90	2200	60,400,000
Change Revenue (\$)	254	256,679	1,917,968	-723,200	111.5	23,600,000
Change Revenue (%)	254	226	627	-90	24.08	5000
Public 2003	264	0.11	0.32	0	0	1
Public 2010	264	0.14	0.35	0	0	1
Age 2003 (Yrs)	264	13.62	8.01	0	13	68
Age 2010 (Yrs)	264	20.62	8.01	7	20	75
Lawyers	118	0.74	0.44	0	1	1
Pro-Consumer State	264	0.32	0.61	-1	0	1
Panel B. Product and Market Characteristics						
Trial 2003	264	0.73	0.45	0	1	1
Trial 2010	264	0.77	0.42	0	1	1
Median Price 2003 (\$)	264	812	1,310	14.99	360	12,000
Median Price 2010 (\$)	256	841	1,686	8.99	350	20,995
Consumer Product	264	0.36	0.48	0	0	1
Multi-User License	264	0.08	0.28	0	0	1
Developer License	264	0.08	0.27	0	0	1
H-H Index	236	0.37	0.24	.065	.30	1
Panel C. Contract Characteristics						
Any Terms Changed	264	0.39	0.49	0	0	1
Number of Words 2003	264	1,517	1,365	33	1,152	8,406
Number of Words 2010	262	1,938	2,077	106	1,354	13,416
Flesch Score 2003	259	33.33	7.45	14.3	32.6	63.6
Flesch Score 2010	258	33.43	7.14	15	33.35	55.1



**Table 2. EULA Terms and Bias: 2003 vs. 2010**

#	Category and Term	Score	Mean 2010 (SD)	Mean 2003 (SD)	Mean Change (SE)
	<b>Acceptance</b>	1 = yes 0 = no	<b>0.458</b> <b>(0.499)</b>	<b>0.470</b> <b>(0.500)</b>	<b>-0.011</b> <b>(0.022)</b>
1	Does license alert consumer that product can be returned if she declines terms?				
	<b>Modification and Termination</b>		<b>-0.227</b> <b>(0.539)</b>	<b>-0.167</b> <b>(0.439)</b>	<b>-0.061</b> <sup>***</sup> <b>(0.021)</b>
2	Are license's terms subject to change?	0 = no -1 = yes	-0.106 (0.309)	-0.076 (0.265)	-0.030 <sup>**</sup> (0.012)
3	Does license allow licensor to disable the software remotely if licensee breaches any EULA terms, according to licensor?	0 = no -1 = yes	-0.121 (0.327)	-0.091 (0.288)	-0.030 <sup>**</sup> (0.013)
	<b>Scope</b>		<b>-1.792</b> <b>(1.169)</b>	<b>-1.659</b> <b>(1.162)</b>	<b>-0.133</b> <sup>***</sup> <b>(0.046)</b>
4	Does definition of "licensed software" include regular updates such as enhancements, versions, releases, etc.?	1 = yes 0 = no; no mention	0.170 (0.377)	0.136 (0.344)	0.034 <sup>**</sup> (0.015)
5	Can licensee alter/modify the program?	0 = yes or no mention -1 = no	-0.640 (0.481)	-0.598 (0.491)	-0.042 <sup>***</sup> (0.015)
6	Can licensee create derivative works?	0 = largely unrestricted or no mention -1 = strict prohibition, derivative works owned by licensor, or need permission of licensor	-0.379 (0.486)	-0.352 (0.479)	-0.027 <sup>*</sup> (0.015)
7	Does license prohibit reverse engineering of the software?	0 = no; no mention -1 = yes	-0.716 (0.452)	-0.663 (0.474)	-0.053 <sup>***</sup> (0.017)
8	Are there license grant restrictions?	0 = no or no mention -1 = yes (e.g., for business-oriented products, "for business purposes" or "internal purposes only" language; for consumer-oriented products, restrictions	-0.227 (0.420)	-0.182 (0.386)	-0.045 <sup>***</sup> (0.018)

on commercial use)

<b>Information Collection</b>			<b>-0.117</b>	<b>-0.061</b>	<b>-0.057<sup>***</sup></b>
			<b>(0.367)</b>	<b>(0.269)</b>	<b>(0.017)</b>
9	Does license allow licensor to collect and /or distribute licensee's personally identifiable information?	0 = no; no mention -1 = yes	-0.102 (0.304)	-0.053 (0.225)	-0.049 <sup>***</sup> (0.014)
10	Does license allow licensor to install software that will track licensee's activity?	0 = no; no mention -1 = yes	-0.015 (0.122)	-0.008 (0.087)	-0.008 (0.005)
<b>Transfer</b>			<b>-1.466</b>	<b>-1.394</b>	<b>-0.072<sup>***</sup></b>
			<b>(0.584)</b>	<b>(0.595)</b>	<b>(0.021)</b>
11	Are there limitations on transfer?	0 = no or no mention -1 = some or full restrictions (licensee cannot assign, transfer, lease, sublicense, distribute, etc.; or, needs written consent of licensor)	-0.955 (0.209)	-0.943 (0.232)	-0.011 <sup>*</sup> (0.007)
12	Can licensee transfer the software to an end user who accepts the license terms without licensor's prior permission?	0 = yes or no mention -1 = no	-0.511 (0.501)	-0.451 (0.499)	-0.061 <sup>***</sup> (0.017)
<b>Warranties and Disclaimers</b>			<b>-0.871</b>	<b>-0.875</b>	<b>0.004</b>
			<b>(0.994)</b>	<b>(0.973)</b>	<b>(0.028)</b>
13	Are there express warranties?	1 = yes 0 = no	0.042 (0.200)	0.042 (0.200)	0.000 (0.005)
14	Is there a limited warranty stating that software is free from defects in materials and workmanship or that the software will work according manual specifications in force for a limited period?	1 = yes 0 = no	0.311 (0.464)	0.295 (0.457)	0.015 (0.017)
15	Is there a limited warranty stating that the media of software distribution and documentation are free from defects in force for a limited period?	1 = yes 0 = no	0.280 (0.450)	0.269 (0.444)	0.011 (0.017)
16	Is the disclaimer in caps, bold, or otherwise conspicuously presented?	0 = yes or no disclaimers appear -1 = no	-0.231 (0.422)	-0.261 (0.440)	0.030 <sup>**</sup> (0.013)

17	Disclaims IWM and IWFPP or contains “AS IS” language?	0 = no -1 = yes	-0.913 (0.283)	-0.890 (0.313)	-0.023** (0.009)
18	Disclaims warranty that software will not infringe on third parties’ intellectual property rights?	0 = no -1 = yes	-0.360 (0.481)	-0.330 (0.471)	-0.030** (0.014)
<b>Limitations on Liability</b>			<b>-2.413</b> <b>(1.221)</b>	<b>-2.273</b> <b>(1.187)</b>	<b>-0.140</b> <sup>***</sup> <b>(0.047)</b>
19	Who bears the risk of loss?	0 = licensor, for losses caused by factors under licensor’s control, or no mention -1 = licensee	-0.167 (0.373)	-0.152 (0.359)	-0.015 (0.012)
20	Who bears the performance risk?	0 = licensor (for causes under licensor's control), or no mention, or licensee (for uses expressly forbidden by licensor) -1 = licensee (language “licensee assumes responsibility of choice of product and functions,” etc)	-0.299 (0.459)	-0.277 (0.448)	-0.023 (0.015)
21	Disclaims consequential, incidental, special, or foreseeable damages?	0 = no or no mention -1 = yes	-0.924 (0.265)	-0.902 (0.299)	-0.023** (0.009)
22	Are damages disclaimed under all theories of liability (contract, tort, strict liability)?	0 = no or no mention -1 = yes	-0.299 (0.459)	-0.273 (0.446)	-0.027* (0.015)
23	What is the limitation on damages?	0 = no mention or cap on damages greater than purchase price -1 = cap on damages less than or equal to purchase price	-0.553 (0.498)	-0.519 (0.501)	-0.034* (0.019)
24	Is there an indemnification clause?	0 = no, no mention, or two-way indemnification -1 = indemnification by licensee	-0.170 (0.377)	-0.152 (0.359)	-0.019 (0.015)
<b>Maintenance and Support</b>			<b>0.667</b> <b>(0.472)</b>	<b>0.663</b> <b>(0.474)</b>	<b>0.004</b> <b>(0.014)</b>
25	Does base price include M&S for 31 days or more?	1 = yes 0 = no or no mention			
<b>Conflict Resolution</b>			<b>-0.341</b> <b>(0.513)</b>	<b>-0.284</b> <b>(0.476)</b>	<b>-0.057</b> <sup>***</sup> <b>(0.019)</b>

26	Forum specified?	0 = court, choice of licensee, or no mention -1 = specific court or mandatory arbitration	-0.322 (0.468)	-0.273 (0.446)	-0.049 <sup>***</sup> (0.017)
27	Law specified?	0 = same as forum or no mention -1 = yes and different from forum	-0.011 (0.106)	-0.008 (0.087)	-0.004 (0.004)
28	Who pays licensor's attorney fees?	0 = paid by losing party or no mention -1 = paid by licensee	-0.008 (0.087)	-0.004 (0.062)	-0.004 (0.004)
<b>Third Parties</b>			<b>-0.216</b> <b>(0.574)</b>	<b>-0.098</b> <b>(0.346)</b>	<b>-0.117<sup>***</sup></b> <b>(0.028)</b>
29	Does license require licensee agree to third party licenses or terms?	-0 = no or no mention -1 = yes	-0.121 (0.327)	-0.064 (0.246)	-0.057 <sup>***</sup> (0.015)
30	Does license disclaim licensor's liability for any included third party software?	0 = no or no mention -1 = yes	-0.080 (0.271)	-0.034 (0.182)	-0.045 <sup>***</sup> (0.015)
31	Does license allow licensor or third parties to install additional software?	0 = no or no mention -1 = yes	-0.015 (0.122)	0.000 (0.000)	-0.015 <sup>**</sup> (0.008)
<b>Consumer Protection</b>			<b>0.473</b> <b>(0.500)</b>	<b>0.417</b> <b>(0.494)</b>	<b>0.057<sup>***</sup></b> <b>(0.017)</b>
32	Does license inform licensee of statutory rights?	1 = yes, contract informs consumer about state law rights they may have 0 = no or no mention			
<b>Overall Bias</b>			<b>-5.845</b> <b>(3.405)</b>	<b>-5.261</b> <b>(3.153)</b>	<b>-0.583<sup>***</sup></b> <b>(0.128)</b>

**Table 3. Bias, Change, and Innovation**

	(1a) Overall Bias 2003	(1b) Overall Bias 2010	(2) Any Terms Changed [1 = yes, 0 = no]	(3) Net Change Overall Bias	(4) Number of Innovative Terms 2003	(5) Change Number of Innovative Terms 2010
Multi-User License	-0.950 (0.670)	-0.420 (0.629)	-0.052 (0.108)	0.467 (0.357)	-0.257* (0.151)	-0.0873 (0.106)
Developer License	0.329 (0.740)	-0.720 (0.970)	-0.104 (0.121)	-0.803 (0.678)	0.149 (0.134)	0.174 (0.253)
Ln Price	0.163 (0.173)	0.0756 (0.180)	0.029 (0.034)	-0.139 (0.137)	-0.00647 (0.0370)	0.0314 (0.0394)
Change Ln Price			0.108 (0.108)	-0.202 (0.432)		-0.101 (0.112)
Consumer Product	-0.215 (0.527)	-0.155 (0.583)	-0.058 (0.088)	-0.000400 (0.372)	0.184 (0.123)	0.0433 (0.132)
Ln Revenue	-0.338*** (0.0978)	-0.375*** (0.119)	0.047*** (0.0158)	-0.0513 (0.0968)	0.0676*** (0.0257)	0.0988*** (0.0306)
Change Ln Revenue			0.0863*** (0.0328)	-0.228* (0.135)		0.136** (0.0575)
Ln Age	1.480*** (0.395)	3.079*** (0.694)	0.0372 (0.0638)	0.597** (0.244)	-0.260** (0.107)	-0.160* (0.0826)
Pro-Consumer State	0.114 (0.339)	-0.0506 (0.386)	0.0838 (0.0611)	-0.144 (0.232)	-0.0318 (0.0842)	0.175** (0.0706)
H-H Index	-0.980 (0.849)	-1.211 (0.826)	0.158 (0.142)	-0.479 (0.507)	0.259 (0.193)	0.224 (0.157)
Overall Bias 2003				-0.157*** (0.0531)		

Number of Common Terms					0.0492 <sup>***</sup> (0.0129)	
Change in Number of Common Terms						0.119 <sup>***</sup> (0.0283)
Constant	-6.875 <sup>***</sup> (1.252)	-11.91 <sup>***</sup> (2.285)		-1.413 (1.217)	-0.103 (0.402)	-0.617 <sup>*</sup> (0.341)
Observations	231	228	223	223	231	223
Adjusted $R^2$	0.105	0.109	0.078	0.063	0.131	0.285

Standard errors in parentheses. Marginal effects and pseudo R-squared from a logit regression are reported in column (2); other regressions are ordinary least squares.

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

**Table 4. Bias, Change, and Innovation: Presence of Lawyers**

	(1a)	(1b)	(2)	(3)	(4)	(5)
	Overall Bias 2003	Overall Bias 2010	Any Terms Changed [1 = yes, 0 = no]	Net Change Overall Bias	Number of Innovative Terms 2003	Change Number of Innovative Terms 2010
Lawyers	-2.263** (0.993)	-3.515*** (1.037)	0.151 (0.197)	-2.159*** (0.669)	0.778*** (0.265)	0.431 (0.267)
Table 3 Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	103	101	98	98	103	98
Adjusted $R^2$	0.124	0.239	0.236	0.174	0.213	0.306

Standard errors in parentheses. Marginal effects and pseudo R-squared from a logit regression are reported in column (2); other regressions are ordinary least squares.

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

**Table 5. Litigated Terms**

#	Term	Cases pre-2003	Cases 2003-2009	Prob Upheld All Years	Prob Upheld pre-2003	Prob Upheld 2003-2009	Change in Prob Upheld	Highlights
5	Can licensee alter/modify the program?	1	1	1	1	1	0	Davidson & Associates v. Jung
6	Can licensee create derivative works?	1	6	1	1	1	0	D&B v. Grace Consulting
7	Does license prohibit reverse engineering of the software?	1	4	0.8	0	1	1	Bowers v. Baystate Techs.; Vault v. Quaid
8	Are there license grant restrictions?	4	2	0.33	0.25	0.5	0.25	ProCD v. Zeidenberg
11	Are there limitations on transfer?	9	6	0.87	0.78	1	0.22	Vernor v. Autodesk
13	Are there express warranties?	1	1	0	0	0	0	Jesmer v. Retail Magic
14	Is there a limited warranty stating that software is free from defects in materials and workmanship or that the software will work according manual specifications in force for a limited period?	0	1	0	.	0	.	Schacter v. Circuit City Stores
16	Is the disclaimer in caps, bold, or otherwise conspicuously presented?	1	4	0.8	1	0.75	-0.25	Fieldtech Avionics & Instruments v. Component Control.Com.
17	Disclaims IWM and IWFPP or contains "AS IS" language?	9	4	0.85	0.78	1	0.22	Telecom Int'l Am. v. AT&T
21	Disclaims consequential, incidental, special, or foreseeable damages?	2	3	1	1	1	0	i.Lan Systems, Inc. v. i.Lan Systems v. Netscout Service Level
22	Are damages disclaimed under all theories of liability (contract, tort, strict liability)?	0	1	1	.	1	.	Pure Bioscience v. Ross Systems
23	What is the limitation on damages?	4	1	1	1	1	0	M.A. Mortenson v. Timberline Software
26	Forum specified?	24	41	0.77	0.63	0.85	0.23	Specht v. Netscape, Caspi v. Microsoft Network
27	Law specified?	3	4	0.71	0.67	0.75	0.08	Vision Graphics, Inc. v. E.I. Du Pont
28	Who pays licensor's attorney fees?	0	1	0	.	0	.	McKee v. ATT



**Table 6. Litigation and Individual Term Changes**

	(1) From 0 to -1	(2) From -1 to 0
Uphold Probability	0.0841** (0.0355)	-0.0689*** (0.0183)
Change in Uphold Probability	0.0919*** (0.0173)	-0.0488** (0.0233)
Controls from Table 3 col (3)?	Yes	Yes
Observations	1191	1139
Pseudo $R^2$	1139	0.094

Marginal effects from logit regressions; Standard errors clustered by company in parentheses.

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Figure 1. Number of Terms Changed, 2003 vs. 2010

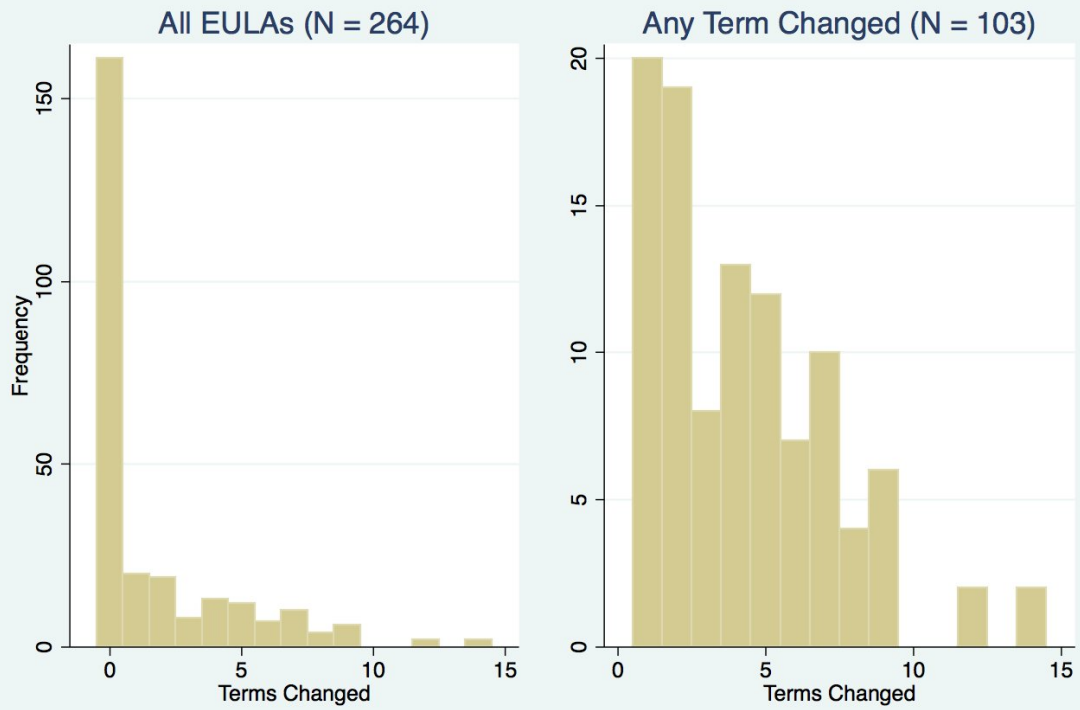


Figure 2. Net Change in Overall Bias, 2003 vs. 2010

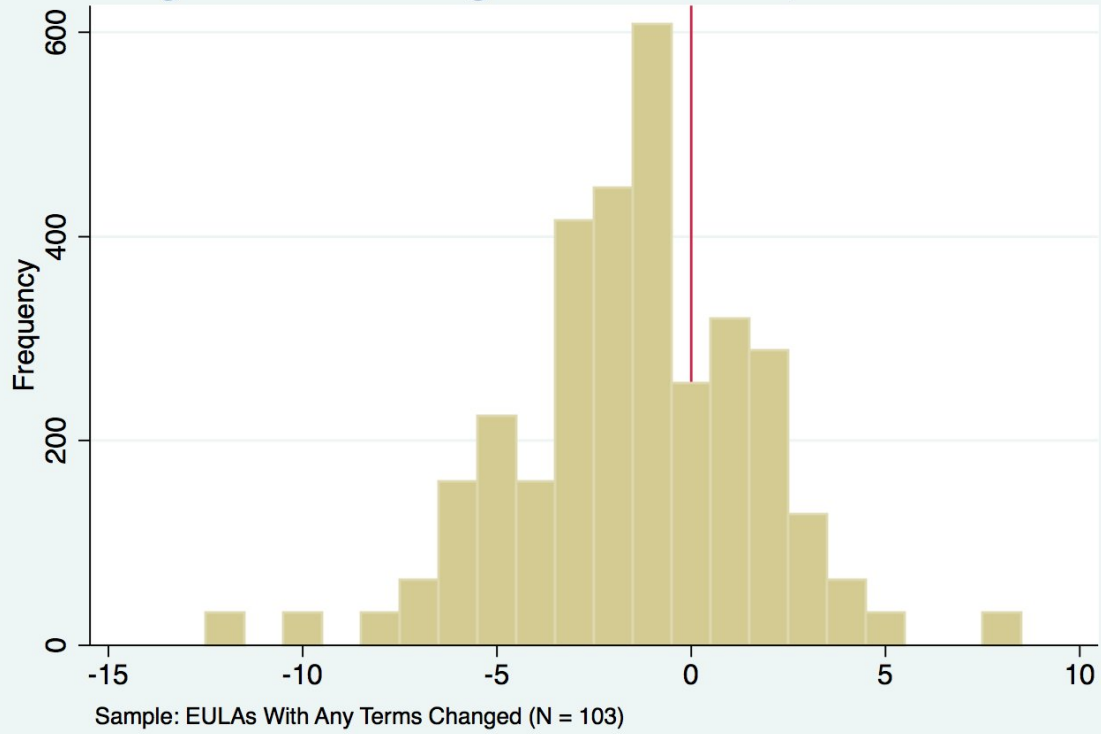
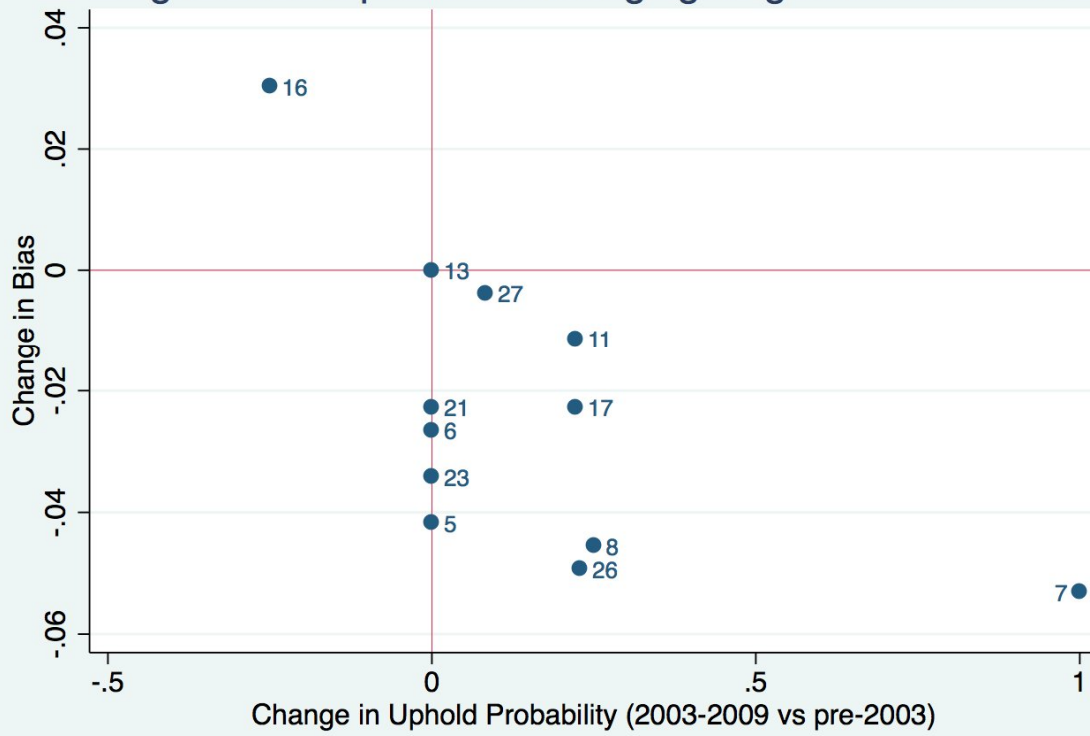


Figure 3. Response to Changing Litigation Outcomes



# X Marks the Spot: The Dynamics of Contract Evolution

Stephen J. Choi, Mitu Gulati & Eric A. Posner\*

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## Abstract

Contract scholarship has given little attention to the production process for contracts. The focus instead tends to be on the evaluation of the different doctrines that courts utilize to determine case outcomes. A key question in analyzing the quality of a legal doctrine though is determining whether the doctrine sets up the right incentives for contract production for the future. And how could one know the answer to that question if one did not understand the contract production process in the first place? The answer, we suspect, is that the key elements of the contract production process are so simple and obvious that analysis is not required. This article takes a different perspective; that the production process can be quite complex. The article takes some initial steps towards unpacking the contract production process in the context of boilerplate contracts.

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\* Faculty at NYU, Chicago and Duke, respectively. Thanks to Guangya Liu and Irving De Lira Salvatierra, for research assistance with the data.



# X Marks the Spot: The Dynamics of Contract Evolution

Stephen J. Choi, Mitu Gulati & Eric A. Posner\*

## I. Introduction

The literature on the evolution or production of contracts, to the extent it exists, is sparse. A basic contracts course is unlikely to have a component on the production function for contracts. Contracts, and the provisions in them, are generally conceptualized as arising as a function of the needs of the specific transaction at hand. Reality is different. Lawyers typically produce new contracts by modifying existing templates. In other words, there is a built in path dependence. In the context of boilerplate contracts more particularly, the basic template tends to be resistant to change, even when it is clear that making the change would serve the interests of the parties in the transaction at hand. In a word, boilerplate contract provisions tend to be sticky.<sup>1</sup>

“Sticky” does not mean that contracts are static. We know that contracts do change. What we do not know much about are the when, where and how. In a prior article, we examined the evolution of sovereign debt contracts over roughly a fifty-year period.<sup>2</sup> Over a period that long, we found that contract provisions did change and often did so meaningfully; these were not just cases of contract language being modified around the margins, but that entirely new provisions showed up and old provision disappeared. However, those changes did not occur in a manner that resembled anything close to the conventional model of deal-to-deal tailoring of contract provisions. Industry-wide change, when it did come, tended to show up in clusters, and after major events, such as global financial crises. For example, after the Latin American debt crisis in the early 1980s we found that sovereigns adopted new terms in their sovereign bond contracts including waivers of sovereign immunity, consent to enforcement, consent to jurisdiction, governing law, agent for service of process and cross default provisions. Individualized change or tailoring was less prevalent, but not absent. Individualized change also tended to show up as a function of significant events, but the events in question were significant for particular actors and not the market as a whole – in the case of sovereign debtors, these were individual defaults.

In this article we extend our prior research to analyze the internal dynamics of these periods of clustered change. We assess how boilerplate terms shift to a new

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\* Faculty at NYU, Chicago and Duke, respectively. Thanks to Guangya Liu and Irving De Lira Salvatierra, for research assistance with the data.

<sup>1</sup> For a discussion of the literature on contract stickiness, see ROBERT SCOTT & MITU GULATI, *THE THREE AND A HALF MINUTE TRANSACTION: BOILERPLATE AND THE LIMITS OF CONTRACT DESIGN* (forthcoming 2012).

<sup>2</sup> Stephen J. Choi, Mitu Gulati & Eric A. Posner, *The Evolution of Contracts in Sovereign Bonds*, J. LEGAL ANALYSIS (forthcoming 2012).

standard. Among the as yet unanswered questions we ask are: How and where do the changes begin that lead to these eventual clustered moves? Who tend to be the change agents? Do shifts occur all at once or is there competition among large market participants in determining the new standard? How do changes in the boilerplate in one market diffuse into other markets? We do not pretend to have come up with answers to these questions; we hope though to have taken some steps towards answering them.

The answers to the foregoing questions have the potential to assist both policymakers and contract theorists. As a policy matter, the contract terms private parties use can sometimes impose externalities. This is particularly true in the sovereign debt markets that are the focus of our study. As we are witnessing first hand in the context of the Eurozone sovereign debt crisis, crises, concerns about a default by one country can cause contagion elsewhere and result in costs to the entire system and are not necessarily internalized by the country that had the initial crisis. To the extent contracts can be reformed to make defaults and the resulting contagion less likely to occur, policy makers might seek to induce contract reform. And precisely this has happened on multiple occasions in these markets; where financial crisis has been followed by policy initiatives to reform contract terms.<sup>3</sup> Within such contexts, producing contract change quickly can be important. Achieving that goal requires an understanding of how change occurs and what change agents have to be employed or incentivized to lead the move.

For contract theorists, our study provides a first cut at unpacking the contract production process. The typical assumption regarding doctrines of contract interpretation is that their purpose is to assist adjudicators in unpacking the intentions of the parties. However, another role that these doctrines play is in setting up incentives for lawyers drafting contracts in the first place.<sup>4</sup> Determining what doctrines will impact incentives in the contract production process requires an understanding of how the production process works. In the context of interpreting boilerplate contracts, for example, a question that has come up is that of what deference to give a prior court's interpretation of a clause, if that interpretation was not clearly right and was from a different jurisdiction. One view courts have taken is that lawyers in a sophisticated market can modify their new contracts to adjust to court errors in interpretation. Hence, if a court finds that contracts are not modified to respond to some prior court decision, the implication is that parties must have been comfortable with the prior interpretation.<sup>5</sup>

But what if the actual production process were different? Imagine one where, because of frictions in the negotiation process, it was costly for individual

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<sup>3</sup> For discussions of these various contract reform attempts in the sovereign market, see Mark Weidemaier, *Reforming Sovereign Lending Practices: Modern Initiatives in Historical Context* ([http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1996763](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1996763)).

<sup>4</sup> *E.g.*, Alan Schwartz & Joel Watson, *Conceptualizing Contract Interpretation* (2012 draft).

<sup>5</sup> *Morgan Stanley v. Archer Daniels*, 570 F. Supp. 1529 (S.D.N.Y. 1983).



parties to deviate from the standard forms used across the industry. In such a scenario, the doctrines articulated above might have misfired in terms of achieving its goals of setting up the right incentives during the drafting process. If it were prohibitively expensive for the parties to deviate from the industry standard form, despite being aware of the contingencies in question or the prior erroneous interpretation, then applying a doctrine that interprets a lack of change (or slow change on the part of only marginal market participants) as indicative of agreement with the interpretation at the adjudication stage may simply deter parties at the front end from entering into what might be welfare-enhancing deals. To the extent adjudicators craft contract doctrines to influence drafting practices, *ex ante*, understanding how those practices work is important.

The industry we use in our analysis is the sovereign bond market for foreign-law governed bonds. These are the bonds typically purchased by cross border investors and are typically governed by either the laws of New York or England. The parties in this market tend to be sophisticated (states, banks, mutual funds, pension fund, hedge funds, etc.). Regulation is sparse – after all, the key actors are the states themselves. And the basic economic problem in the transaction has remained the same over centuries. States borrow money from foreign investors. But it is hard to force the states to pay the money back if the states decide that they would rather not. States nonetheless have an economic incentive to give investors some confidence in getting repaid in order to get the investors to lend to the states in the first place. The stability of the basic economic transaction over time is important because it enables us to test our evolutionary model over a long period of time.

We focus on a particular shift in the boilerplate sovereign bond contract for those issuances governed under New York law: the shift toward collective action clauses (or CACs) from unanimity action clauses (or UACs) governing changes to payment related terms. The shift to CACs was a watershed event in the history of sovereign bond covenants.<sup>6</sup> It significantly increased the ability of bondholders and issuers to engage in debt restructurings.<sup>7</sup> Our interest is not only with how and when New York-law governed contracts shifted from UACs to CACs for payment terms but also the process of change for a number of other CAC-related terms, including the vote threshold for non-payment terms as well as disenfranchisement,

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<sup>6</sup> There is now a large literature discussing this debate and the eventual shift to CACs in the New York market. *See, e.g.*, JOHN B. TAYLOR, *GLOBAL FINANCIAL WARRIORS* 100(2007); Randal Quarles, *Herding Cats: Collective Action Clauses in Sovereign Debt -- The Genesis of the Project to Change Market Practice in 2001 to 2003*, 73 *L. & CONTEMPORARY PROBLEMS* 29 (2010); Sean Hagan, *Designing a Legal Framework to Restructure Sovereign Debt*, 36 *GEO. J. INT'L L.* 295 (2005); David Skeel, *Can Majority Voting Provisions Do it All?* 52 *EMORY L. J.* 417 (2003).

<sup>7</sup> On the impact of these CACs, see Michael Bradley & Mitu Gulati, *Collective Action Clauses for the Eurozone: An Empirical Analysis* (March 2012 draft; available on [ssrn.com](http://ssrn.com)). The question of exactly how important these CACs have been is a matter of continuing debate, but the basic point that a bond with a unanimity requirement to alter payment terms is harder to restructure than one with a supermajority one is not at issue. *Cf.* FEDERICO STURZENEGGER & JEROMIN ZETTELMEYER, *DEBT DEFAULTS AND LESSONS FROM A DECADE OF CRISES* (2006).

mandatory meeting, and aggregation clauses (we explain these later). Together these terms form the “model” that applies in any particular sovereign bond contract.

Shocks to the sovereign debt market, in the form of Mexico’s crisis in 1995, the Asian Financial Crisis in 1997-98, and Argentina’s default in 2001, were important triggers for the change in the contract model. We report on the types of contract innovations that took place with the start of these shocks and the market participants associated with these changes. Importantly, a shift in the CAC model as the new standard did not occur overnight. Instead, there was a period of time after Mexico’s crisis in 1995 through Argentina’s default in 2001 during which the use of CACs was infrequent and only associated with more marginal market participants.

After this initial period of gradually increasing use of CACs, a tipping point occurred—driven by the cumulative effect of the default shocks as well as vocal public sector pressure—at which point top market participants changed from supporting the old standard to competing actively with one another to generate the new standard. At this tipping point, the usage of the old standard dropped rapidly and the incidence of the new CACs increased dramatically—giving an “X” pattern at the point where their usage percentages in the market crossed. We report evidence that once this tipping point—the “X” point—is reached, subsequent CAC innovations, largely involving the CAC-related terms such as the aggregation clause, are driven by the top market participants competing to control the eventual new CAC-standard. This competition eventually led to a new standard, Mexico’s version of the CAC first used in 2003 and a gradual slowing of adoption of the CAC model in the market as CACs saturated the market. This slow initial adoption, then rapid acceleration of adoption, followed lastly by a slowing adoption in the market as the CAC became dominant tracks the classic S adoption curve found in the product innovation literature.

In Part II we survey the background literature, including the product innovation literature. We discuss how this literature relates to contract innovation in Part III, setting forth our hypotheses of the process of boilerplate contract change. Part IV describes our sovereign bond dataset, including the key-CAC clauses, and the shocks to the sovereign bond market during the time period of our dataset that we use in our empirical tests. Part V presents evidence from the sovereign bond dataset on the process of contract change. Part VI extends our analysis to parallel contractual change that occurred in the CACs within the English-law-governed sovereign bond market. We use differences in how contract innovation occurred in this separate market from the New York-law bond changes to illuminate what distinguishes the initial stages of contract innovation from later stages of new contract standardization. In particular, the presence of external calls for change (in our case from the public sector) is an important factor in determining when top market participants shift from defending the existing standard to competing to generate the new standard.

## **II. Background: The Innovation to Standardization Cycle**

The idea of conceptualizing standard-form contracts as products is not a new one.<sup>8</sup> However that conceptualization has not been extended into asking – as is frequently done in the commercial product literature – how the cycle of innovation to market dominance occurs for contract terms. We call this innovation to standardization cycle because entering the standard-form or boilerplate is the equivalent of market dominance.

While the whole cycle has not been examined, portions of it have been studied. For example, scholars have examined the question of what factors induce shifts in the boilerplate, using models built on assumptions about strong network effects. Network effects, when added to the fact that returns from innovation in contract are difficult to capture (the difficulty in patenting the innovation combined with the ease of copying it), results in contract stickiness.<sup>9</sup> Using a model of network effects and stickiness in contract change, Kahan and Klausner predicted, and found, that high-volume intermediaries would be associated with changes in boilerplate provisions in corporate bond contracts.<sup>10</sup> Research by two of us on sovereign debt contracts found roughly similar high-volume intermediaries as being key change agents (the change agents in question were different in the two settings; but the basic idea was the same).<sup>11</sup> In markets with strong network effects, there were costs to deviating from the boilerplate. High-volume intermediaries such as investment bankers or law firms were associated with changes to boilerplate language because they had the scale to ensure the adoption of a new standard while also garnering the benefits of moving to an improved product design. Being at the forefront on the innovation front potentially also helped confirm the status of these high-volume intermediaries as market leaders.<sup>12</sup> More generally, scholars studying financial product innovation have found that strong network effects can give rise to big first mover advantages to innovations by large investment banks.<sup>13</sup>

Subsequent research suggests both that deviations from the boilerplate or standard-form occur more often than the strong network effects model might

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<sup>8</sup> E.g., John Burke, *Contract as Commodity: A Non Fiction Approach*, 24 SETON HALL LEGIS J. 285 (1999-2000); Hank T. Greely, *Contracts as Commodities: The Influence of Secondary Purchasers on the Form of the Contract*, 42 VAND. L. REV. 133 (1989).

<sup>9</sup> For an overview of the legal literature, see Clayton P. Gillette, *Standard Form Contracts* (2009 draft) (available at [http://lsr.nellco.org/nyu\\_lewp/181/](http://lsr.nellco.org/nyu_lewp/181/)).

<sup>10</sup> Marcel Kahan & Michael Klausner, *Standardization and Innovation in Corporate Contracting* (or 'The Economics of Boilerplate'), 83 VA. L. REV. 713 (1997).

<sup>11</sup> Stephen J. Choi & Mitu Gulati, *Innovation in Boilerplate Contracts: An Empirical Examination of Sovereign Debt Contracts*, \_\_ EMORY L. J. \_\_ (2004).

<sup>12</sup> E.g., Damon J. Phillips & Ezra W. Zuckerman, *Middle-Status Conformity: Theoretical Restatement and Empirical Demonstration in Two Markets* 107 *Amer. J. Soc.* 379 (2001) (suggesting that innovation typically arises from either those at the top of the status hierarchy, seeking to confirm that status, or those at the bottom, seeking to break into the market).

<sup>13</sup> Peter Tufano, *Financial Innovation*, in HANDBOOK OF ECONOMICS AND FINANCE (George M. Constantinides ed. 2003); more generally, see W. Scott Frame & Lawrence J. White, *Empirical Studies of Financial Innovation: Lots of Talk, Little Action?*, 42 J. ECON. LIT. 116 (2004).

predict and might also arise not from the impetus of high-volume intermediaries but instead from marginal players.<sup>14</sup> These innovations were perhaps less well known because they had not received wide adoption.<sup>15</sup> In effect, this later research suggested two distinct periods to the standardization process (as opposed to the single period implicit in the first set of article mentioned). During the first period there are innovations or deviations from the standard form, but they do not necessarily garner widespread adoption. These initial innovations can come from a wide range of parties. We conjecture that market participants at the margins, without a vested interest in maintaining the existing standard, will be the most likely to promote innovation in the second period. The dominant players, being the primary users of, and experts in, the existing standard, will be less likely to innovate in this first period. The second period, where a particular innovation becomes widely adopted may be where high-volume or high-status intermediaries play a key role. Approval of an innovation by official actors (in the sovereign debt context, a key industry group or the IMF may be such actors) might also have an impact on whether the innovation gained wide adoption.<sup>16</sup>

To summarize, the literature suggests two things. First, deviations away from the boilerplate can and do occur. But early versions of these innovations often receive little notice; indeed, it can be decades before an innovation gets picked up for wider adoption. Second, deviations from the standard-form do occasionally displace the old boilerplate and those displacements frequently correlate with the adoption of the deviation by a high-volume player.

Elsewhere in the legal literature, the social norms literature might also yield insights. The relevance has to do with the fact that boilerplate contract provisions, like social norms, are public goods. The question that is asked in the norms context, about what sets of factors and conditions result in the translation of rebellions against the existing norms into new dominant norms is similar to the one we are asking about contract evolution. Ellickson suggested that norm entrepreneurs are likely to be unusual; actors with superior technical, social and leadership skills.<sup>17</sup> He also speculated that endorsement by opinion leaders might be important in helping deviation from a prior norm displace the old norm. Boiled down, this Ellickson model can also be conceptualized in two stages: one where there are deviations from the existing norms; and two, where, after endorsement by an opinion leader, some of those rebellions gain popularity and supplant the old norm.

In contrast to the sparse literature on innovation, diffusion and standardization in the contract law area, there are numerous papers on this topic in

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<sup>14</sup> Mark C. Weidemaier, *Disputing Boilerplate*, \_\_ ARIZ. L. REV. \_\_ (2009); Mark C. Weidemaier, *Reforming Sovereign Lending Practices: Modern Initiatives in Historical Context* (UNCTAD Working Paper 2012); Mark C. Weidemaier, Robert Scott & Mitu Gulati, *Origin Myths, Contracts and the Hunt for Pari Passu*, \_\_ L. & SOC. INQUIRY \_\_ (2012); Scott & Gulati, *supra* \_\_ .

<sup>15</sup> Cf. Gugiatti & Richards (2004); Gelpert & Gulati (2008).

<sup>16</sup> Anna Gelpert & Mitu Gulati, *Public Symbol in Private Contract*, \_\_ WASH. U. L. Q. \_\_ (2006).

<sup>17</sup> Robert Ellickson, [title] AMER. L. & ECON. REV. (2001 paper)

other areas ranging from marketing, anthropology, economics, political science, sociology, geography and so on.<sup>18</sup> Of interest, given our conceptualization of standard-form contracts as products, is the literature on product innovation.<sup>19</sup> The context is somewhat different, in that the product innovation literature tends to be focused on commercial products rather than public goods. Nevertheless, there is interest in products in markets characterized by network effects (such as the VHS versus Betamax example). The literature is enormous and we do not attempt to summarize it. However, some of the findings in that literature that might help us construct a model of contract evolution.

Simplifying, the research suggests a cycle between innovation, diffusion, and the emergence of “dominant designs”. From a baseline where a certain product dominates the market, advances in technology (exogenous shocks) can suggest new possibilities for product improvement. Once the shock occurs, a window of opportunity for innovation opens and attempts are made to improve upon the existing dominant design.<sup>20</sup> When there are multiple deviations competing to dethrone the dominant design, this is referred to as the “era of ferment”.<sup>21</sup> When, from this era of ferment, one design emerges victorious, that takes on the mantle of dominant design. From there, there is calm until the next technological shock to the system. After which, ferment begins again. To quote from classic work by Anderson and Tushman, technological change arrives “through long periods of incremental change punctuated by revolutionary breakthroughs” and can be “fruitfully characterized as a sociocultural evolutionary process of variation, selection, and retention.”<sup>22</sup>

These models of innovation have been applied in the inter-market context as well. Among the questions asked in the inter-market context include what the dynamics are for successful innovations in one market diffusing into another market. Across national boundaries, the answer to the above question is likely to be determined by matters such as differences in market structures, cultural attitudes and local laws. As noted, the basic model across the various fields in which innovation and diffusion have been studied tends to have the shape of an S curve –

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<sup>18</sup> The literature is too vast to cite and we pretend no expertise in it. Early work on the topic includes, VIJAY MAHAJAN & ROBERT A. PETERSON, *MODELS FOR INNOVATION DIFFUSION* (1985); EVERETT ROGERS, *DIFFUSION OF INNOVATIONS* (1962); H. E. Pemberton, *The Curve of Culture Diffusion Rate*, \_\_ AM. SOC. REV. \_\_ (1936);

<sup>19</sup> Thanks to Barak Richman and Arti Rai for suggestions as to readings in this literature.

<sup>20</sup> See, e.g., William J. Abernathy & James M. Utterback, *Patterns of Industrial Innovation*, TECH. REV., June/July 1978; Rebecca M. Henderson & Kim B. Clark, *Architectural Innovation: The Reconfiguration of Existing Product Technologies and the Failure of Established Firms*, 35 Admin. Sci. Q. 9, 13-14 (1990); Steven Klepper, *Entry, Exit, Growth, and Innovation over the Product Life Cycle*, 86 AM. ECON. REV. 562, 562-63 (1996); Michael L. Tushman & Philip Anderson, *Technological Discontinuities and Organizational Environments*, 31 ADMIN. SCI. Q. 439, 441 (1986).

<sup>21</sup> Philip Anderson & Michael L. Tushman, *Technological Discontinuities and Dominant Designs: A Cyclical Model of Technological Change*, 35 ADMIN SCI. Q. 604, 610 (1990).

<sup>22</sup> *Id.* at 605.

ferment followed sharp adoption of the winning design and then stability that is followed eventually by another ferment stage.

Among the questions that have received attention in this literature that are relevant to our inquiry are those about the types of actors who are likely to be change agents. Incumbents, who dominate the existing market and may have established routines, are often reluctant to embrace change. Newer players (whether the actual contracting parties or intermediaries such as attorneys), seeking to establish a foothold, however, may be more willing to embrace new technologies. Early innovators, however, even in markets characterized by network effects, are not always the ones whose product wins the competition to be the dominant design.<sup>23</sup> Sometimes, there can be a long gestation period before an innovation emerges in a form that becomes dominant. Assistance from dominant players and opinion leaders may be necessary to shift to a new dominant design. Note also that a dominant design does not always emerge.<sup>24</sup> Whether a dominant design emerges will depend on factors such as the size of the technological shock that produced the ferment, the strength of network effects, the ease of appropriating the technology, and the market structure.<sup>25</sup>

### III. The Contract Evolution Cycle

Standard contract texts assume an idealized process where every contract contains the provisions that the parties and their lawyers have worked out will best serve their joint interests. Reality is different. Few contracts are drafted from scratch. Old contract templates provide the foundation for new contracts. This dynamic is particularly the case for markets where standard forms are common. This evolutionary characteristic of contracts will come as no surprise to practitioners.<sup>26</sup> Take the following from a 1916 speech by Paul Cravath:

“The provisions of the modern reorganization agreement and the modern corporate mortgage”, he warned, “are the result of the experience and prophetic vision of a great many able lawyers.... It would indeed be a courageous man who would say that any of the provisions which some of these lawyers have conceived to be wise should be rejected simply because he cannot for the moment think when or how it will become useful.”<sup>27</sup>

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<sup>23</sup> Some studies identify significant first mover advantages. E.g., Kalyanaram and Urban 1992; Robinson and Fornell 1985; Urban et al. 1986. Others suggest first mover advantages are often exaggerated. See Gerry Tellis [book].

<sup>24</sup> See Srinivasan, Lilien & Rangaswamy, *The Emergence of Dominant Designs* (2005 draft).

<sup>25</sup> *Id*; see also Srinivasan, Lilien & Rangaswamy, *Network Externalities and Pioneer Survival*, 68 J. MARKETING 41 (2006).

<sup>26</sup> For cites, see Scott & Gulati, *supra* \_\_.

<sup>27</sup> Cite; see also Allen & Overy, *Life After Lehman*, 2009 (quoting legendary banking lawyer, Philip Wood, as saying, with regards to the evolution of contracting practices: “Documents are like ships traveling in the ocean; they gather barnacles on their hull as they go”) (available at <http://www.allenoverly.com/AOWeb/binaries/53064.PDF>).

We are interested in how change occurs within this evolutionary model. We take two stylized facts as the basis for our analysis. Both draw from prior research using much the same data that we rely on here: that (a) contract provisions are slow to change; and (b) that when the change occurs, it tends to occur in clusters.<sup>28</sup> The first stylized fact tells us that deviations from the standard form are costly. Research suggests a variety of reasons for this cost including network externalities, learning externalities, cognitive biases, lawyer instincts toward herd behavior, asymmetric information, first mover costs and so on.<sup>29</sup> The second stylized fact tells us that once the inertia to change is overcome for a sufficiently large enough number of countries – in other words the benefits from change exceeds the cost for these countries – change to a new standard often occurs across multiple related contract terms. One additional stylized fact specific to the sovereign bond market is that the markets are segmented, leading to different boilerplate terms prevalent in the various market segments. In the sovereign bond context, two markets dominate overwhelmingly. And it is the dynamic of innovation and standardization that occurs as a function of the borrowing dynamic across these two markets that is the basis for our empirical tests. The two markets are the one based out of London (with standard forms governed by English law) and the one based out of New York (with standard forms governed by New York law). There are some sovereign bonds issued also in jurisdictions like Germany and Japan, but the numbers here are small. The English-law and New York-law markets are the two dominant markets, comprising the vast majority of all sovereign bonds issued to foreign investors, outside of the traditional AAA rated issuers such as the U.S., Japan, France and Germany, who issue under their local laws.

Drawing on the research reported in Part II, we break the evolutionary process of contract change into three stages. We start by assuming a pre-existing standard set of provisions being used in stage one. Without anything more, we expect the dominant standard in stage one to persist without change.

The transition from stage one to stage two requires a shock to overcome the inertia of the existing dominant standard. Events need to occur -- in the case of sovereign bonds a shock to the financial markets -- that lead to dissatisfaction with the existing provisions. With such an initial shock, we enter into stage two of our model. We predict that in stage two, players at the margins in stage two begin to experiment with modifications of the existing models. The top players in the market will resist any change to the use of the dominant standard from which the top players (particular lawyers) obtain a competitive advantage (if the lawyers are the primary source for the standard and thus can obtain more business by maintaining the standard). We hypothesize that initial experimentation with modifying boilerplate terms is an important precursor to a later broad shift in the boilerplate standard. To the extent the deviation is seen to be value enhancing, others begin to

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<sup>28</sup> See Choi, Gulati & Posner, *supra*; Choi & Gulati, *supra*; Scott & Gulati, *supra*

<sup>29</sup> Scott & Gulati, *supra*

use it. Despite the presence of experimentation in stage two, we hypothesize that adoption of any new standard is slow due to the resistance on the part of the top market participants.

Eventually, if there are enough shocks leading to large enough dissatisfaction in the market with the existing standards or external pressure from the public sector, the participants in the market will realize that a new standard is likely if not inevitable. Once market participants accept the move to a new standard, we posit that contracting activity enters into a new standardization stage, referred to here as stage three. In stage three, eventually, a majority of the market chooses between the different models at hand. The old model goes into a rapid decline and a new model begins to dominate. What we should have then is an S curve for the emergence of the new model and a reverse S for the deterioration of the old model. And the intersecting S curves should make an X. Where the two curves intersect, the X point, marks the spot where the transition between the old and new standard occurs. The change agents relevant at the standardization stage are likely to be different from those at the innovation stage, particular after the X point. We predict that it will primarily be the high-volume players who can transform an innovation into a market standard. It is these actors, because of their expertise in high-volume production and their desire to maintain their market-leader status despite the change in standard, who are most likely to invest in controlling the new boilerplate.

Across all three stages, we hypothesize that lawyers – the ones who are experts at drafting contracts – play a critical role in producing (or resisting) change. We predict that innovations/modifications at each stage will be more likely to arise from different types of law firms. From prior work, we know that the structure of the legal market from sovereign debt is such that a handful of firms dominate, with all the other players have small bits of the market.<sup>30</sup> In other words, the marginal actor and the high-volume intermediaries are easily identifiable in both the New York and London markets. That feature of these markets allows us to identify which of these different types of actors tend to feature more at the innovation, standardization and diffusion stages. There are, of course, other actors involved in these issuances as well; investment bankers and the issuers themselves, who can also be categorized in terms of the volume of deals they do. Although, our baseline prediction is that it is the lawyers who will be important in contract production, we examine the data on these other actors as well.

In sum, we test several hypotheses using our sovereign bond data and the shift from UACs to CACs in the New York law sovereign debt market. We first hypothesize that prior to a shock, the existing boilerplate standard will dominate with little to no innovation. Standards have inertia and are costly to change. Without any shock to move even marginal market participants away from the standard, we expect the existing standard to prevail in the market. Second, once shocks commence, we do not expect an immediate shift to a new standard. Instead,

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<sup>30</sup> *E.g.*, Choi & Gulati, *supra* note \_\_.



we predict an initial period of experimentation by more marginal players in the market. Third, with enough shocks and possibly external pressure, we predict that the shift to a new standard will accelerate, particularly once a shift to a new standard is viewed as likely in the marketplace, and then eventually slow as the new standard saturates the market (following a typical “S” curve from the product innovation literature). We predict that top market participants that derive value from the specific contract language (such as attorneys selling their services in part as contractual experts) will take the lead in innovation once it is clear that the market will shift away from the old standard.

#### **IV. The Dataset: Shocks and Clauses**

We utilize a dataset covering roughly twenty years of sovereign bond issuances. This is the era of the modern cross-border sovereign bond markets. Although there were a small number of sovereign bond issuances done prior to 1990, much of the lending in the pre-1990 period was in the form of syndicated loans. The bond market began growing significantly, in the wake of the Latin American Debt crisis of the late 1970s and early 1980s.<sup>31</sup> Our dataset goes between January 1, 1990 and July 1, 2011 and contains over 700 separate bond issues by roughly 50 sovereigns.

For our analysis of the evolutionary process for contract terms, we take as our starting point a period of relative calm in the international lending markets, the early 1990s. This is a period during which both the New York-law and English-law market had developed rather stable, albeit different, boilerplate contracts that evolved out of the experiences with the Latin American debt crisis. From that period of stability, we trace changes in contract terms as they occur before and after subsequent shocks to the sovereign market. We define “shocks” as events that, according to press accounts and policy discussions at the time, caused key actors to question the efficacy of the prevailing boilerplate. The shocks that we discuss have been extensively discussed in the literature relating to CACs.<sup>32</sup>

##### **A. The Clauses**

As noted earlier, the clauses we examine were at the center of reform debates relating to the New York-law market for sovereign bonds, through the period 1995-2003. This is the set of terms referred to as CACs. A sovereign bond is a multi-creditor contract. Typically, there will be hundreds of bondholders governed by a single bond issuance (which, today, is often in the billions of dollars or euros). Prior to 1990, for the most part, if the sovereign debtor needed to ask for debt relief, it needed to conclude a debt reduction agreement with each of the

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<sup>31</sup> On the shift from syndicated loans to bonds, see Graciela Kaminsky, *Crises and Sudden Stops: Evidence From the International Bond and Syndicated-Loan Market*, Bank of Japan Working Paper 2008-E-10 (available at <http://www.imes.boj.or.jp/research/papers/english/08-E-10.pdf>).

<sup>32</sup> For references, see Gelpern & Gulati, *supra* note \_\_

individual bondholders under the prevailing unanimity action clause or UAC. However, as the number of bondholders and their level of dispersion across the globe expanded – which it did, with the expansion of the bond market and the shift away from syndicated loans – the coordination problem became increasingly difficult to solve under UACs. In particular, individual bondholders, despite their small holdings, were able to hold up any collective attempt to renegotiate the debt. This holdout problem got exacerbated with the emergence of hedge funds that specialized in holding out (something that involved having deep pockets and high quality litigators). The proposed solution from policy and industry experts was for the contracts to be reformed to bind these holdouts to a restructuring, so long as some significant fraction of the creditors agreed to the reform. Hence the term “Collective Action Clause.”

What we do is to examine the evolution of this CAC. That is, the shift from the stage at which the dominant model in the market required individual consent for modification of terms, to the stage at which the new dominant model required collective consent. In numerical terms, a shift between a requirement of 100% approval from the various bondholders before a change to key contract terms could be made to a requirement of something less than 100%.

A significant literature on CACs already exists.<sup>33</sup> And it is growing further with the key role that CACs played in the Greek restructuring in 2012 and the recent contract reform initiative in the Eurozone that has the inclusion of CACs in all future Eurozone sovereign bonds at its center.<sup>34</sup> There are two significant differences between our analysis and prior examinations of CACs. First, because much of the existing literature on CACs is from either economics or finance, the focus is on the economic impact on adopting CACS; that is, the impact on the cost of capital for sovereign debtors.<sup>35</sup> Second, much of the research assumes that these bonds meaningfully differ along only a single dimension. That is, the vote that they require for the alteration of payment terms (by “payment”, we mean principal, interest, maturity and currency). An examination of the contracts, however, reveals that these CACs differ along a number of important dimensions other than the raw vote.

CAC provisions, which can take between a paragraph and multiple pages of text, are more complicated than the types of contracts that much of the literature assumes. This is important for purposes of achieving our goal, which is to

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<sup>33</sup> *E.g.*, Barry Eichengreen & Ashoka Mody, *Do Collective Action Clauses Raise Borrowing Costs?* 114 *ECON. J.* 247 (2004); Anthony Richards & Mark Gugiatti, *Do Collective Action Clauses Influence Bond Yields?*, 6 *INT’L FIN.* 415 (2003); Michael Bradley & Mitu Gulati, *Collective Action Clauses for the Eurozone: An Empirical Analysis* (2012 draft) (ssrn.com).

<sup>34</sup> W. Mark C. Weidemaier, *Reforming Sovereign Lending Practices: Modern Initiatives in Historical Context* (2012 draft) (available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1996763](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1996763)).

<sup>35</sup> *E.g.*, Mark Gugiatti & Anthony Richards, *Do Collective Action Clauses Influence Bond Yields? New Evidence from Emerging Markets* (2003). [www.rba.gov.au/rdp/rdp2003-02.pdf](http://www.rba.gov.au/rdp/rdp2003-02.pdf); F. Weinschelbaum & Jose Wynne, *Renegotiation, Collective Action Clauses and Sovereign Debt Markets*. 67 *J. INT’L ECON.* 47 (2005).

understand how contracts, when conceptualized as products, evolve. If we were examining the question of why, for example, Trek's standard road bike model, rather than that of Cervelo, became the dominant model in the market for road bicycles, we would not just look at the gear boxes for the two bikes. We would look at other features as well, such as the material used to construct the frame, the shape of the handle bars, the configuration of the configuration of the brake and gear controls, the types of tires, and so on. To take a different product analogy, the iPhones and Blackberries differ across many key characteristics. If we were examining, for example, when and how the iPhone displaced the Blackberry as the dominant phone model, we would look at the key characteristics of those two phone models across a range of characteristics – data storage, ease of typing, speed of internet access, data security, coolness and so on. Our goal is to compare the different CAC models in a similar fashion.

The difficulty with this perspective though is that the actual contract provisions, like actual products, differ across so many different dimensions that the analysis gets complicated quickly. Hence, we simplify and focus only on the key dimensions that affect the operation of a collective action clause.

Below, we describe the key dimensions along which we measure these CAC provisions. The most important aspect of the product is its vote requirement vis-à-vis the modification of payment terms. This is the primary dimension considered by prior research and is the dimension along which we allow the most variation across our different models. Along the other dimensions, we allow less variation so as to keep the number of different product models to a manageable number. We picked these other dimensions as a function of the key characteristics of these CACs that are discussed in the policy debates about need to adopt them.

The five dimensions that are used are (i) Vote required to modify payment terms ("Min Mod Vote"); (ii) Voter required to modify other key contract terms ("Other Vote"); (iii) Constraints on who can vote ("Disenfranchisement"); (iv) Whether the voting process has to take place at an actual physical meeting of the bondholders ("Mandatory Meeting"); and (v) Whether the vote to change payment terms has to occur bond by bond or whether the contracts have a mechanism that aggregates the votes across various different bonds that the sovereign debtor has issued ("Aggregation").

The five CAC dimensions are the ones that were debated publicly, in the context of the financial shocks mentioned above. We describe each more fully below. We note that there are other bondholder collectivization clauses that were adopted around the same period of time as the CACs relating to modification of terms. These clauses, such as those governing Acceleration and Bondholder Representation (trustees and committees), were also discussed extensively and adopted by many sovereigns during the period that we study. The modification CACs that we focus on, however, received the bulk of public attention.

## Dimensions of the Modification CAC

i. Vote Requirement – Payment Term Modification: CACs vary in terms of the vote fraction required to modify payment terms. For each bond, we calculate the lowest vote required to alter payment terms. This calculation is made as a function of features in the contract such as quorum and adjourned meeting provisions. Some bonds, for example, allow for the required vote to diminish if a quorum is not satisfied at the first bondholder meeting). For the bonds in our dataset, the vote requirements range from a high of 100% (unanimity) to a low of 18.75%. Because this is the most important dimension, we code the models in terms of all of their variations. The models, in New York and England have *Min Mod Vote* equal to either 1, .85, .75, .375, .25 or .1875.

ii. Vote Requirement – Modification of Other Key Terms: While research on CACs has primarily focused on the vote required to alter payment terms, the ability to alter non-payment terms can also be important to sovereign issuers seeking to restructure their bonds. Crucial non-payment terms include the negative pledge clauses, cross default provisions, acceleration provisions and governing law clauses. A sovereign seeking to do a restructuring can use its ability to threaten the alteration of key non-payment terms, assuming it has enough creditor support, to incentivize a restructuring. Because the ability to alter non-payment terms is likely less important than the ability to alter payment terms, we examine this provision along only three vote types. *Other Vote* is equal to either 1, .5 or .67 (we merge these two and call it .5) and .75. Since there are very few bonds taking the value of 1 for Other Vote, we essentially get variation between two values, 0.5 and 0.67.

iii. Disenfranchisement: It there is voting where a supermajority of voters can potentially outvote a minority holder and force her to suffer a haircut, the voters might want safeguards to make sure that the debtor is not able to manipulate the vote. However, this is not always the case. Some bondholders are willing to give the issuer wide leeway in terms of who gets to vote on the Modification CAC. Others, by contrast, restrict the voting to those bondholders who are not “owned or controlled” by the issuer. We code this variable, *Disen*, as taking two forms: 0 (no disenfranchisement provision) and 1 (a restriction on the issuer voting bonds it “owns or controls”). There are a handful of additional variations in the data, such as whether Central Banks are allowed to vote. We do not consider those.

iv. Mandatory Meetings: Some bonds require that any vote to decide on whether to activate a Modification CAC has to occur at a physical meeting of the bondholders. The requirement of a meeting typically has two effects, going in opposite directions: one, making it harder to restructure; the other, making it easier. On the one hand, a physical meeting of the holders allows them to coordinate; and that means that they might coordinate to block the intentions of the debtor. On the other hand, because meetings typically come

with quorum requirements (and diminishing quorum requirements if the quorum is not satisfied at the first meeting), the actual vote required at a meeting is generally lower than that required in the absence of a meeting requirement. This lower vote requirement, in theory, makes bonds with a meeting requirement easier to apply Modification CACs to than those without one. We code the *Mand Meet* variable as coming in two types: 0 (no meeting required) and 1 (meeting required)

v. Aggregation: The typical CAC operates within an individual bond. Any restructuring therefore has to be conducted bond by bond – a difficult and tedious exercise where a sovereign has hundreds of bonds outstanding, as can sometimes be the case. To solve this problem, some bonds use Aggregation clauses that operate as a function of an approval vote across all of the sovereign’s bonds (typically, a vote that is higher than the requirement in an individual bond). Because, there is only one type of Aggregation provision that was used up to 2011 (requiring an aggregated vote of 85% across the bonds, so long as individual bonds reach at least a 67% vote of the outstanding principal amount), we code the *Agg* variable as either 0 (no aggregation across bonds; each bond has to vote and approve the change individually) or 1 (aggregation across bonds is allowed).

We treat any particular combination of these five dimensions as our contract “model”. Our empirical tests focus on who introduces new models into the marketplace and when this introduction takes place.

## **B. The Agents**

As part of our examination of the contract evolutionary model, a key goal for us is to identify the key change agents. That is, the types of actors who tend to be leaders or laggards in the innovation (stage two of our model) to standardization (stage three) cycle. To be able to do this, we coded each bond for data for both the contract terms mentioned above and also for the identities of the key agents working on the deals. The agents include the issuer’s lawyers, the underwriter’s lawyers, and the lead investment bank. In terms of the counsel, we coded for the law firm in the legal jurisdiction of issue. That is, if the issue was under New York law, we coded for the New York based law firm that would presumably had had responsibility for crafting provisions that would work with the background New York law. Where the transaction in question was a restructuring, as opposed to a regular issuance, we also code that fact since the lawyers and bankers who tend to work on restructurings are often different from those who do offerings. There are other agents who are involved in these deals, such as the local counsel (e.g., the local counsel in South Africa on an issuance by the Republic of South Africa in New York, under New York law) and the secondary investment banks (that is the banks with smaller shares of the issue). Our understanding is that these actors play minimal roles in the contract drafting process. Hence, we did not collect data on their identities. Finally, since the lawyers and bankers on any deal are ultimately hired by

the sovereign issuer, we code for the identities of the issuers as possible architects as change.

Our model asked the question of whether change agents were likely to be marginal players or high-volume intermediaries. For a product market characterized by network effects, we predicted that activity was likely to come from the extremes. The data on lawyers and bankers helpfully maps onto the foregoing. There are a handful of firms that dominate the market. The figures in the Appendix detail the number of deals done by each of these bankers and lawyers during our study's 1990 to 2011 time period. The figures illustrate the dominance of a relatively few market participants for the New York and English-law sovereign bond markets. For example, in the New York law market, Cleary Gottlieb has more than 25% of the market on the issuer counsel's side and Sullivan & Cromwell has more than 25% on the underwriter counsel's side. We define high-volume intermediaries as those with more than 25% of the market. Basically, the graphs show that there are a handful of firms that dominate and then there are many others than only do a handful of deals each over a twenty-year period.

The data on Investment bankers does not show quite the same degree of skew as that on the lawyers. No single bank, in either the New York or English markets dominates to anywhere near the extent that we see on the lawyer side. Reported in a different paper, the data show that there tends to be a great deal of variation in bankers in that the same issuer will frequently change its lead bankers from deal to deal (most likely because the deals are put to an auction).<sup>36</sup> By contrast, the lawyers are long-term players. Further, while the bankers change, the lawyers for the bankers and the issuers appear to come in pairs – both having long term relationships with the issuer. Consistent with the foregoing, the data also reveal that when one set of lawyers changes (e.g., on the issuer side), the other set (on the underwriter side) also typically changes.

For purpose of the analysis that follows, we break the data on potential change agents down into quartiles. In the top quarter (quartile 1) we put the players who make up the top quarter of players in terms of deal volume. Then the next quarter and so on. Figures \_\_ through \_\_ illustrate the population distributions that make up the four quarters in the fashion described.

### **C. The Shocks**

In the model we sketched out in the prior section, we posited that innovation and standardization would occur as a function of external shocks that would call into question the standard model or the boilerplate. The shocks that we use as the basis for our investigation are the shocks that were reported in the press as having caused a rethinking of the existing terms in sovereign bonds. In our two-market

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<sup>36</sup> Michael Bradley, Mitu Gulati & Irving De Mira Salvatierra, *The Reputational Value of Lawyers: An Empirical Examination* (April 2012; on file).

system, we assume that shocks that directly impacts one market will be felt with a reduced influence in the other market. So, a shock in one market that produces a change to the boilerplate, might be felt only with diminished impact in a second market.

The three shocks we identify as having hit during our period of study are: the Mexican “Tequila” crisis (that resulted in a bailout from the U.S. (1995); the Asian financial crisis (that resulted in a number of IMF bailouts) (1997-98); and the Argentine default (IMF funding followed by a default) (2001).<sup>37</sup> These were the shocks that produced calls for reform, particularly in terms of the need to put in place mechanisms so that there was not a constant need for bailouts. Effectively then, the time period we study has three periods. First, the pre shock period of calm of 1990-1994. Then there is the 1995-2002 period during which multiple large shocks hit the global sovereign debt markets (that is the period of shocks). And then the post-shock period of 2002-2011. The three shocks mentioned all primarily hit the sovereign debt markets in New York – the sovereigns in question were primarily users of the New York market and the New York style boilerplate (Russia being an exception). Any impact of the shocks, therefore, should show up in a more marked fashion in the New York market.

As of this writing, in April 2012, the sovereign markets have been hit by a new shock, the Eurozone crisis. This shock has led to fresh calls for standard sovereign bond contract terms to be revised (and specifically, the CACs used on the European markets). Our data, however, only reaches up to the beginning of the Eurozone crisis.

Our dataset of bonds comprises of every sovereign bond available on the Thomson One Banker database up to July 1, 2011. This database has one of the largest collections of contemporary sovereign bonds. Our data on contract terms is based on the summary of terms provided in the offering documents (prospectuses, prospectus supplements and offering circulars) mentioned available on the databases mentioned above. While we have only a small subset of the actual contracts (roughly 30), we have no reason to think that the offering documents contain inaccurate descriptions of the underlying contract provisions. Further, our comparisons of the actual contracts with the disclosures in the offering documents provided an exact match on the provisions we examined.

## **V. Evidence on Innovation in the New York Models**

Based on the five CAC-related dimensions described in the prior section, we find 10 different CAC models to have been in use during the 1990-2011 period. In this section, we do two things. First, we examine the evolution of these different models over the three stages period of 1990-94 (pre shock period of stability); 1995-2001 (multi-shock period); and 2002-11 (post-shock period). For each stage,

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<sup>37</sup> For discussions of these crises, see, e.g., John Taylor; Paul Blustein; Roubini & Setser

we document those models in use that continue from the past as well as new models that appear in the stage. Second, we unpack the data to identify the types of agents associated with new model innovation during the different stages.

Our focus is on the timing of the introduction of new CAC models and the market participants associated with the innovation. We define a new model as the use of a new combination of the five CAC-related terms. Just like a bicycle model can vary from a prior model by changing one aspect of the bicycle, say the type of brake, we treat a particular contract as using a new model if any one of the five CAC-related terms change from any pre-existing model. For clarity, we give the models the name of the nation that first began using it. Since some of the models in our first stage arise out of the prior era, we have had to utilize a supplemental dataset (for naming purposes only). Thomson One Banker, our primary source for the 1990-2011 period, has relatively little data for the prior period, 1950-90. To examine the origins of the models during this period, we used data collected from the archives at the U.S. Library of Congress.

#### A. Stage One (Pre Shock Period of Stability)

To assess the introduction of new models in stage one, we start with three models that were already in use prior to stage one: Belgian Congo 1958, Ireland 1967 and Indonesia 1983. The Belgian Congo 1958 model is the full unanimity model, requiring 100% creditor approval to change either payment or non-payment terms. The Belgian Congo 1958 model dominated all through the 1800s and the 1900-1980 period, which essentially had no CACs (Min Mod Vote = 1 and Other Vote = 1).<sup>38</sup> The Ireland 1967 model allows for some modification, requiring 100% approval for payment term changes, but relaxing that requirement for non-payment terms (to 50%). Finally, the Indonesian 1983 model is an early version of the modern CAC (the one that dominates the 2002-2011 period). It allows for modification of both payment and non-payment terms with a less than 100% vote requirement (75% for payment; 50% for non-payment). In addition to these three pre-existing models, we look for whether any new models are introduced in stage one. Table 1 reports the different models that are in use in stage one. Figure 1 graphs the frequency of use of these models in stage one.

**Table 1: New York Models in Stage One (1990-1994)**

##### Pre-Existing Models

Model Name	Min Mod Vote	Other Vote	Disenfranchisement	Mandatory Meeting	Aggregation
Belgian Congo	1	1	0	0	0

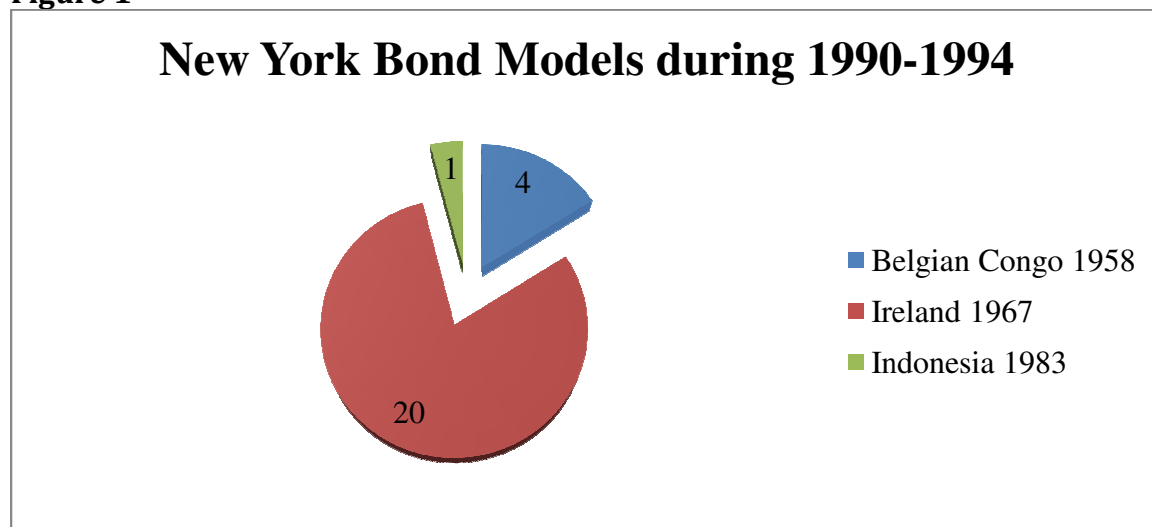
<sup>38</sup> See Weidemaier, supra note \_\_. We name it Belgian Congo 1958, because that is the first New York-law bond that we have from the post-World War II period in our Library of Congress dataset.



1958					
Ireland 1967	1	0.5	0	0	0
Indonesia 1983	0.75	0.5	0	0	0

As documented in Table 1, stage one is a period of calm. No new models are introduced during stage one. All of the models used during this period are carry overs from the prior period. They are also all two dimensional models – only two of the five dimensions show activity. We report the frequency of use of the models in stage one in Figure 1 below.

**Figure 1**



As Figure 1 shows, among these three models, a single model dominates the market for New York law bonds: Ireland 1967. This is the baseline model where the unanimous approval from the bondholders is required to alter payment terms (Min Mod Vote = 1), but non-payment terms can be altered with less than unanimity (Other Vote = 0.5).

In contrast, the Belgian Congo 1958 model had but a handful of adherents in stage one – it sees only four uses during stage one in issuances from Malaysia, Austria and Iceland. The other model in use in stage one is Indonesia 1983, with Min Mod Vote = 0.75 and Other Vote = 0.5. The Indonesian 1983 model has only one user during this period, Venezuela in 1991 (Indonesia itself no longer uses this model in stage one). Within this period itself though Venezuela switches over to the Ireland 1967 model, leaving no country actively using the Indonesia 1983 model by the end of stage one.

**B. Stage Two (Multi-Shock Period)**

Stage two begins with a shock: the Mexican debt crisis in 1995, where the U.S. bailout resulted in widespread discussion of the need to reform the unanimity model that dominated the New York-law market in stage one. The subsequent financial crises in Asia (1997-98) and Argentina (2001) were shocks that added to the concerns about the existing unanimity model and the need to move away from the bailout model. Table 2 reports on the CAC models in use in stage two.

**Table 2: New York Models in Stage Two**

**Pre-Existing Models**

<b>Model Name</b>	<b>Min Mod Vote</b>	<b>Other Vote</b>	<b>Disenfranchisement</b>	<b>Mandatory Meeting</b>	<b>Aggregation</b>
Belgian Congo 1958	1	1	0	0	0
Ireland 1967	1	0.5	0	0	0

**New Models**

<b>Model Name</b>	<b>Min Mod Vote</b>	<b>Other Vote</b>	<b>Disenfranchisement</b>	<b>Mandatory Meeting</b>	<b>Aggregation</b>
Bosnia 1997	1	0.5	1	0	0
Qatar 1999	0.1875	0.5	1	1	0
Egypt 2001	0.85	0.5	0	0	0
Kazakhstan-Indonesia 1997	0.75	0.5	0	0	0

From Table 2, note that the pre-existing models continue to find use in stage two. The old Belgian Congo 1958 model, the anti-CAC model, is used infrequently in the 1995-2001 period, finding only 9 uses. The Ireland 1967 model continues to be dominant with 86.2% of the uses.

It is in stage two that we see the first new models since 1990 emerge, indicating considerably more innovation than during the prior period. Three different sovereign issuers introduce new models. Bosnia 1997; Qatar 1999; and Egypt 2001. The Bosnian innovation is a relatively small one; it introduces a disenfranchisement clause that restricts the issuer from voting bonds it owns or controls. Qatar's innovation is more significant. It uses a model more commonly used in the English law market; with Min Mod Vote of 0.1875 and the requirement of a Mandatory Meeting. Egypt, by contrast, uses a high Min Mod Vote of 0.85, with

no meeting requirement. We treat one other model as a new introduction in stage two. Because the Indonesia 1983 model was abandoned in stage one, we treat Kazakhstan’s return to Indonesia 1983 model as a new innovation (effectively, the Kazakh-Indo 1997 model). The Kazakh-Indo 1997 model also gets use from Lebanon in 2000.

**Figure 2**

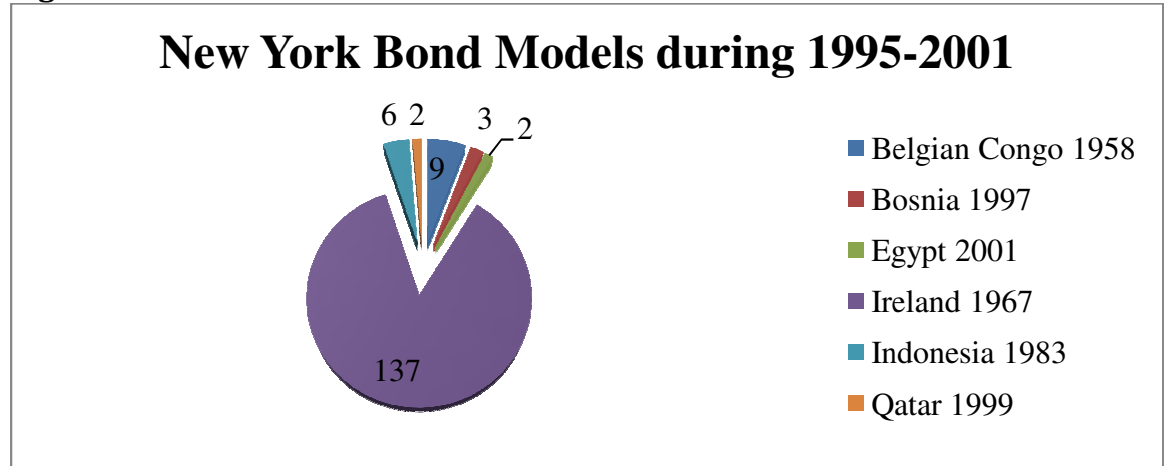


Figure 2 reports on the frequency of use of the models in stage two. From Figure 2 note that while there are new entrant models in stage two, The Ireland 1967 model that was dominant in stage one remains dominant in stage two. While innovation does occur initially after the Mexico shock—including in particular Bosnia 1997, Qatar 1999, Egypt 2001, and Kazakhstan-Indonesia 1997—few others attempt to adopt these models..

We next examine whether those market participants associated with the innovations in stage two are themselves marginal participants. We hypothesize that larger market participants will not shift away from the existing standard until it becomes clear that a shift to a new standard is clearly underway. In Table 3 below, we set out these new entrants in terms of who their lawyers and bankers are. In reporting the characteristics of these new entrants, we break down the lawyers, banker and issuer characteristics based on whether they are in the first, second, third or fourth quartiles in terms of the number of sovereign bond issuances for the 1990 to 2011 period. That is, if the issuer’s counsel for Kazakhstan is in the top 25% of issuers, by volume, it gets a rank of 1 in the issuer’s counsel box.<sup>39</sup>

**Table 3: Market Rank Associated with New Models in Stage Two**

Issuer	Issuer	Issuer	I Bank Counsel	I Bank
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<sup>39</sup> Quartiles could also be done in terms of the dollar (or euro) value of deals. The results there remain the same. The results remain largely the same if we use breakdowns in terms of the top 10%, next 10% and so on.

Name	Quartile	Counsel Quartile	Quartile	Quartile
Bosnia 1997	4	4	n.a.	n.a.
Kazakhstan-Indonesia 1997	4	4	4	2
Qatar 1999	4	4	4	2
Egypt 2001	4	4	4	2

Table 3 shows that the new models all arise from low-volume actors. The issuers, issuer's counsel and underwriter's counsel are all in the bottom quartile for each of these new models that show up in stage two. The only column in which we do not see the quartiles in the fourth column is the column for investment banks. Unlike the issuer counsel and investment bank counsel who have a vested interest in maintaining a particular contract with which they maintain their dominance, investment banks are less tied to the language of any particular contract. Instead, investment banks compete along other dimensions, including the size of the underwriter's discount. The higher relative rank (issuances quartile) of the investment banks associated with the contract model innovations in stage two compared with the other intermediaries who compete more directly based on contract language is consistent with the different dimension along which investment banks compete. In comparison to the lawyers in these deals, who tend to have long-term relationships with the issuer, the investment banks tend to be promiscuous, changing issuers frequently.

### C. Stage Three (Post-Shock Period)

In stage two, the period characterized by shocks, we saw a number of new models enter the CAC competition, but they all came from small players. Stage three starts in 2002, after the Argentine default in late 2001. The Argentine default is significant because it is the last of the major shocks that occur for sovereigns that issued under New York law during the period of our study. We conjecture that the cumulative effect of the Mexican, Asian Financial, and Argentine shocks, as well as public sector responses to these shocks, led market participants to expect that a change would occur to the Ireland 1967 standard. After the Argentine default in late 2000, and increase in the decibel level of the complaints regarding the old contract models, it became clear by 2003 that there would be a new model. In 2002, the IMF had famously proposed an alternative to CACs, a sovereign bankruptcy court (SDRM). Prior to that, the leading players in the market, such as the finance ministries of Mexico and Brazil, had been deeply skeptical about CACs. However, the prospect of SDRM, along with the release of a G-20 draft of proposed new clauses, and endorsement of CACs by the U.S. Treasury, created a sense that CACs

would happen. But the question was, who would design the model that would be the new dominant design.<sup>40</sup>

While no additional shocks occur for New York law governed bond issuances from 2002 to 2011 (hence we refer to this period as one of stability), the realization that a change in the boilerplate standard was to occur led to both a rapid change in the amount of contract innovation as well as the type market participants involved in these changes. Table 4 reports on the types of pre-existing and new CAC models used in stage three.

**Table 4: New York Models in Stage Three**

**Pre-Existing Models**

<b>Model Name</b>	<b>Min Mod Vote</b>	<b>Other Vote</b>	<b>Disenfranchisement</b>	<b>Mandatory Meeting</b>	<b>Aggregation</b>
Belgian Congo	1	1	0	0	0
Ireland 1967	1	0.5	0	0	0
Bosnia 1997	1	0.5	1	0	0
Qatar 1999	0.1875	0.5	1	1	0
Egypt 2001	0.85	0.5	0	0	0
Kazakhstan-Indonesia 1997	0.75	0.5	0	0	0

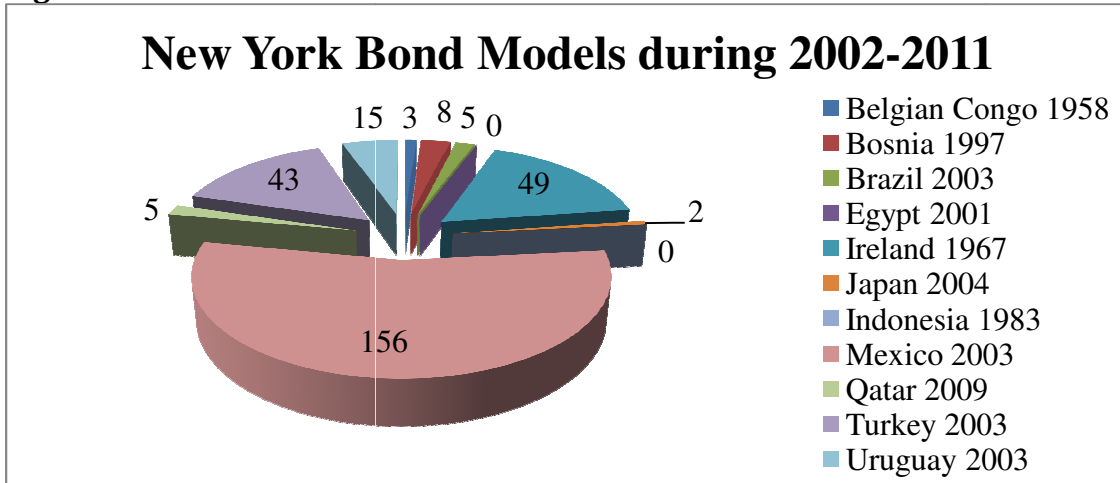
**New Models**

<b>Model Name</b>	<b>Min Mod Vote</b>	<b>Other Vote</b>	<b>Disenfranchisement</b>	<b>Mandatory Meeting</b>	<b>Aggregation</b>
Mexico 2003	0.75	0.75	1	0	0
Brazil 2003	0.85	0.75	1	0	0
Turkey 2003	0.75	0.75	0	0	1
Uruguay 2003	0.75	0.75	1	0	1
Qatar 2009	0.1875	0.5	1	1	0

We see four new models show up in 2003: Mexico 2003; Brazil 2003, Uruguay 2003 and Turkey 2003. That means that almost half of all the new models we see over a 20 year period show up in a single year, 2003 (this is a big year for new models in the English-law market as well, as we will see later). The fifth new model during this period is Qatar 2009. Figure 3 sets out the models and the frequency of their use in stage three.

<sup>40</sup> See Anna Gelpern & Mitu Gulati, *Public Symbol in Private Contract*, \_\_ Wash U. L. Q. \_\_ (2006).

**Figure 3**



While the Ireland 1967 model still persists in stage three, it is far from being the dominant model. Instead, in 2003, on the heels of the heated debate over the SDRM versus CACs (bankruptcy versus contract) in 2002, we see four new models show up: Mexico 2003; Brazil 2003; Uruguay 2003, and Turkey 2003. Two features of these four new models are interesting. First, they all show up during the same year, 2003. This is the point at which the dominant model shifts in the New York market as the Ireland 1967 model exits. Second, these models in stage three in 2003, unlike what we saw in stage two, are from the blue bloods of the market – the high volume issuers and their high volume lawyers. These four models are, we surmise, the big players competing to be the authors of the new the dominant design. Table 5 reports on the issuers and associated intermediaries that put forward new competing models in Stage 3.

**Table 5: Market Rank Associated with New Models in Stage Three**

Issuer Name	Issuer Quartile	Issuer Counsel Quartile	I Bank Counsel Quartile	I Bank Quartile
Mexico 2003	1	1	1	2
Brazil 2003	1	1	1	1
Turkey 2003	1	1	1	2
Uruguay 2003	1	4	n.a.	2
Qatar 2009	4	4	4	1

Note from Table 5 that the four issuers that sought to compete over a new CAC standard in 2003 are all in the top quartile in terms of issuances. The attorney intermediaries associated with the four competing models in 2003 are also generally in the top quartile in terms of issuances. The issuer counsel and investment bank counsel for Mexico 2003, Brazil 2003, and Turkey 2003 are all in the top quartile. The one exception is Uruguay 2003, where the issuer counsel is in the bottom quartile. Uruguay would also have mostly 1s, if we looked at any of its offerings other than its first one in 2003, which was a restructuring and therefore had a special set of lawyers (restructuring lawyers) and had no investment banker counsel. Overall, the point is that unlike in stage two, the issuer, issuer counsel, and investment counsel associated with the new models that are introduced immediately after it becomes clear that a change in the standard will occur are the top market participants. The active participation of the top market participants is consistent with the view that these participants have a competitive stake in controlling the contract standard. Attorneys that control the standard have a competitive advantage in selling their services to future sovereigns seeking to issue under the prevailing market standard. As with the new models in stage two, the investment bank associated with the new models in stage three are not always in the top quartile, consistent with the view that the investment bank itself does not compete based on contract language but instead along other dimensions such as the underwriting discount.

As Figure 3 depicts, despite the immediate presence of four competing new models in 2003, eventually, the model that dominates is the Mexico 2003 model. Over half of the sovereign bond issuances in the 2002 to 2011 period use the Mexico 2003 model of the CAC. In some ways, Mexico 2003 has the most illustrious pedigree. Not only do its issuer's counsel, investment bank counsel, and issuer all show up in quartile 1, but they are each the leaders within their quartiles. One other thing to note is Qatar 2009. While a new model in stage three, Qatar 2009 is notable in that the issuer, issuer counsel, investment bank counsel, and indeed investment bank are all the bottom quartile in terms of issuances. Importantly, by 2009, the Mexico 2003 model was securely in place as the standard leaving little room for competition. The Qatar 2009 model was thus more akin to the marginal innovations that occurred in stage two than the models in 2003 that the top market participants put into play to compete for the new standard.

It is worth noting that the models of stage three are all but small variations on the innovations that showed up earlier in stage two. The shift from unanimity to something less (either 75% or 85% for Min Mod Vote) had already been demonstrated to work by smaller players like Egypt 2001 (85%) and Kazakhstan 1997 (75%). In stage three, the Mexico 2003 and Brazil 2003 models used the same vote thresholds. In other words, the key dimension, the vote required to change payment terms, remained the same in the stage three new models. We conjecture that learning on how this key dimension played out in sovereign bond deals (including how they were priced) in stage two allowed stage three new models to

incorporate these changes at low cost. What changed was the addition of important ancillary terms, including Disenfranchisement provisions, higher vote thresholds for Other Vote, and Aggregation. It was like Steve Jobs (our top market participants) taking Xerox's mouse (the Payment related term in the stage two new models) and making it more acceptable to the wider market (with the addition of important ancillary terms). No one remembers Xerox's mouse anymore. Job's mouse, by contrast, is one of the dominant designs on the market.

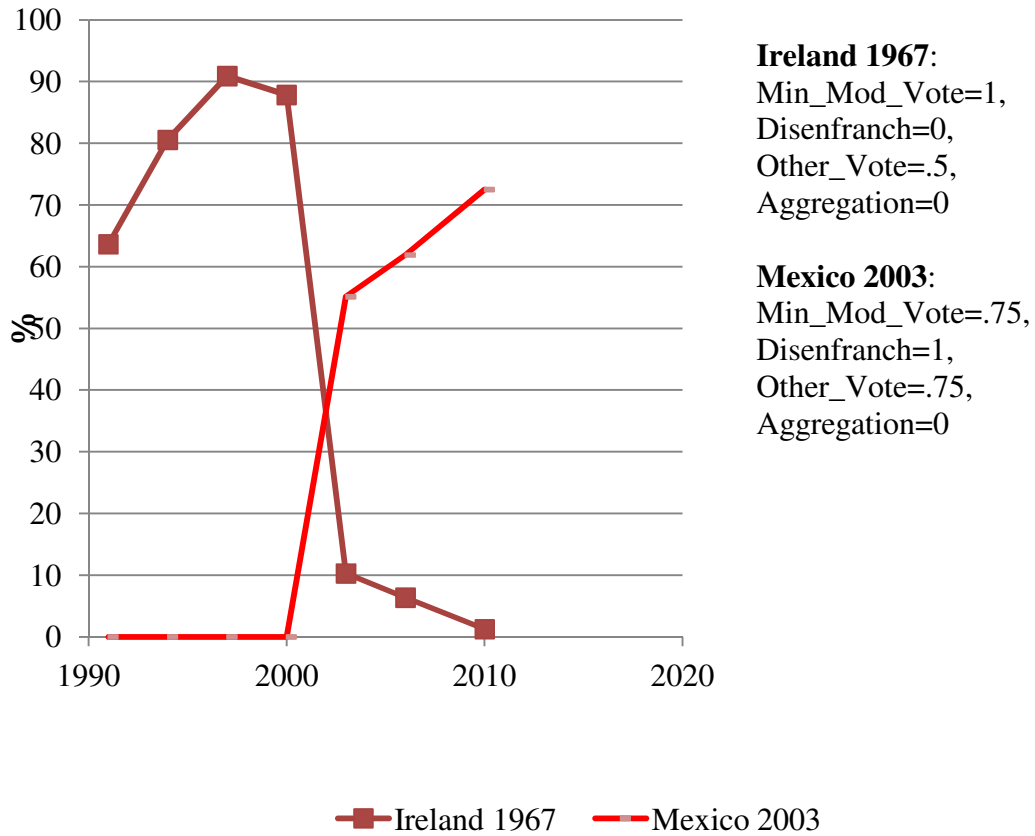
#### **D. Summary of Results**

We find that shifts in boilerplate contract terms do not occur without some initial shock. Absent a shock, boilerplate standards persist. During stage one, we report no new model innovations. Instead, all contracts use one of the three pre-existing CAC models and most use the dominant Ireland 1967 standard. Shocks can in turn induce a change in the market standard. An initial shock (Mexico 1995), can spur marginal players in the market to commence experimentation, reducing but not eliminating the dominance of a pre-existing standard (corresponding with stage two of our model). Eventually, the cumulative effect of the crises in Mexico 1995, Asia in 1997-1998, and Argentina in 2002 as well as public sector pressure produced a loud call for change to some CAC model in NY law governed bonds. Once market participants expect a change in the contract standard, changes in market practices take place rapidly (stage three of our model).

Figure 4 below depicts the percentage market share of the two New York Bond CAC standards in effect during the time period of our study: Ireland 1967 and Mexico 2003. Note from Figure 4 that a rapid although not universal shift to Mexico occurs after Mexico's 2003 issuance.

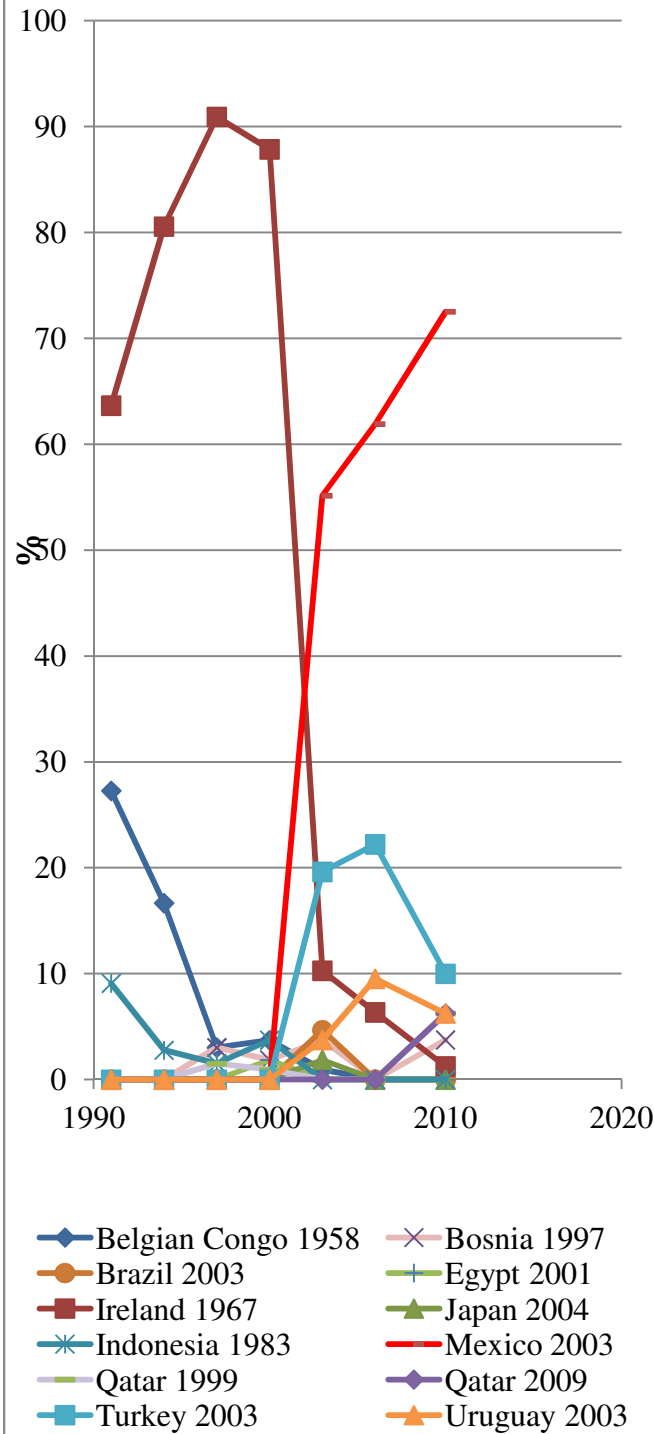


### Figure 4: New York Bond Models



Importantly, the shift to the Mexico 2003 standard does not occur in isolation. Figure 5 reports on the market share of other competing models during our sample time period.

### Figure 5: New York Bond Models



**Belgian Congo 1958:**  
 Min\_Mod\_Vote=1,Disenfranch==0, Other\_Vote=1, Aggregation=0

**Ireland 1967:**  
 Min\_Mod\_Vote=1,Disenfranch=0, Other\_Vote=.5, Aggregation=0

**Japan 2004:**  
 Min\_Mod\_Vote=1,Disenfranch=0, Other\_Vote=.75, Aggregation=0

**Bosnia 1997:**  
 Min\_Mod\_Vote=1,Disenfranch=1, Other\_Vote=.5, Aggregation=0

**Egypt 2001:** Min\_Mod\_Vote=.85, Other\_Vote=.5, Aggregation=0

**Brazil 2003:**  
 Min\_Mod\_Vote=.85, Other\_Vote=.75, Aggregation=0

**Mexico 2003:**  
 Min\_Mod\_Vote=.75,Disenfranch=1, Other\_Vote=.75, Aggregation=0

**Indonesia 1983:**  
 Min\_Mod\_Vote=.75,Disenfranch=0, Other\_Vote=.5, Aggregation=0

**Turkey 2003:**  
 Min\_Mod\_Vote=.75,Disenfranch=0, Other\_Vote=.75, Aggregation=0

**Uruguay 2003:**  
 Min\_Mod\_Vote=.75,Disenfranch=1, Other\_Vote=.75, Aggregation=1

**Qatar 1999:**  
 Min\_Mod\_Vote=.1875, Disenfranch=0, Other\_Vote=.5, Mand\_Meet=1, Aggregation=0

**Qatar 2009:**  
 Min\_Mod\_Vote=.1875, Disenfranch=1, Other\_Vote=.5, Mand\_Meet=1, Aggregation=0

Figure 5 depicts the more marginal competing models prior to the Mexico 2003 shift. During stage two of our analysis, we saw new models from Bosnia 1997,

Qatar 1999, and Egypt 2001. Not only are these issuers in the bottom quartile in term of issuances but the intermediaries most concerned about the contract language (the issuer counsel and the underwriter counsel) are also in the bottom quartile in terms of issuances.

In contrast, once it becomes clear that a new standard is to emerge in the market, after for example the incidence of Ireland 1967 and Mexico 2003 cross in dominance (or at the X mark in the chart), the source of innovation in models changes. During stage three of our analysis, we see new models from Mexico 2003, Brazil 2003, Turkey 2003, Uruguay 2003, and Qatar 2009. As we report above, these issuers are not only in the top quartile in terms of issuances but the issuer counsel and underwriter counsel are generally in the top quartile as well. This finding is consistent with the hypothesis that once a shift to a new standard becomes clear, the top market participants who compete based on the type of contract they offer will have a strong incentive to take an active role in generating this new standard. The resulting competition among top players results in (a) a delay in the eventual shift to a universal new standard and (b) a time period during which there are competing standards with more than negligible market share until the universal new standard becomes dominant. In terms of Figure 5, this dynamic leads to the S curve of adoption of the Mexico 2003 standard that we observe.

#### **IV. English Law Bonds and Other Market Shifts**

The sovereign bond market today, and over the period we study (1990-2011), is dominated by issuances out of two locations, New York and London.<sup>41</sup> Over the years, the contract documentation practices in these two markets (under either New York or English law) have developed in different ways. The fact that sovereign issuers themselves, over long periods of time, have shown themselves unlikely to switch between the English law or New York law enables us to examine how and when contract provisions migrate back and forth, independent of movements by the issuers themselves. This is important for purposes of unpacking the model of contract evolution. We posit a model where an important source of change in contract terms is experience with a potential new term in a parallel market. London and New York are our parallel markets.

With segmented markets, as in the sovereign context, with different boilerplates, large shifts (the shift to new boilerplate) may occur at separate times in the different markets. Put differently, a shock that hits one market hard might have diminished impact on another market. However, learning in one market is likely to diffuse into parallel markets. A product that succeeds in becoming the dominant design is likely to garner attention in the parallel market, with actors in the second market beginning to ask whether they should consider experimenting. Innovations can of course also occur independent of prior precedent. What we posit, however, is

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<sup>41</sup> Michael Bradley & Mitu Gulati, *Collective Action Clauses for the Eurozone: An Empirical Analysis* (2012 draft).

that an important mechanism of change is a borrowing dynamic that occurs across related but separate markets. Put simply, the boilerplate in one market can be the basis for innovation and deviation from the boilerplate in a sister market.

What we saw in the New York data was that the big players brought their innovations to the table only when it had become clear in 2002 that there was going to be a new model. In 2002, the IMF put out its SDRM proposal, the G-20's expert group released a set of draft clauses, and the U.S. Treasury began urging nations to adopt CACs. It was clear by then that there was going to be a change. It was simply a matter of what the change was going to look like. At this point, the biggest players in the New York law market brought out their models to compete to become the new standard – Mexico 2003, Brazil 2003, Uruguay 2003 and Turkey 2003. No other year in our data saw quite as many new models, let alone with the imprimatur of the big players. Most important, one of those models, Mexico 2003, quickly became the dominant design. The other models each got a few adherents, but nowhere near as many as Mexico 2003, which was a model designed by the most elite players in the business (highest volume issuer, highest volume issuer counsel and highest volume underwriter counsel).

What we see for the English law market is more muted during the 2002-11 period; what we called stage three for New York. The shocks in the New York law market though are not irrelevant to the English-law bond market. New models are introduced in the English-law market during the 2002-11 time period. Market participants introduced five new models during the 2002-2011 period in the English-law market. Four of those models, like with New York, cluster in the 2003-04 period. First, Bahrain and Morocco in 2003. Then, Hungary and Finland in 2004. It is worth reminding ourselves that this is an unusual number of new models in either market – most years see no new models.

The new models in the English-law context, however, are more consistent with stage two of our model (innovation and experimentation) rather than a big shift toward a new standard that defines a shift into stage three. The new models are all from relatively small and marginal issuers. In terms of the 2003 models, Bahrain and Morocco are tiny players in the sovereign market – they barely do any issuances. The 2004 models come from two bigger issuers, Hungary and Finland, but as Table 6 shows, we see nothing like we saw in New York with the biggest players competing to be the author of the new dominant design. Finally, there is Ukraine 2007, another tiny issuer. In effect, what we see during the 2002-2011 period, particularly in 2003-04 is more fermentation consistent with the English-law market remaining in stage two rather than transitioning to stage three. Consistent with that, we do not see a new dominant design arise in the English-law market during the time period of our study (which ends in 2011).

#### **Table 6: New English Models (2002-2011)**

<b>Issuer Name</b>	<b>Issuer Quartile</b>	<b>Issuer Counsel Quartile</b>	<b>I Bank Counsel Quartile</b>	<b>I Bank Quartile</b>
Bahrain 2003	4	4	3	2
Morocco 2003	4	3	4	1
Hungary 2004	3	n.a.	1	2
Finland 2004	3	n.a.	1	2
Ukraine 2007	4	2	1	1

In terms of the actual model characteristics, all of the new innovations during this period move closer to the New York model in terms of raising the Min Mod Vote above the prior 0.1875 level that dominated in the earlier period (this was the Sweden 1977 model). The new models also incorporate some other features of the New York model, removing mandatory meetings, raising Other Vote and including Disenfranchisement. Morocco and Bahrain in 2003, take relatively modest steps toward the New York model (that is, Mexico 2003), by using a Min Mod of 0.25 and 0.375 respectively. The two new models introduced in the English market in 2004, Hungary and Finland, by contrast, are more aggressive in essentially adopting the New York model (the Mexico 2003 model) with Min Mod Vote = 0.75. And we see in Table 6, that Hungary 2004 and Finland 2004 are in a higher quartile than the prior innovators such as Bahrain 2003 and Morocco 2003, they are still not akin in status level to what Brazil 2003 and Mexico 2003 in the New York market.

We speculate that the English-law sovereign market did not suffer a big direct shock in the same way that the New York-law market did with Argentina in late 2001 (Argentina did almost all its foreign issuances on the New York market). The shocks in the New York-law market diffused to the English-law market and led more marginal players to start their own experimentation and innovation with the existing English-law models, leading to the new models we observe in 2002 to 2011. Nonetheless, there were no opinion leaders such as the IMF urging change in the English-law market in 2003. If anything, the Bank of England was more focused on inducing change in the New York-law market. Absent a clear signal in the market that the existing boilerplate standard (Sweden 1977) was going to change, top market participants in the English-law market in 2003 did not put forward new models to compete for this standard.

As of this writing, in April 2012 though, the equivalent of 2002 in the New York market appears to be taking place in the English-law market. The Eurozone sovereign debt crisis hit the European markets (and the English-law market for

sovereign bonds in particular) hard in 2011. Greece restructured in March 2012, in the largest sovereign bond restructuring ever done. And the Eurozone's Bonds and Bills Committee issued a set of proposed new CACs for Eurozone sovereigns (much more aggressive ones than the ones that have become standard in New York). The old model, Sweden 1977, is waning. We expect to see a new dominant design show up in the English-law market starting in 2013, and not just for the Eurozone nations, as the English-law market enters stage three of our model.

## **VII. Conclusion**

In the business context, contracting parties generally do not draft contracts in a vacuum, arising newly formed for any particular deal. Instead, contracting parties rely heavily on boilerplate terms. The use of boilerplate is well known. And boilerplate can change if the benefits from using a new standard outweigh the costs (from network externalities, legal uncertainty and other sources). What is less understood is the process through which one boilerplate standard gives way to a new standard. If the benefits of using a new standard outweigh the costs of sticking with a boilerplate do we observe instantaneous shifts to new standards?

Our contribution is to demonstrate that new contract innovations in at least one important contracting context—the sovereign bond market—occur through a class S pattern from the product innovation literature. Prior to any shock, existing standards are sticky and innovation sparse (stage one of our model). External forces can precipitate a change in the standard, such as the shocks in the sovereign bond market we observe during the time period of our study. Rather than result in an immediate shift to a new standard, these shocks initially lead to a period of experimentation on the part of more marginal players (stage two of our model). Top players have a vested interest in supporting the existing standard through which they maintain their competitive dominance. Stage two represents the initial low positive slope portion of the S pattern for the introduction of a new standard.

Stage two continues until market participants come to the conclusion that a shift in the standard will occur (the X tipping point in our analysis). In the sovereign debt context, we conjecture that prior learning from contract innovation in stage two, the cumulative impact of shocks, and public sector pressure led to the tipping point when top market participants abandoned the old standard and began competition over the new standard. In other contexts, other combination of factors including pressure from the public sector (e.g., the IMF) and approval from key industry groups (e.g., the Institute of International Finance or IIF) are likely critical in reaching such a tipping point for a contract term standard.

Once market participants expect a shift in the standard, we enter stage three of our model. In stage three, top market participants switch from defenders of the existing status quo to promoters of their own individual visions of the coming new standard. Competing visions can then lead to multiple new standards in stage three with one competitor gaining market share to become the new standard (as is the

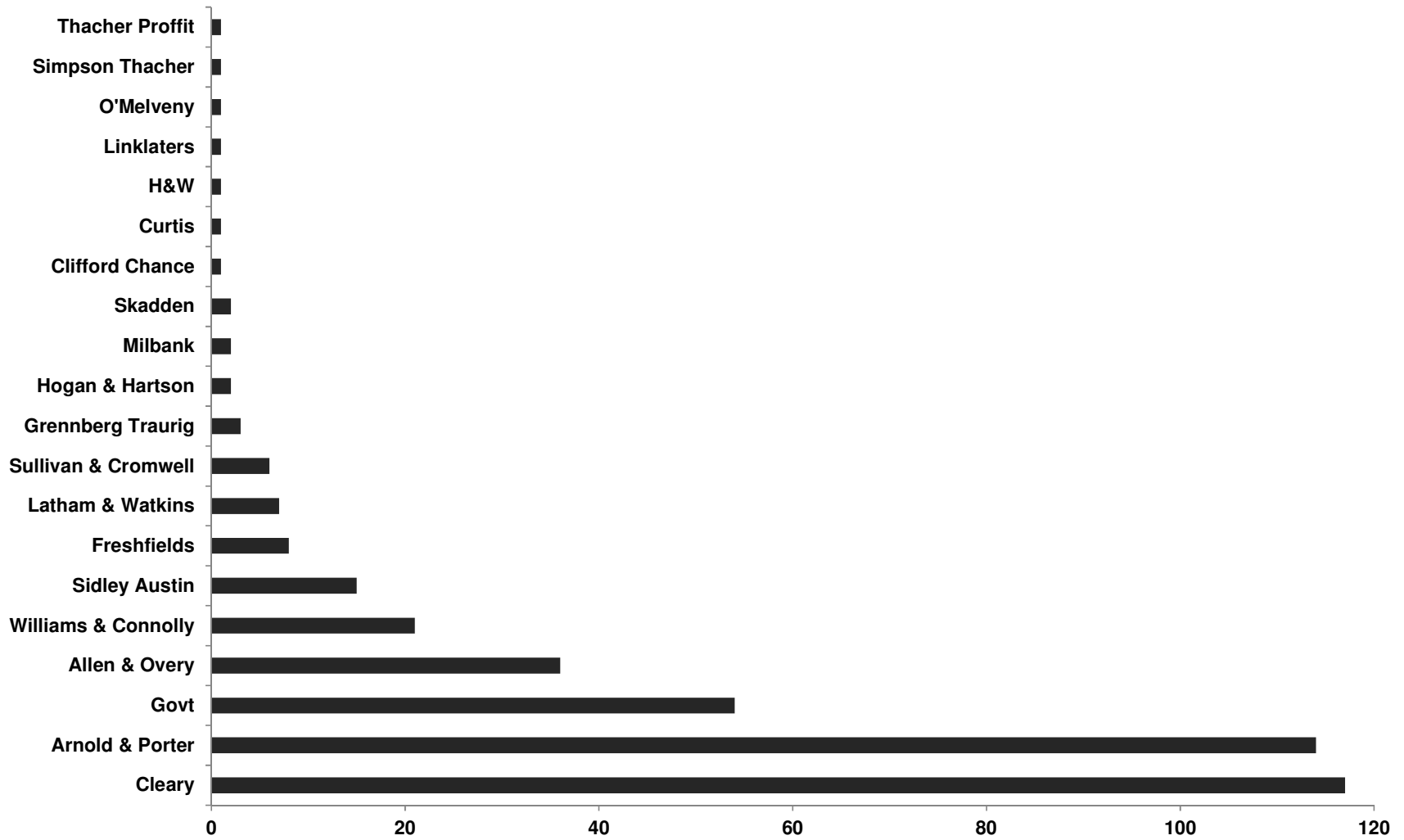
case for the Mexico 2003 standard). The rapid gain in market share represents the high positive slope portion of the S pattern. There is a corresponding drop in the market share of the old standard (in our case the Ireland 1967 standard). Where the market share of the new standard and old standards cross, or the X marks the spot point, we conjecture that the incentive to compete for a new standard is at a maximum. It is at this cross point in our dataset that we observe not only the Mexico 2003 but also the Brazil 2003, Uruguay 2003, and Turkey 2003 models introduced.

We also observe that standards may vary across differing market segments. The English law governed sovereign bonds historically had very different collective action terms compared with the New York law governed bonds. When standards differ by market segments, innovations in one market, the New York law market, can have an effect (although indirect), on innovations in another market, the English law market. This effect nonetheless is muted. The shocks and resulting contract innovations in the New York law market did spur innovation and experimentation in the English-law market. But opinion leaders in the English-law market did not call for a shift to a new CAC standard during the time period of our study. Consequently, without a clear signal that the English law standard was going to change, the market participants involved in the innovation and experimentation were only the marginal players up until 2011. Looking forward, we expect that the recent Greece sovereign debt shock and the frequent public sector calls for change today will lead the English law market and its top market participants to compete more vigorously to generate a new English law CAC standard.

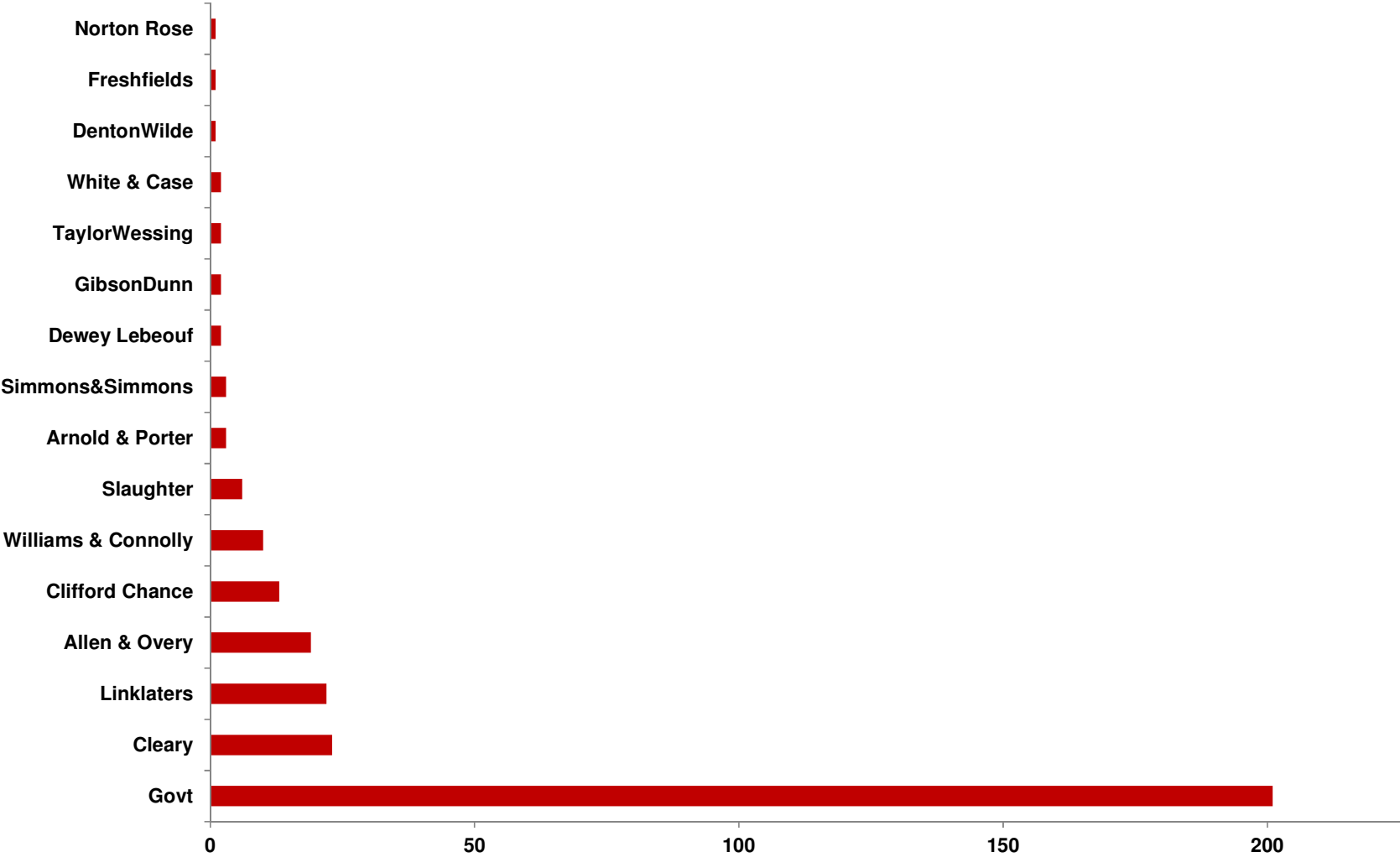
**Appendix: Volume of Deals Under New York and English Law**



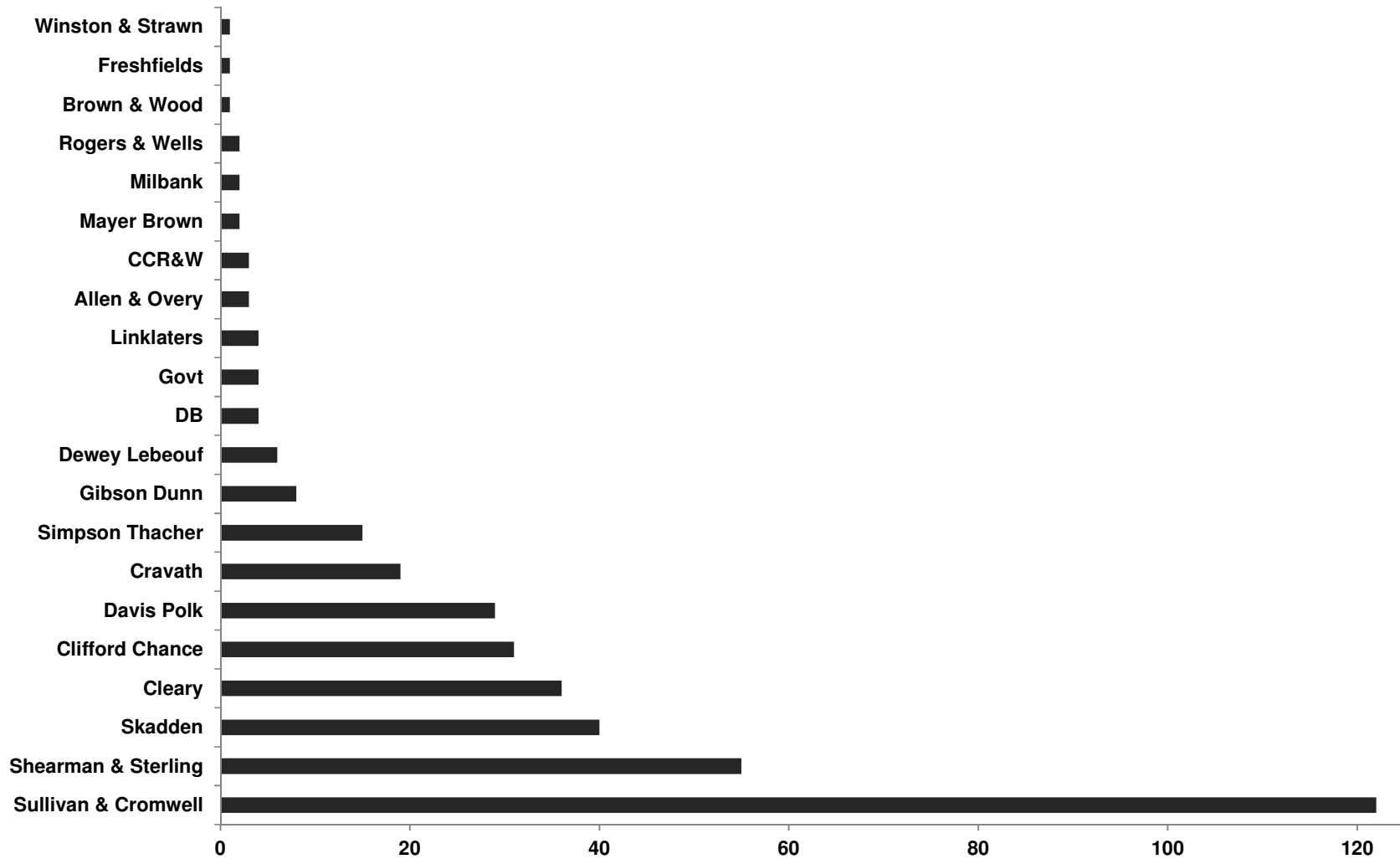
## NY Issuer Counsel, 1990-2011 (USDollar)



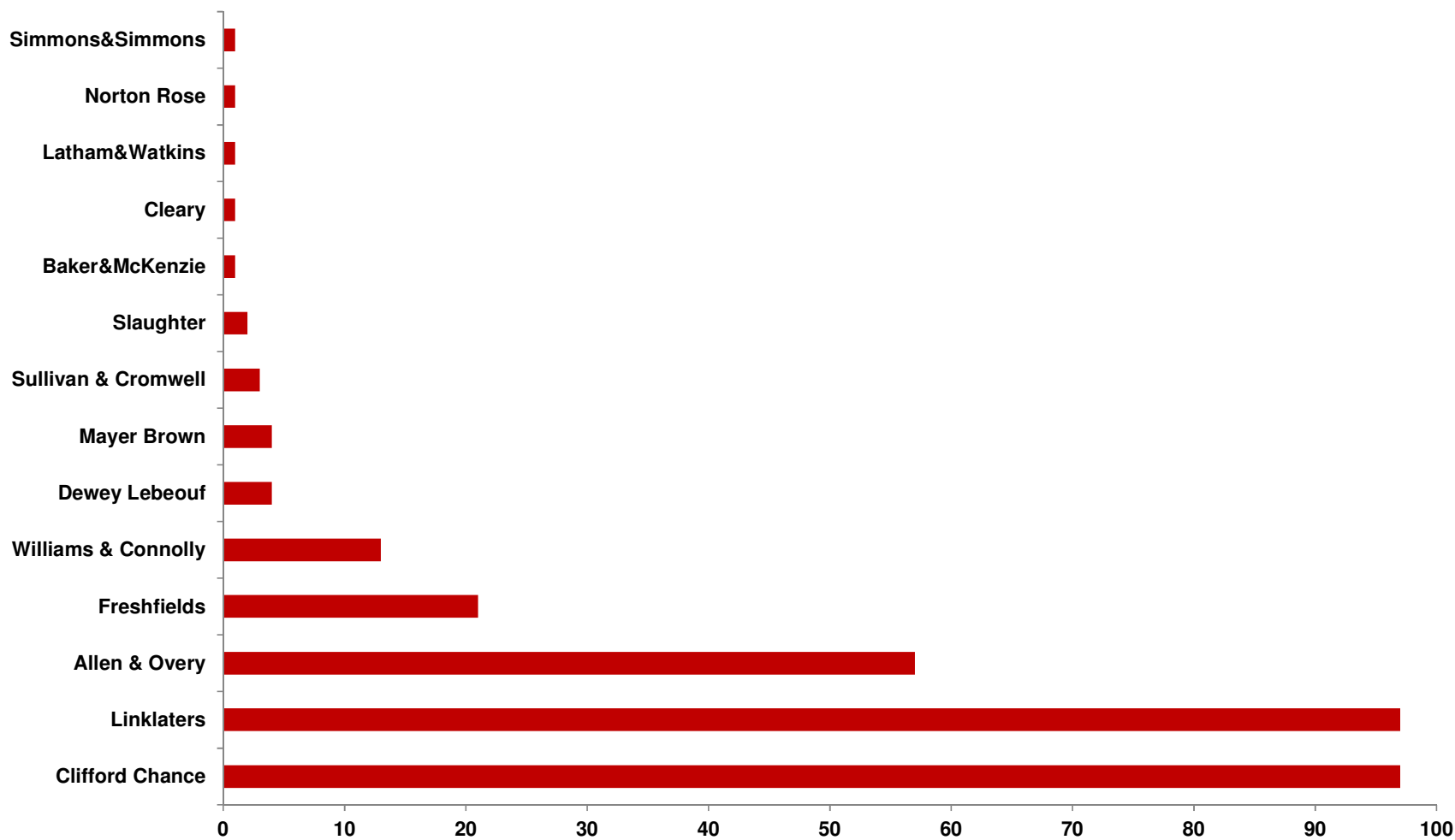
# English Issuer Counsel, 1990-2011 (USdollar, pound and euro)



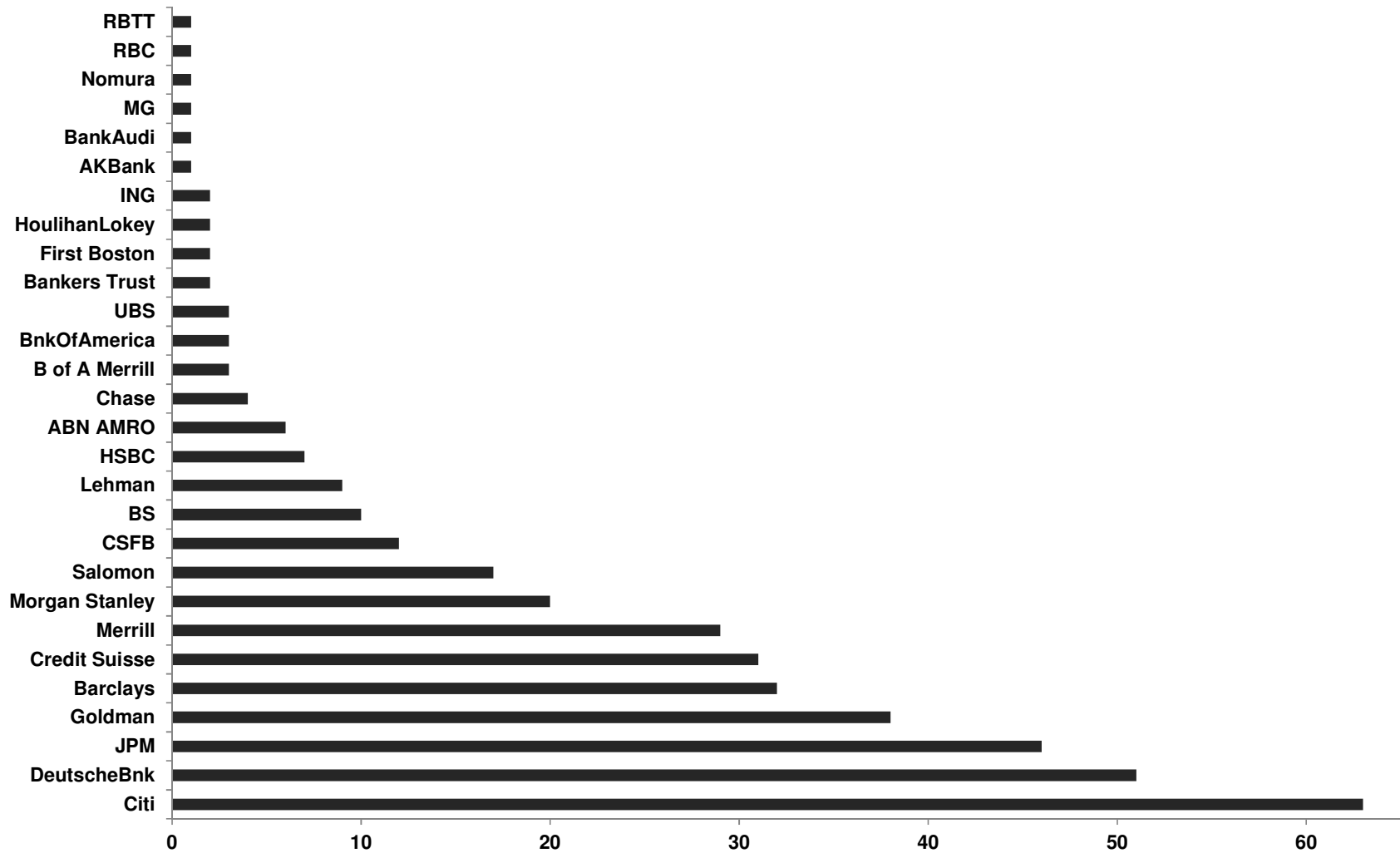
## NY Investment Bank Counsel, 1990-2011 (USDollar)



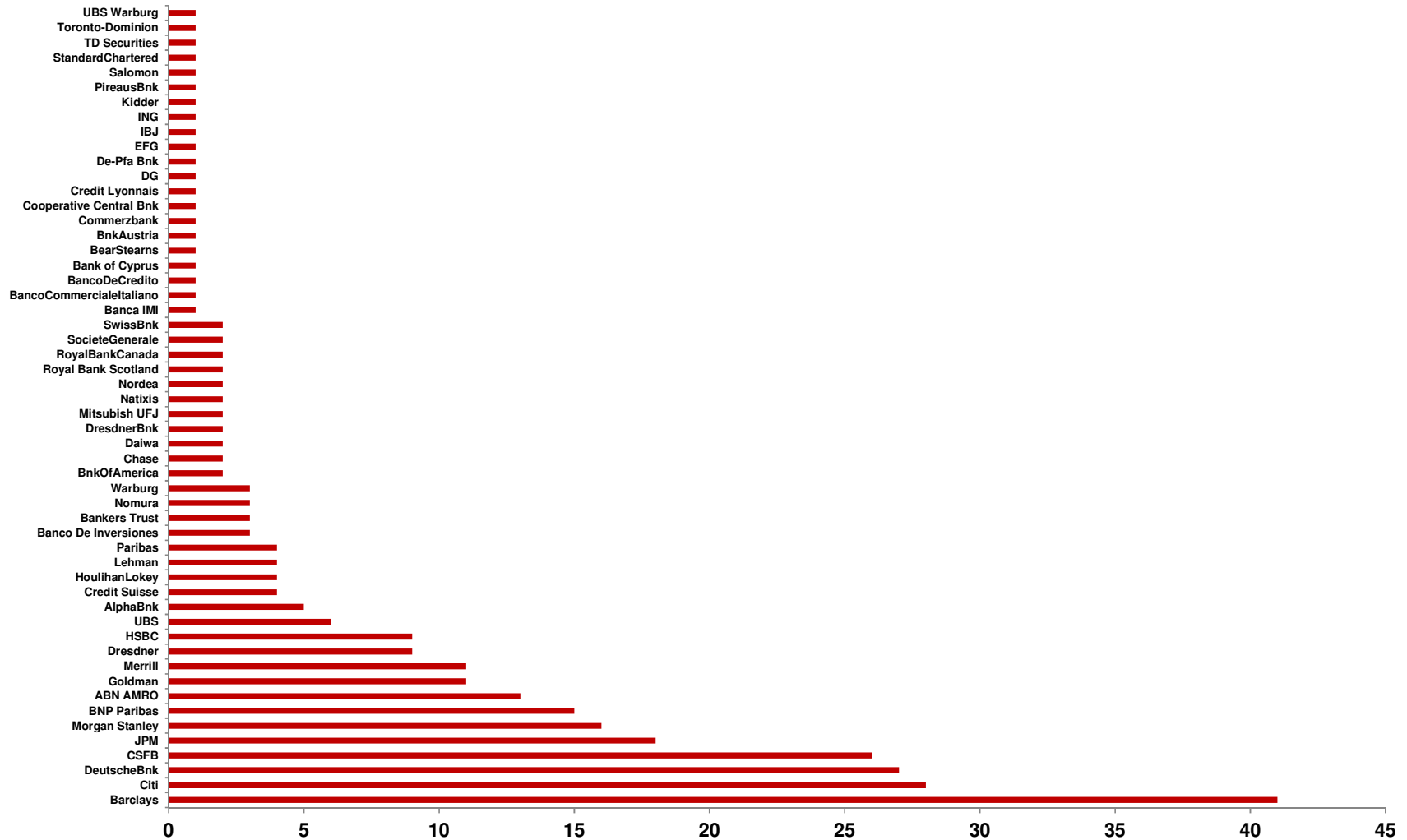
## English Investment Bank Counsel, 1990-2011 (USdollar, euro and pound)



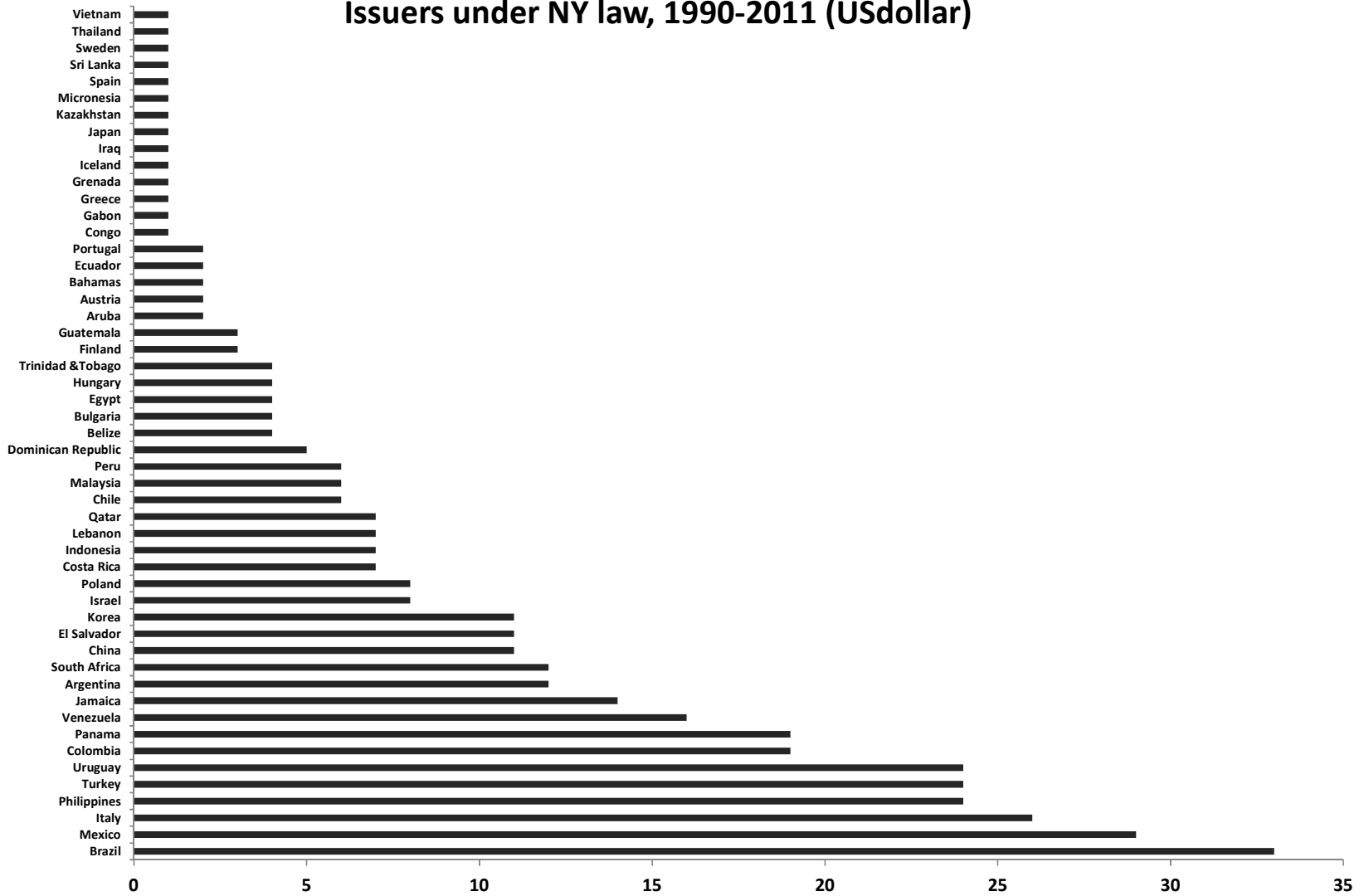
## NY Investment Bank, 1990-2011 (USDollar)



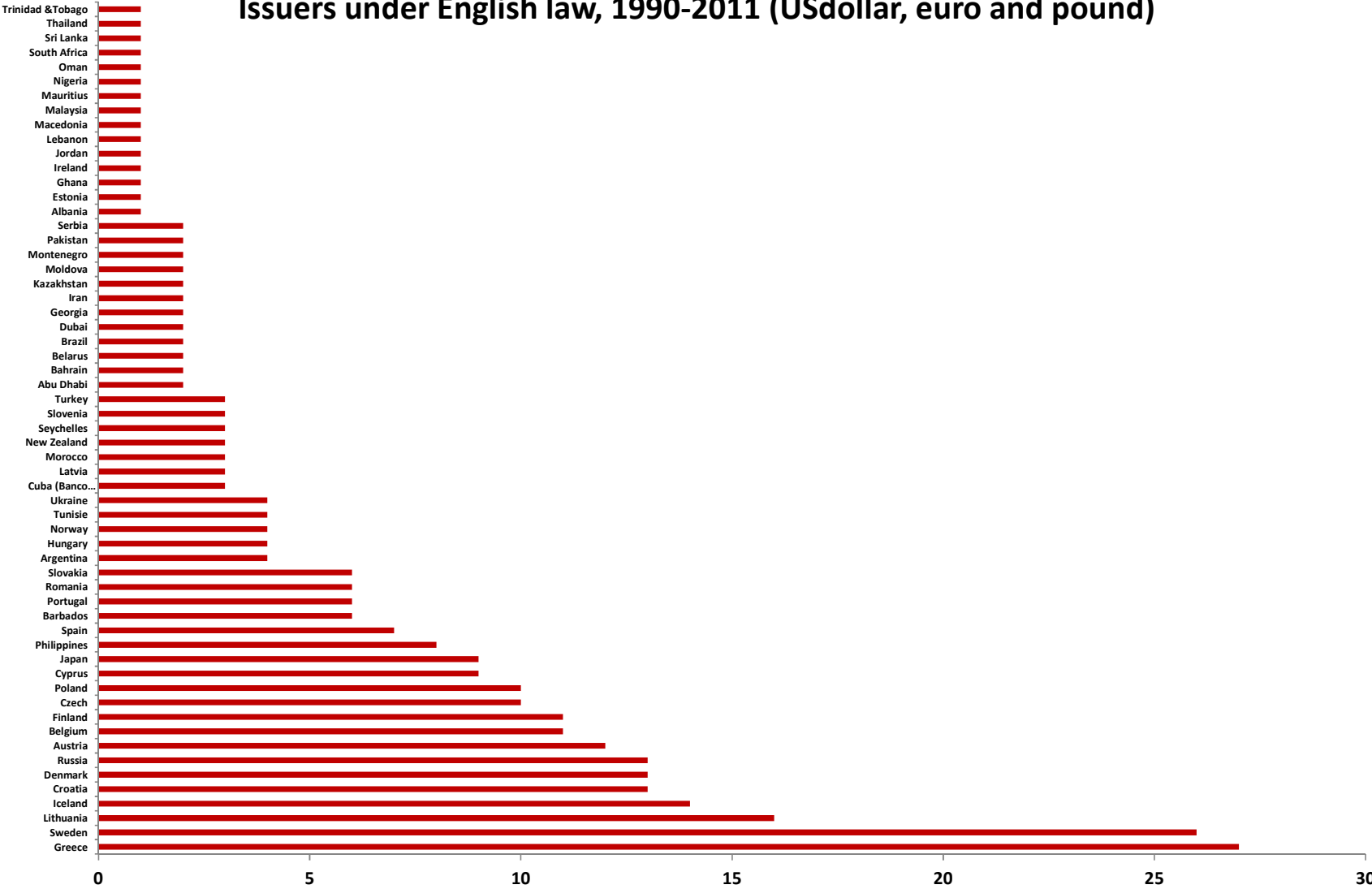
# English Investment Bank, 1990-2011 (USdollar, euro and pound)



## Issuers under NY law, 1990-2011 (USDollar)



# Issuers under English law, 1990-2011 (USDollar, euro and pound)





**CONTRACT AND INNOVATION**

*Ronald J. Gilson,<sup>\*</sup> Charles F. Sabel<sup>\*\*</sup> & Robert E. Scott<sup>\*\*\*</sup>*

**I. INTRODUCTION**

Contract is broadly regarded as a cohesive body of law precise enough to facilitate transactions across very different domains, yet open and flexible enough to accommodate and eventually discipline substantial variations and changes in commercial practice without sacrificing its cohesion. There is disagreement as to whether contract achieves these ends best when judges most fully respect the autonomy of the parties, and decide disputes principally by reference to the formal agreements they enter, or when instead judges are invited to inquire into the context of the parties' dealings, and decide disputes with reference to their practices and informal understandings. But there is little disagreement that contract law, as developed by generalist judges, approximates the ideal image of the common law as a highly decentralized and sensitive institution for responding incrementally to incipient changes in the parties' relations. Thus, common law courts are commonly believed fully capable of extending the reach of existing legal principles to emergent forms of agreement without undermining the security of actors who continue to rely on traditional doctrine.

This familiar picture of the development of contract in our view mis-portrays the appropriate role of generalist courts in developing and adjudicating disputes under novel contract forms and terms, and therefore mischaracterizes the ways in which generalist courts do, and do not, effectively support innovation in contract law. The goal of this Essay is to begin replacing the erroneous picture with a more accurate one. We argue

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<sup>\*</sup> Marc & Eva Stern Professor of Law and Business, Columbia University; Charles J. Meyers Professor of Law and Business, Stanford University; and European Corporate Governance Institute.

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first and most fundamentally that contractual innovation comes to courts as it were later and more fully fledged than the standard picture allows. Highly stylized, the trajectory of innovation in contract we find is this: Private actors respond to exogenous shocks in their economic environment by changing existing structures or procedures to make them efficient under the new circumstances. The need to stabilize the changes in business arrangements and dealings under them in turn induces responsive innovation in contractual forms.<sup>1</sup>

When markets are thick in the sense that many actors face similar changes in their dealings and stand to benefit from concerted responses to them, the affected parties through collective action often will institutionalize the innovative contract forms and terms. Depending on the precise character of the collective action problems they face, the resulting regime for adapting contract to the particulars of their context—what we will call a contextualizing regime—may be entirely private (with contract terms developed by industry associations and disputes resolved by private arbitration), largely public (with terms developed by an administrative agency in consultation with trade associations and disputes resolved by an administrative tribunal) or some more complex combination of these as where courts enforce the collectively determined contract forms.<sup>2</sup> The nature of the regime, moreover, will vary according to the level of uncertainty<sup>3</sup> faced

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<sup>1</sup> In this Essay, we examine the role of generalist courts in the emergence of innovations in commercial contracting between sophisticated parties. We argue elsewhere that any theory of optimal contract design and interpretation requires a separation of the question of consumer protection -- whether a particular contract is exploitive and, in turn, what terms would be reasonable -- from the design and interpretation of commercial contracts. Consumer protection is an important goal of public policy. But, we argue, placing the responsibility for advancing this goal in the hands of generalist courts charged with the task of contract enforcement and interpretation is a category error. Ronald G. Gilson, Charles F. Sabel & Robert E. Scott, *Text and Context: The Role of Uncertainty and Scale in Contract Design and Interpretation* (mimeo 2012).

<sup>2</sup> We extend to contractual innovations the categorization of contextualizing regimes developed in Charles F. Sabel & William H. Simon, *Contextualizing Regimes: Institutionalization as a Response to the Limits of Interpretation and Policy Engineering*, 110 Mich. L. Rev. --- (2012).

<sup>3</sup> It is commonplace to follow Frank Knight and distinguish between risk – the likelihood of an event that can be estimated probabilistically, and uncertainty, the likelihood of whose occurrence, or even whether it could happen at all, is unknown. FRANK H. KNIGHT, RISK UNCERTAINTY AND PROFIT, (1921). See Ronald J. Gilson, Charles F. Sabel & Robert E. Scott, *Contracting for Innovation: Vertical Disintegration and Interfirm Collaboration*, 109 Colum. L. Rev. 431, 433 (2009); Daniel A. Farber,

by the actors. When uncertainty is low (insiders to the activity know what to do but judges are ignorant of the relevant details and likely to remain so), attention will be focused on elaborating specialized terms and industry codes. When uncertainty is high—neither insiders nor outsiders can say reliably what should be done—attention will focus on the creation of a joint framework for exploring new possibilities and mitigating hazards.

When markets are thin and the actors few and scattered, and levels of uncertainty are high, parties facing similar problems cannot rely on collective action to institutionalize contractual innovation. In these circumstances innovation occurs initially in bi-lateral relationships. Here, the parties, in the very process of collaboration, develop governance mechanisms based on rich and regular exchange of information on the project's progress that allows each to ascertain the other's capacity fruitfully to proceed. This same exchange of information creates enough mutual transparency so that opportunism can generally be detected before it has ruinous consequences for the more vulnerable party. These collaborative arrangements—commonly found in supply chains, joint efforts to develop new technologies and preliminary agreements—differ from traditional contracts in that they typically obligate the parties to jointly explore possibilities, without committing them to execute any specific project. Nevertheless, the purpose of these bi-lateral arrangements, as of the institutionalized contextualizing regimes that come with scale, is to harmonize contractual relation and context. This process of contracting for innovation is a governance framework designed to *create* a context in which it is possible to ascertain whether extended collaboration is possible and desirable.

In short, whether contractual responses to changes in the economic environment take the form of bi-lateral collaborative agreements between the participating firms, or complex, collective efforts through industry groups or complex public-private

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Uncertainty, available at: <http://ssrn.com/abstract=1555343>. In the context of a transaction, both risk and uncertainty will typically be present in most transactions, but in different proportions. For expositional purposes, we will treat the term uncertainty as covering both probabilistic assessments and circumstances where probabilistic assessments cannot be made, except where we otherwise specify.

“regulatory” structures , they are the vehicles for contractual innovation that respond to substantive change in the business environment.

It is only when such contextualizing responses<sup>4</sup> take form, or are well on the way to formation, that generalist common law courts systematically begin to encounter significant innovations in contract. Prior to that point, there is unlikely to be disputes that lead to litigation. The choice then posed for the generalist judge is not merely (as the standard picture suggests) how to weave a partial and incipient innovation into the fabric of contract doctrine. Rather, the fundamental choice is (a) whether to accept the output of the innovative contractual or institutionalized structure even when it deviates (for reasons particular to the context) from outcomes the court would reach in applying its normal rules of contract interpretation, and (b) when the court does generally defer to the judgments (and instructions) that emerge from the innovative contractual structure, whether and when to superintend its operation so that parties do not exploit their counterparties.

If contract innovation does indeed reach generalist courts through the mediating institution of the contextualizing regime, then our third argument follows directly: The role of the generalist court is more limited, and different, from the one generally depicted. The court’s role is more limited because, as innovations accumulate and contextualizing regimes multiply, the proportion of cases properly decided under the general rules of contract declines in relation to the proportion resolved in accord with the principles and rules of the various regimes. And the court’s role is also different because the problem of how best to manage relations in contextualizing regimes requires courts to determine when to defer to them, and when superintending correction by policing opportunism is necessary. That the role of the generalist judge is more limited and different from that

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<sup>4</sup> We refer to both the bi-lateral arrangements and the institutionalized regimes that arise through collective actions as forms of “contextualizing regimes.” The argument for applying a unitary label is that in both the bi-lateral and collective action contexts the key is that parties create their own context and, we will argue, courts must not seek to understand, interpret or otherwise engage with that context. Alternatively, we could describe the overall process functionally: Institutionalizing contractual innovations is accomplished in two ways: bilateral contracts in thin markets, like collaborative contracting for innovation, and contextual regimes that result from solving collective action problems in thick markets.

normally portrayed does not make judges and courts less central to the development of contract law. We will see that contextualizing regimes are vulnerable to disruption in many ways, and a proper balance between judicial deference to and intervention in their operation is a necessary, though not sufficient condition for their survival.

The Essay proceeds as follows. Part II develops the general argument of the relation between contractual innovation and contextualizing regimes with regard to a particular exemplar – the emergence of contracting for innovation in global supply chains, platform production and project development that have figured prominently in recent years. Part III discusses contextualizing regimes more systematically, situating them in relation to the kinds of environments—high, intermediate or low levels of uncertainty, thick or thin markets—in which they arise. In Part IV, we illustrate the fragilities of contextualizing regimes and the innovations they generate and suggest why increased attention by the courts to their proper role in relation to these regimes may itself be a palliative, and a first step towards institutional improvements. Part V briefly concludes.

## **II. CONTRACTING FOR INNOVATION AS AN INNOVATION IN CONTRACTING**

In this Part, we address the central feature of our account of the determinants of innovation in contract design: uncertainty. We develop this through an example in which the dramatic increase in the uncertainty associated with product design required radical innovations in the contract forms that were needed to support businesses efforts to operate under ongoing conditions of high uncertainty. We argue that innovation in contract design is stimulated by three factors that operate along different dimensions but are highly interactive. Exogenous shocks produce dramatic changes in the structure of efficient business arrangements, whether because of changes in one or more of the firm or its industry's economic environment or in the relevant regulatory environment. In turn, the change in efficient business arrangements evoked by the shock induces innovation in the contractual forms that institutionalize the new business arrangements. These new contractual arrangements are highly sensitive to the regulatory power of the state. That power is exercised through the adjudicatory process; in other words, generalist

courts have to get the scope of enforcement right. This interactive process is neither simple nor monotonic, and in each instance the nature and extent of the innovation is a product of differing levels of uncertainty.

### **A. The Evolution of Innovation**

In previous work, we identified the exogenous shock that marked the emergence of collaborative contracting in global supply chains, platform production and project development as what is loosely called “the information revolution.”<sup>5</sup> Innovations cascaded, often leading to improvement cycles that became self-perpetuating, devaluing or disrupting existing and apparently robust solutions as they progress. The resulting high levels of uncertainty rendered prior contracting forms obsolete: existing transactional structures, including contingent contracting through modular exchange, relational contracting and vertical integration, offered no solution to the contracting problem the parties confronted. Rather, in diverse industries ranging from contract manufacturing of advanced electronics, to contracts between suppliers of sophisticated components and manufacturers of agricultural equipment, and collaborations between biotech firms with innovative technologies for indentifying compounds with promising therapeutic features and large pharmaceutical companies with deep knowledge of particular pathologies and expertise in the regulatory and commercial complexities of bringing new drugs to market, these changes led to an increase in inter-firm relations with *both* parties expecting to innovate jointly.<sup>6</sup>

In some of these settings the parties anticipate that joint exploration, if successful, will resolve the initial uncertainty and give rise to familiar contractual problems.<sup>7</sup> In the case of the pharmaceutical collaborations, for example, as uncertainty is reduced, reliance

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<sup>5</sup> Gilson, Sabel & Scott, *Contracting for Innovation*, supra note --.

<sup>6</sup> Francine Lafontaine & Margaret Slade, *Vertical Integration and Firm Boundaries: The Evidence*, 45 J. Econ. Lit. 629, 649 (2008) (hold-up problem “clearly pose[s] problems for long-term contracting, and those problems are exacerbated in volatile environments).

<sup>7</sup> In this case innovation is adaptive and endogenous to the context of the relationship but again keyed by the level of uncertainty. In the case of the pharmaceutical collaborations, for example, as uncertainty is reduced, the separation of formal process terms but informal substantive terms gives way to formal contracting over substance.

on the contextualized regime gives way to reliance on more familiar instruments, either traditional statements of obligation and remedy, with a mix of rules and standards, or, when the reduction in uncertainty is substantial, the creation of property rights through the use of nested options.<sup>8</sup>

In other settings repetition results in a learning process that reduces uncertainty, permitting a shift from a contextualizing regime to a contingent contract: Experience substitutes for prediction and exploration so that it possible to identify the relevant contingencies going forward.<sup>9</sup> In these settings contracts become more complex and complete as time goes on.<sup>10</sup> The parties can specify in the formal contract the relevant

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<sup>8</sup> There is additional complexity in the case of large pharmaceutical company/ biotech collaboration. One problem is that the biotech, which typically has a number of research projects with other companies as well as proprietary research, may use the contractual payments to cross-subsidize other projects, to the disadvantage of the pharma and its project. Another is that the biotech may skew research to its benefit and to the detriment of the commercially oriented research desired by the pharmaceutical. Here the problem is not uncertainty per se – both parties know and understand the object of the contract and the desired inputs to performance, and the pharmaceutical company will know when the biotech is, from the commercial point of view, misdirecting the project. Rather, the problem is that the pharmaceutical company will not be able to prove the misbehavior to the court at reasonable cost. But because uncertainty is low, the parties can still use innovative contingent contracting to police the biotech by granting the pharmaceutical company an unconditional option to terminate the relationship, and thereby secure broad property rights to the research output on payment of a termination fee. The termination fee, in turn, constrains responsive opportunism by the pharmaceutical company. This use of options may viably substitute for the ex ante incorporation of performance specifications in a low uncertainty environment because the inputs that may be subject to opportunism are fully observable by the contracting parties. See Josh Lerner & Ulrike Malmendier, *Contractibility and the Design of Research Agreements*, 100 Am. Econ. Rev. 214 (2010).

<sup>9</sup> A complete contingent contract—the discrete contract setting in legal terminology—is the canonical case for parties contracting under conditions of low uncertainty. Because parties can anticipate the environment in which performance will occur, the contract itself will reflect it. Of course, we observe few circumstances where bespoke contracting can be this prescient. However, where uncertainty is low rather than absent, the parties can specify in the formal contract the relevant context within which the specific performance obligations are measured. Innovation in these relatively complete contracts thus takes the form of discursive exposition of goals, expectations and business plans, whether in the contract’s preamble or in particular sections. This additional context can supplement precise specifications of outcomes while still constraining a future court’s discretion to range more widely than the parties want.

<sup>10</sup> See Kyle J. Mayer & Nicholas S. Argyres, *Learning to Contract: Evidence from the Personal Computer Industry*, 15 Org. Sci. 394 (2004)(contracts are more complete or detailed when firms have prior alliances, whether with the same firm or other firms); Michael D. Ryan & Rochelle C. Sampson, *Do Prior Alliances Influence Contractual Structure? Evidence from Technology Alliance Contracts*, in STRATEGIC ALLIANCES (A. Arino & J.J. Reuer, eds. 2006)(contracts become more complex rather than less with experience); Nicholas S. Argyres, Janet Berkovits & Kyle J. Mayer, *Complementarity and Evolution of Contractual Provisions: An Empirical Study of IT Service Contracts*, 18 Org. 3 (2007).



context within which the specific performance obligations are measured. The parties thus have less need to rely on informal mechanisms created by the contextualizing regime and can instead turn to a variety of contract clauses<sup>11</sup> to deal with what has become a low-uncertainty environment.

But these qualifications notwithstanding there is a substantial and apparently growing range of situations in which uncertainty is persistent or recurrent: for example, the co-development of successive generations of innovative components by automobile, construction or agricultural equipment manufacturers and their leading suppliers, the regular, joint re-definition of “service levels” by the providers of business process outsourcing (typically “back office” services ranging from human resources management to account or treasury management) or successive collaborations between large pharmaceutical firms and different bio-tech companies.<sup>12</sup> The challenge facing transactional lawyers in these circumstances is to craft a contractual structure—what we are calling a contextualizing regime-- that supports ongoing collaboration, allows adjustment of the parties’ obligations under conditions of *continuing* uncertainty and limits the risk of opportunism inherent in open-ended goals. Unaddressed, such risk undermines the incentive to make efficient relation-specific investments in the first place. Absent a successful design for innovative contractual safeguards, the substantive innovation fails.

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<sup>11</sup> Contract clauses that embed context in the written agreement include (a) “whereas” or “purpose” clauses that describe the parties’ business plan and the transaction; (b) definition clauses that ascribe particular meanings to words and terms that may vary from their plain meaning; and (c) appendices that provide more precise specifications governing performance as well as any memoranda the parties want an interpreting court to consider in interpreting the contract’s text. See for (a) *tan supra*; for (b) e.g., Data Management Outsourcing Agreement Between Allstate Insurance Company and Acxiom Corporation, Art. 2. DEFINITIONS (defining 34 technical or non-standard meanings including specialized meanings of “Agreement,” “Confidential Information,” “Data Integrity,” “Current Projects,” “Affiliate,” “End User,” “Material Default,” “Party,” “Person,” “Problem,” “Term,” “Work Order,” and “Work Product.”), available at <http://contracts.onecle.com/acxiom/allstate.outsource.1999.03.19.shtml>; and for (c) e.g., Apple/SCI Manufacturing Agreement, available at- <http://contracts.onecle.com/apple/scis.mfg.1996.05.31.shtml>; <http://cori.missouri.edu>.

<sup>12</sup> See Iva Bozovic & Gillian K. Hadfield, *Scaffolding: Using Formal Contracts to Build Informal Relations in Support of Innovation* (mimeo 2012) (studying governance structures through interviews with innovative group of firms that supports findings of Gilson, Sabel & Scott describing the institutional structure of collaborative contracting).

## **B. The Innovation in Contractual Design**

### ***1. The Case of Collaborative Agreements***

The common challenges facing parties contracting across organizational boundaries when uncertainty makes specification of the product impossible yield solutions with common elements: a process of collaboration substitutes functionally for ex ante specification of the desired product – the process defines the specification, not the other way around. Through this process each party makes relation-specific investments in learning about the other’s capabilities. These investments raise the costs to each party of replacing its counterparty with another—its switching costs—and so restrain both parties from taking advantage of their mutual dependency.

The key design element is to use *formal* contracts to create governance processes that support iterative joint effort to discover the characteristics of the product that the parties will decide whether to make. These contracts rely on low-powered enforcement techniques that cover only the commitment to collaborate, without controlling the course or the outcome of collaboration, and with the extent of damages limited to investment in the collaborative process rather than expectation damages based on the commercialization of the product that might have resulted from successful collaboration. The success of this formal governance arrangement depends on two closely linked components.

The first critical component is a commitment to an ongoing mutual exchange of private information designed to determine if a project is feasible, and if so, how best to implement the parties’ joint objectives. The second component is a procedure for resolving disputes arising during the course of the first. Its key feature -- the “contract referee mechanism”<sup>13</sup> -- is a requirement that the collaborators reach unanimous (or near unanimous) agreement on crucial decisions, with persistent disagreement resolved (or not) by unanimous agreement at higher levels of management from each firm. Together these two mechanisms render observable, and

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<sup>13</sup> Gilson, Sabel & Scott, *Contracting for Innovation*, supra note -- at 479-81.

forestall misunderstandings about, each party's character traits and substantive capabilities as, working under uncertainty, they encounter unanticipated problems that can only be solved jointly. At the same time, the parties' increasing knowledge of their counterparty's capacities and problem-solving type, a direct result of the processes specified in the formal contract, generates trust and thus creates switching costs that constrain subsequent opportunistic behavior. Innovation thus occurs at two levels: the contextualizing regime "braids" formal and informal contractual elements in novel ways that make possible the technological innovation the contract is designed to support.<sup>14</sup>

The formal element of a braided contract is thus sharply and distinctively limited in what it aims to accomplish. It functions to allow both parties to learn about each other's skills and capabilities for collaborative innovation and to develop jointly the routines necessary to working together. But, importantly, the formal contract does not commit either party to develop, supply or purchase any product, and this limits the potential damages that can arise out of the formal contract. Production and purchase commitments result from the informal contract supported by increased switching costs generated by the collaboration process itself.<sup>15</sup> Thus, contracting for innovation represents the braiding of two forms of contracts that the academic literature treats as substitutes, while real contracting parties treat them as complements.

## ***2. Supporting the Search for Partners: The Case of Preliminary Agreements.***

Similar innovations are underway in certain types of preliminary agreements. The increasing pace of technological development—the knowledge revolution-- means that parties can no longer expect the next generation of solutions to emerge directly from current practice--solutions can and do come from more and more unexpected places, off the trajectory of development. For that reason, parties constantly have to search for

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<sup>14</sup> 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).

<sup>15</sup> Only where the subject of the braided contract is a discrete project, do we see formal contracting over the output of the process. In the discrete project setting, switching costs discourage opportunism during the collaborative period, but the parties have to fear opportunistic renegotiation once the cooperative stage of the project is completed and switching costs no longer provide protection. The only issue then remaining is division of the gains from prior cooperation. As a result, an explicit constraint on opportunism must be employed; but at this stage, the uncertainty having been resolved, the contract theory solution of allocating rights to decision-making is feasible.

unexpected alternatives to current techniques. Uncertainty and search are thus two sides of the same coin, and in an uncertain world the search for partners capable and willing to engage in incompletely specified collaboration becomes an essential part of doing business rather than an incidental preliminary. Thus, in domains as diverse as commercial contracting, corporate acquisitions and complex construction projects,<sup>16</sup> parties increasingly realize that the feasibility of many projects can only be determined by joint investment in the production of information to evaluate whether a project is profitable to pursue. These types of bi-lateral arrangements typically take the form of preliminary agreements or letters of intent, as they are termed in the context of corporate acquisitions.

The common feature of these regimes is to facilitate joint exploration and search without imposing legal consequences on the outcome of the parties' collaborative activity. The contextual framework of this relationship requires that neither party have a right to demand performance of the contemplated transaction. If the parties cannot

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<sup>16</sup> In construction, contractually specified information exchange regimes are now often used to facilitate coordination during complex projects, and especially to register emergent problems and respond effectively to them. See, e.g., AGREEMENT by and between Georgetown 19th Street Development, LLC, (as authorized agent for HTRF Ventures, LLC) "Owner" and Turner Construction Company "The Construction Manager" for The West Side 18th and 19th Street Project located at 527--537 West 18th Street, New York, New York, Dated as of April 1, 2003 (on file with the authors). Article 5.2 of the Agreement provides

Throughout the Pre-Construction Services Phase and the Construction Services Phase of the Work, the Key Personnel, and the Construction Manager's Trade Contractors shall meet at least once a week (and more frequently if required by Owner) with Owner and the Architect for the purpose of (i) reviewing the Work, or any component thereof, in respect of design, construction, costs incurred and to be incurred, and progress, and (ii) preparing a list (to the extent reasonably foreseeable) of decisions or actions which Owner must make or take within the next sixty (60) Days to avoid delays in completion of the Work, or any component thereof.

For a detailed account of how such mechanisms function in practice, see Atul Gawande, *The Checklist Manifesto: How to Get Things Right* 54-71(2009). Similar collaborative arrangements appear to be proliferating in business process outsourcing. See, e.g., The Professional Services Agreement between New Century Financial Corporation and Accenture LLP, dated January 25, 2006, available at <http://contracts.onecle.com/new-century-financial/accenture-services-2006-01-25.shtml>, last visited Jan. 11, 2009. The Agreement provides that Accenture will supply defined Human Resource services to New Century, and periodically improve them (7.4). Moreover, under the agreement Accenture will conduct surveys of New Century employees to determine their level of satisfaction with the services provided (7.5). "If the results of any satisfaction survey .. indicate that the level of satisfaction with Supplier's performance is less than the target level .., Supplier shall promptly: (i) conduct a Root Cause Analysis as to the cause of such dissatisfaction; (ii) develop an action plan to address and improve the level of satisfaction; (iii) present such plan to New Century for its review, comment and approval; and (iv) take action in accordance with the approved plan and as necessary to improve the level of satisfaction." (7.6 (c))

ultimately agree on a final contract, they may abandon the deal. In effect, both parties enter into an option on (each round of) the deal, which is exercisable after the parties learn the information produced through the preliminary investments and whose price is the cost of the preliminary investment.<sup>17</sup> Agreements of this kind place demands on generalist courts to recognize new forms of contracting that heretofore were denied legal enforcement.

### **C. Contracting for Innovation and Preliminary Agreements in the Courts**

#### ***1. Judicial Enforcement of Emergent Innovations.***

Contracting parties must be able to count on the state's enforcement monopoly if they are confidently to rely on novel forms of agreement. Ideally, courts should respond to exogenously induced innovations by enforcing the chosen methods of mutual cooperation on terms consistent with the arrangements themselves. A court's ability to achieve this consistency will depend very generally on its expertise in the domain of innovation; the conspicuousness of the contextualizing regime—the salience of the statutory or other markers that indicate to outsiders that insiders have given distinctive meaning and effect to usages; and (most elusively) the extent to which the court respects the purposes and values to which the regime is dedicated.

As we will see in the case of the Delaware Chancery Court, courts that are expert in the innovators' domain can see developments through the participants' eyes and give effect to legitimate changes. Conspicuously marked regimes that arise in thick markets put courts on notice that particular kinds of expertise are in play and that generalist knowledge of doctrine and the effects of application in the usual run of cases may be an insufficient or erroneous guide to decision making: the more clearly marked the regime, the more likely it is that the court will be alerted to the possibility that doctrine may not be applicable as usual.<sup>18</sup> In the case of innovations that emerge from the bi-lateral arrangements discussed here, the unique governance structures

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<sup>17</sup> For discussion, see Alan Schwartz & Robert E. Scott, *Precontractual Liability and Preliminary Agreements*, 120 Harv. L. Rev. 661 (2007).

<sup>18</sup> See Part III *infra*.

are less visible to a reviewing court. Moreover, unlike bespoke contingent contracts between sophisticated parties, the courts cannot simply follow the instructions of the parties in deciding what context, if any, should be relevant in resolving disputed transactions.<sup>19</sup> As a consequence, it becomes more important for the court to independently affirm values and methods that accord with those of the regime. To the extent that it does so, the more likely it is it will arrive at concordant decisions, whether it takes notice of the regime's existence or not. As we will also see below,<sup>20</sup> courts that disavow the goals and methods of a regime may knowingly set aside its results in favor of outcomes closer to their own preferences.

Seen this way courts are not well positioned to interpret contracts for innovation and search-supporting preliminary agreements in accordance with the parties' intentions. Most contemporary courts are generalists. They operate in a heterogeneous and rapidly changing economy, of which their institutional situation affords little detailed knowledge or experience. Such courts are, unsurprisingly, prone to undermine an emergent innovation by inadvertently failing to extract the correct meaning from the signals that the parties have given.<sup>21</sup> There is no reason to think they, exceptionally, will have knowledge of the circumstances of the kind of innovation expressed in contracting for innovation and novel types of preliminary agreements. Nor will the contextualizing regime put them on notice that they are entering unknown territory. The information exchange regime created within collaborating firms and between collaborating partners by the innovative braiding of formal and informal contracting elements is the most inward, the least outwardly visible, form of such regimes. Moreover, preliminary agreements in their traditional form—in which, for example, two commercial parties agree to investigate together the prospects of a commercial project *and* agree to negotiate the remaining terms of the contract once they can observe the fruits of their efforts—are historically unenforceable under

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<sup>19</sup> Despite the academic debate whether the default rule of interpretation for generalist courts should encourage scrutiny of context or limit it to the parties' text, the overwhelming majority of common law courts continue to follow the traditional "formalist" approach to contract interpretation in resolving disputes between sophisticated commercial parties. Alan Schwartz & Robert E. Scott, *Contract Interpretation Redux*, 119 Yale L. J. 926 (2010).

<sup>20</sup> See Part IV *infra*.

<sup>21</sup> 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 (1985).

the indefiniteness doctrine of the common law of contracts.<sup>22</sup> So to the extent that generalist courts might be said to have a prior and independent disposition towards the outcome produced by the regime, it is unfavorable. Despite these impediments, courts have in some cases enforced contracts for innovation and new preliminary agreements in terms that support the purposes of the contextualizing regime that the parties have created, although the doctrinal recognition of the innovation in contract is incomplete and in some regards muddy.

## ***2. Low Powered Enforcement of Collaborative Contracts***

Ideally, courts should respond to exogenously induced innovations by enforcing the chosen methods of mutual cooperation on terms consistent with the arrangements themselves. The function of collaborative contracts is to address the high uncertainty confronting the parties – neither the products nor their specifications can be set out *ex ante* – by creating a process through which the parties jointly will both develop this information and learn about each other’s capabilities. This function and the parties’ decision to locate the process of collaboration in a formal contract dictates the scope of legal enforcement: the parties to such an agreement should be legally required to comply with their initial commitments to pursue promised investments (typically investments in information) that are necessary to reveal whether or not a proposed project is feasible. But formal enforcement should play no role in determining whether or not the project should go forward and on what terms. After all, rational parties will pursue efficient projects and abandon inefficient projects. The challenge, as in *Eli Lilly & Co. v. Emisphere Technologies Inc.*,<sup>23</sup> is to discourage parties from defecting early in the relationship before a

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<sup>22</sup> ROBERT E. SCOTT & JODY S. KRAUS, *CONTRACT LAW AND THEORY* 29-41, 299-303 (4<sup>TH</sup> ED. 2007). Two factual patterns typify unenforceable indefinite agreements at common law. The first, illustrated by *Varney v. Ditmars*, [111 N.E. 822 (N.Y. 1916)] is the indefinite bonus contract. In *Varney*, the New York Court of Appeals held a bonus agreement for “a fair share of the profits” too indefinite and thus unenforceable. The second archetype is a variation on the first, extending the common law rule to agreements where essential terms were explicitly left to further negotiation. For example, in *Petze v. Morse Dry Dock & Repair Co.*, 109 N.Y.S. 328 (App. Div. 1908), the New York appellate court held that an agreement providing that “the method of accounting to determine the net distributable profits is to be agreed upon later” was unenforceable under the indefiniteness rule. Common law courts thereafter have consistently held that such “agreements to agree”-are unenforceable so long as any essential term was open to negotiation. *Id.* at 35.

<sup>23</sup> 408 F. Supp. 2d 608 (S.D. Ind. 2006). The court held that the parties to this pharma/ biotech collaboration had entered into a form of cooperative agreement that had important—and legally enforceable—limits. When Lilly subsequently undertook secret research projects, using information that had been jointly developed, it not only risked a claim of patent infringement, but it breached the contract

robust pattern of cooperation has developed. The threat of a legal sanction, therefore, should only be designed to give the parties sufficient opportunity to develop patterns of cooperation supported by switching costs that will provide the information for the decision whether to go forward.

This analysis suggests that the question for a reviewing court should primarily be one of character rather than capability: has one party behaved opportunistically by renegeing on its promised investment in open exchanges of information, and, if so, what remedy is appropriate? Low-powered sanctions designed to encourage compliance with the information exchange regime (and the informal relations it supports), should be imposed while avoiding high-powered sanctions like expectation damages that crowd out informality and destroy the braid. And, indeed, this is what we are beginning to see: Courts in leading cases are sanctioning overtly selfish abuse of information-exchange regimes.<sup>24</sup> Because the sanction relates only to the commitment to collaborate, damages are limited in principle to the reliance costs incurred in the collaboration rather than lost profits from not going forward with the project. In this way, the collaboration commitment can achieve its intended purpose of generating information and trust precisely; low-powered formal enforcement does not drive out informal enforcement.<sup>25</sup> While these cases provide some evidence that courts are limiting the sanctions they impose on parties who breach their commitment to collaborate, as we discuss in Part V, these institutional forms of

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that gave it the limited license in the first place. Holding that Lilly had therefore forfeited its investment in the joint project, the court concluded:

Lilly and Emisphere entered into a close, collaborative research relationship that required trust and good faith on both sides. After several years of joint research, Lilly decided it really did not need Emisphere any further, so it decided to pursue a secret research strategy in breach of its contractual obligations to Emisphere. The parties in this case are both highly sophisticated and well-counseled businesses that have the right to try to exercise their full legal rights under the relevant contracts. Lilly has asserted theories to justify its actions under the contracts, but those theories are not supported by the evidence or the law.

<sup>24</sup> Id.

<sup>25</sup> See Gilson, Sabel & Scott, *Braiding*, supra note --. As might be anticipated in an emergent area of law, the decisions of courts called on to enforce braided contracts are not uniformly consistent with the enforcement theory we have developed here. Some decisions invite the award of damages for parties who participate faithfully in the information exchange regime but then decide that it is not profitable for them to pursue the joint project. Other decisions contemplate (or at least invite the possibility of) the award of full expectation damages -- that is, high-powered enforcement -- for breach of the information-exchange obligation. In both instances, some courts have failed to appreciate the importance of limiting formal enforcement to low-powered sanctions focused on willful violations of the collaboration agreement itself and thereby create the kind of incentives that undo braiding by inducing strategic crowding out of informal enforcement. Id.



innovation remain fragile and the degree to which courts will properly respect the parties own design is still far from settled.

### ***3. Preliminary Agreements in the Courts***

Recently, perhaps as a general response to increased uncertainty and the need for search discussed above, courts have effected a major shift in the common law's aversion to preliminary agreements by relaxing the rule under which parties are either fully bound or not bound at all. Instead, a new contract rule has emerged that enforces "a mutual commitment to negotiate together in good faith in an effort to reach final agreement."<sup>26</sup> But the new rule governing preliminary agreements to collaborate -- creating a legal duty to bargain in good faith but not requiring the parties to agree -- is only a first step in solving the parties' contracting problem. The courts must now give content to this rule by determining the nature of the sanction to be imposed when one party seeks to use the novel form of the agreement to opportunistically exploit the counterparty.

Consider *In re Matterhorn Group, Inc.*<sup>27</sup> Swatch wanted to sell more watches in the United States by expanding its franchise operations and so Matterhorn and Swatch agreed to collaborate on pursuing the possibility of a long-term relationship. The parties signed a letter of intent granting Matterhorn the exclusive franchise for thirty possible sites. Under the agreement, Matterhorn undertook to invest in finding appropriate locations for retailing Swatch watches from among the list of possible locations. Swatch undertook to process diligently the applications for franchises at potentially profitable locations as Matterhorn filed them, and then to seek financing and approval of franchises at chosen locations from its parent firm. In other words, the parties agreed to collaborate by making concurrent investments in pursuit of an entrepreneurial innovation. Swatch subsequently engaged in just the strategic behavior that we might expect under these circumstances: It delayed processing several applications and failed to secure the necessary approvals.<sup>28</sup> The court found Swatch to be in breach of a preliminary

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<sup>26</sup> *TIAA v. Tribune*, 670 F. Supp. at 498.

<sup>27</sup> 2002 WL 31528396 (Bk. S.D.N.Y. 2002).

<sup>28</sup> The court held:

agreement to bargain in good faith and awarded Matterhorn reliance damages based on its investment expenditures in investigating the locations in question. Importantly, however, the court denied Matterhorn's claim for expectation damages based on lost profits, holding that "there is no guarantee that it would have opened a store in [that location]."<sup>29</sup> Thus, the court compensated Matterhorn for the price it paid for the option, but did not protect it from Swatch's decision not to exercise it.

The result in *Matterhorn* supports the view that narrowly defined duties of good faith complement a regime that depends primarily on informal enforcement. A properly configured braiding mechanism, such as the one that appears to have been validated by the court in *Matterhorn*, likely will not crowd out the informal mechanisms that build trust but rather will offer a low-powered complement during the early stages of collaboration, thereby giving reciprocity and trust the opportunity to evolve.<sup>30</sup> Put differently, the formal portion of the braided contract for innovation endogenizes the trust necessary to support the informal portion. By limiting formal enforcement to only collaborative aspect, the crowding out phenomenon is avoided.

But generalist courts have not uniformly understood the limited role of legal enforcement in these preliminary agreements. In several notable cases, the court has failed to embrace fully the notion that an enforceable preliminary agreement only

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The rejection of the Vail application violated the Letter of Intent. The Letter of Intent granted Matterhorn the exclusive right to negotiate a lease in Vail despite Vail's geographical distance from Matterhorn's base of operation in the Northeast. Furthermore, it required Swatch to review the Vail application in good faith, and in a manner consistent with the criteria discussed above.... [Swatch] unilaterally rescinded the exclusivity that the Letter of Intent had granted, and Swatch's [decision] to reject the Vail application was improper. In addition, Matterhorn sent the Vail letter of intent in late April 1996. .... Swatch took four months to complete its processing of the application.... Accordingly, Swatch breached the Letter of Intent by rejecting the Vail application for improper reasons.

Id. at 16-17.

<sup>29</sup> Id.

<sup>30</sup> In *Braiding*, supra note \_\_\_, at \_\_\_, we apply this analysis to interpretation of letters of intent in connection with corporate acquisitions. As we note in that connection, courts have not been uniformly modest in limiting the level of enforcement for breach of these agreements. In several notable cases, courts have applied high powered sanctions for breach of preliminary agreements, suggesting a misunderstanding of the limited role that they can play in superintending these contextualized regimes. See Gilson, Sabel & Scott, *Braiding*, supra note— at ---.

requires a party to pay the option price by undertaking a promised investment in acquiring and sharing information.<sup>31</sup> Framing the obligation narrowly in this way should permit a party to properly obtain a summary judgment even though it walks away from the transaction for reasons wholly unrelated to the actions of the counterparty. And, even if the promised investment is not made, the defendant's liability is properly limited to the investment cost and not to the expectancy that might result from a concluded deal.

#### **4. Summary**

In sum, the judicial role that properly supports the innovation in these bi-lateral regimes is one that does not impose legal consequences on the course of the parties' agreement. The contextual framework of this relationship requires that neither party have a right to demand performance of the contemplated transaction. If the parties cannot ultimately agree on a final contract, they may abandon the deal. Both parties thus enter into an option on the ultimate deal, which is exercisable after the parties learn the information produced through the preliminary investments and whose price is the cost of the preliminary investment.<sup>32</sup>

In the case of disputes arising under contracting for innovation, or the related arrangements for collaborative search, the courts that support the innovation are those that, in effect, discern the existence of these innovative governance structures and conform their decisions to the parties' purposes by respecting the arrangements the parties have created. In many other settings, however, contextualizing regimes are institutionalized outside of firms and the bi-lateral relations they create. Here, the outputs of the regimes are more conspicuous—though not, therefore, necessarily easier for courts to interpret; indeed, these structures often may not involve courts at all. It is to those settings we turn next.

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<sup>31</sup> See e.g., *Venture Associates Corporation v. Zenith Data Systems Corporation*, 96 F. 3<sup>rd</sup> 275 (7<sup>th</sup> Cir. 1996); *Tan v. Allwaste, Inc.*, No. 96 C 3558, 1997 WL 337207 (N.D. Ill. June 11, 1997).

<sup>32</sup> For discussion, see Alan Schwartz & Robert E. Scott, *Precontractual Liability and Preliminary Agreements*, 120 Harv. L. Rev. 661 (2007).

### **III. CONTEXTUALIZING REGIMES OUTSIDE THE FIRM**

All else equal, the higher the level of uncertainty, the more difficult it is for parties to write, and courts to interpret, complete, state-contingent contracts. All else equal, the greater the number of traders engaged in the same kind of a transaction, the more likely that the contracting infrastructure—terms adapted to current need in the form of standard contracts and industry codes, and a mechanism for adjusting terms as needs change—will be provided jointly as a club or (industry specific) public good by a trade association alone or in collaboration with public authorities. We have seen how shocks produce innovations in contractual form in bi-lateral relationships. These “internal” contextualizing regimes, we just saw, arise when markets are thin and uncertainty is high. Similarly, exogenous factors can stimulate the creation of innovative contractual forms in “external” contextualizing regimes. These regimes are institutionalized outside the participating firms and arise when markets are thick. One type of regime arises when uncertainty is low, and the exogenous problem is profound official ignorance of insider practices. Another type evolves when uncertainty is high, and ignorance of the precise nature of threats and opportunities is universal. Here, all actors must collaborate in the joint elaboration of innovative procedures to mitigate the risks of catastrophe and address other common problems.

#### **A. Low Uncertainty and the Problem of Ignorance**

Take first the setting where commercial practices are stable and well understood by a substantial community of traders. Uncertainty is low and markets are thick. But despite the regularities of dealings, and the trading community’s easy familiarity with their particulars and the distinctive vulnerabilities to which they can give rise, the generalist judge cannot reasonably be expected to have knowledge of trade practices or be able conveniently to obtain it. The problem here, in other words, is that the official decision maker is and will remain ignorant of the common knowledge of the trade, and

unthinking application of contract law principles will disrupt, rather than buttress, trade practice. Coping with the adverse consequences of judicial ignorance, including moral hazard-based litigation to take advantage of that ignorance, stimulates innovation by the affected trade association or other collective body. The goal of the contextualizing regime that emerges is to innovate in ways that a) renders insider understanding in terms that can be incorporated into everyday contracting, b) establish methods for the expeditious resolution of disputes arising under these agreements, and c) institutionalize a process for keeping terms and forms of dispute resolution abreast of developments.

One variant of this kind of contextualizing regime is based on private ordering, to the de facto exclusion of courts and administrative agencies. Trade associations not only establish procedures for fixing and updating trade rules and technical terms, but also arbitral bodies to dispose of conflicts arising under them. A prominent example in the literature is the contextualizing regime in the U.S. cotton industry, carefully studied by Lisa Bernstein, which originated in the mid 19<sup>th</sup> century and took on its modern form in the 1920s.<sup>33</sup>

Dealers in cotton are organized in the American Cotton Shippers Association (ACSA); the textile mills to which they sell are organized in the American Textile Manufacturers Institute (ATMI). The ACSA and the ATMI have jointly adopted the Southern Mill Rules (SMRs) to govern transactions between their members. The SMRs are revised annually, and changes are announced at annual meetings and widely circulated. New members are encouraged to attend a summer course to familiarize themselves with the most important rules.<sup>34</sup> The two trade associations have established a joint arbitration panel, the Board of Appeals (BoA) to hear all disputes under the SMRs

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<sup>33</sup> See Lisa Bernstein, *Opting out of the Legal System: Extralegal Contractual Relationships in the Diamond Industry*, 21 J. Leg. Stud. 115 (1992); 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); Lisa Bernstein, *Private Commercial Law in the Cotton Industry: Creating Cooperation Through Rules, Norms, and Institutions*, 99 Mich. L. Rev. 1724, 1745-54 (2001).

<sup>34</sup> *Id.* at 1772.

except those concerning quality, which are referred to a separate body, the Cotton States Arbitration Board (CSAB).

Annual review assures that all regularities in trade practice that contribute to generally beneficial outcomes are identified and incorporated into the SMRs. As Bernstein notes, “given the amount of detail in the trade rules, cases involving contractual gaps are uncommon.”<sup>35</sup> In fact, given the clarity and comprehensive character of the rules, disputes of any kind under the rules are infrequent. The BoA hears on average just two cases per year.<sup>36</sup>

Here, too, we observe a variant of the braiding of formal and informal enforcement mechanisms. Decision-making in the BoA is textualist, with great attention to the letter of the contract in dispute and next to none for the context of the transaction it governs. Contextual variations in individual transactions—for example, the willingness, or not, of a dealer to accommodate a mill by delivering before or after the contracted for date—are assumed by the BoA to be the informal and reciprocal adjustments that both parties choose to make to maintain dealings in a world that neither can fully control. Parties will normally make several such adjustments before resorting to arbitration.<sup>37</sup> If there was any risk that the BoA would interpret such adjustments of the agreement as binding in the future, parties would be more reluctant to make them, and relations would become more brittle.

Again to encourage braiding of formal and informal contractual elements monetary damages are set high enough to make it unprofitable to breach a contract to take advantage of price volatility, but are generally “under-compensatory” in making no provision for recouping foregone profit through expectation damages. Formal penalties are then supplemented by private ones imposed by members of the community of transactors, resulting in what Bernstein calls “hybrid” sanctions that remind wrongdoers

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<sup>35</sup> Id. at 1735-36.

<sup>36</sup> Id. at 1762. But see note –*infra*.

<sup>37</sup> Id. 1775.

of their obligations, allow the parties to transactions in distress to arrive, informally, at mutually acceptable remedies, but provide no inducement to manipulate the formal rules for selfish gain.<sup>38</sup>

The innovations in contractual processes that are created by trade associations such as the ACSA are protected by their formal removal from the supervision of generalist courts. But regimes of this type are not inherently “private” in the sense of depending on insulation from public institutions such as courts or administrative agencies. We see this in the cotton industry. To take advantage of the recent improvements in measurement instruments the SMRs have incorporated reference to a grading system maintained by the Department of Agriculture, and the CSAB accordingly relies on the public grades as well.<sup>39</sup> When collective action problems thwart private coordination, contextualizing regimes of this type are often created by statute and administered by public agencies.<sup>40</sup>

Similarly, “external” contextualizing regimes often use common law courts to create precedents as a means of standardizing novel terms as they evolve. Such

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<sup>38</sup> Id. at 1783-84.

<sup>39</sup> See *Rules and Regulations of the Cotton States Arbitration Board*, available at <http://www.acsa-cotton.org/acsa/acsalive.nsf/pages/979F8233CD687A29862570FB004F3128?OpenDocument>, visited Jan. 17, 2011.

<sup>40</sup> In “The Case of the Spoiled Cantaloupes,” the first and longest chapter in *THE LEGAL PROCESS*, Hart and Sacks describe, under the name of an “institutional settlement,” just such a contextualizing regime for the regulation of contracting in perishable agricultural commodities. The regime was initially created to respond to “the rejection evil.” When prices fell against them, buyers evaded their commitments by using minor nonconformities as pretexts to reject. Small shippers were typically unable to salvage rejected goods or to pursue litigation in distant locales. The dispersed and fragmented character of the industry impeded efforts by trade associations, over decades, to address. In 1930 Congress passed the Perishable Agricultural Commodities Act (PACA), which makes it a violation of federal law for “any dealer to reject or fail to deliver ... without reasonable cause any perishable agricultural commodity” in an interstate transaction. The Act instructs the Secretary of Agriculture to promulgate regulations to guide interpretation of contract terms allocating risks specific to the industry between buyers and sellers, to operate an arbitration process to adjudicate claims at reasonable costs, and to administer a licensing scheme to screen irresponsible buyers and sellers from the industry. In practice, contract terms were elaborated with the close cooperation of private trade associations. In this case, too, sanctions are set so as to facilitate braiding. See Henry M. Hart and Albert Sacks, *THE LEGAL PROCESS: BASIC PROBLEMS IN THE MAKING AND APPLICATION OF LAW* (William Eskridge and Philip Frickey ed.s 1994).

standardization has been stimulated in construction contracting, for example, through the offices of key intermediaries such as the American Institute of Architects and the Associated General Contractors.<sup>41</sup> One particularly instructive example is the response of these two trade organizations to the contracting challenges produced by the development of fast-track construction and the construction management model of design and construction contracting. Each of these two rival organizations produced during the 1970s a competing set of model forms that defined the contractual obligations and risks associated with the use of a construction manager.<sup>42</sup> Versions of these forms have been widely adopted by contracting parties within the industry and subsequently have been tested in litigation and consensual arbitration proceedings. Out of that process, a set of standardized “official” context-specific terms continues to evolve, that are easily observable by parties.<sup>43</sup> These forms typically specify arbitration as the means of dispute resolution, thereby allowing the parties to increase the experience of the party who will resolve disagreements over the terms of the standard forms.

## **B. High Uncertainty and the Problem of Joint Risk Mitigation**

Consider next the setting of where markets remain thick, but uncertainty is now high.<sup>44</sup> This domain has not been as prominent in the study of contracts as the preceding

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<sup>41</sup>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, 296-8 (1985).

<sup>42</sup>American Institute of Architects, General Conditions of the Contract for Construction, Docs. Nos. A101/CM, A201/CM, B141/CM, B801; Associated Gen. Contractors, Standard Form of Agreement Between owner and Construction Manager, Doc. Nos. 8a (1977), 8d(1979), 8(1980), and 520 (1980).

<sup>43</sup>See e.g., *Bolton Corp. v. T.A. Loving Co.*, 94 N.C. App. 392, 380 S.E. 2d 796 (N.C. Ct. of Appeals 1989). For a review of the testing of contract terms through arbitration, see Thomas J. Stipanowich, *Beyond Arbitration: Innovation and Evolution in the United States Construction Industry*, 31 Wake Forest L. Rev. 65 (1996). Scale also matters with respect to designating the forum that will adjudicate disputes concerning the performance of a contract. Analogous to form contracts, scale will support specialized forums that will have the experience and expertise to understand and apply the relevant context. Out of this testing process a set of standardized terms emerges that collectively reduces the risk of writing construction contracts. See Victor G. Trepasso, *The Lawyer's Use of AIA Construction Contracts*, Prac. Law., May 1973 at 37.

<sup>44</sup>Sabel & Simon, *supra* note ---.



one, but for reasons we have discussed elsewhere it is rapidly increasing as a matter of practical concern.<sup>45</sup> The problem here is not official ignorance of established understanding or practices. Under conditions of high uncertainty both generalists and insiders are unsure about what the solution might be. The aim of the regime is therefore not the elaboration and codification of established knowledge, but rather the organization of joint exploration of possibilities for joint problem solving, especially the mitigation of exogenous risks that can only be addressed through exacting, common efforts by all market participants. As in consumer protection and insurance, regulation in the sense of the distinction of acceptable from unacceptable practices goes hand in the hand with the determination of the conditions for contracting.

Food safety illustrates the class of risk that induces formation of this type of contextualizing regime. As the supply chains for foodstuffs lengthen and ramify, pathogens can enter in innumerable and rapidly changing ways. Undetected, food contamination is rapidly propagated by processing (through mixing of foodstuffs and secondary contamination of equipment), and then disseminated through extensive distribution networks. All actors in the food supply chain—growers, processors, distributors and retailers—have an interest in protecting their market by developing a regime of practices that reduce the chances for contamination and limit its effect. Since the failure of any actor to scrupulously adhere to the good practices can undo the efforts of all the others, adherence to the requirements of the regime will be a precondition to contracting in the market. Government, as the protector of public health, has complementary interests. So, as in the case of contextualizing regimes addressing judicial ignorance, collective responses to high-uncertainty regimes can be formed by public or private action, depending on the relevant configuration of collective action problems.

The California Leafy Greens Products Handler Marketing Agreement is an exemplar of a (initially) private regime of this type. Leafy greens became a salient concern after highly publicized disease outbreaks from tainted spinach and lettuce in 2006. Leafy

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<sup>45</sup> Gilson, Sabel & Scott, Contracting for Innovation, supra note ---.

greens pose particular risks because they are often eaten raw (cooking kills most micro pathogens) and because these vegetables, produced in larger scale operations than in the past, are often sold in “salad mixes” that mingle pieces picked in different locations, thus multiplying the possibilities for cross contamination. Federal food regulation has focused traditionally on post-farm industrial processing and was ill pre-prepared to address the numerous “critical control points” on the farm by which pathogens could enter this food chain.

In 2007, after the outbreaks of illness, the FDA, partly for this reason, refused to promulgate rules for processing of fruits and vegetables,<sup>46</sup> and encouraged and assisted state and private efforts in this direction instead. Acting through a trade association (the Western Growers Association, California), growers petitioned the state to recognize the California Leafy Greens Product Handler Marketing Agreement (LGMA) under the authority of a state marketing act that confers antitrust immunity on organizations of agricultural producers for various purposes. There are currently about 120 members, accounting for about 99 percent of California leafy green production (which in turn accounts for about 75 percent of national production).

The LGMA designates safety standards or “best practices” for the farms from which the handlers buy. These standards, drawing on methods developed in food-safety and related domains in recent decades, requires growers and processors to prepare plans identifying hazardous control points, detailing the measures undertaken to mitigate the risk, and reporting the results of tests verifying the efficacy of these measures. Inspectors from the California Department of Food and Agriculture monitor compliance. The LGMA additionally requires each handler to maintain records that permit identification of the farm and field from which all components of its products originate in case contamination is later discovered. The handler members commit to deal only with farms that comply with the standards. As in the case of the low-uncertainty regimes, the ultimate sanction for noncompliance is suspension or withdrawal of a recalcitrant

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<sup>46</sup> Marian Burros, “FDA Offers Guidelines to Fresh Food Industry,” New York Times (March 13, 2007). The agency also pointed to insufficient enforcement resources.

member's right to use a service mark, and thus temporary or permanent exclusion from the industry.<sup>47</sup>

The Food Safety Modernization Act passed at the end of 2010 affirms and strengthens the tendencies reflected in the LGMA. It mandates that each food processing facility develop, implement, monitor, validate, and update a plan for hazard control (now called "Hazard Analysis and Preventive Control"). The Act provides for the FDA to set standards for fruits and vegetables, and it seems clear that such standards will be developed in a way that relies on organizations like LGMA to continue and advance the joint exploration of risks and possible mitigations on which this type of regime depends. In anticipation of the Act, the FDA and the Department of Agriculture jointly announced in the fall of 2010 a Produce Safety Alliance based at Cornell University that will include federal and state agencies, universities, and trade associations. The Alliance will develop standards based in substantial part on existing "voluntary and contractual produce standards" and will facilitate information exchange among members.<sup>48</sup>

As in our previous examples, the success of the LGMA and the durability of the innovation in joint collaboration between private actors and public entities to reduce food safety risks requires a reassessment of the role of generalist common law courts and the extent to which they can successfully apply traditional contract principles to the unique problems that will arise with disputes under this regime. A properly functioning contextualizing regime, we would argue, assigns to administrative institutions the responsibility for establishing the baseline of standards of behavior and assigns to courts

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<sup>47</sup> California Leafy Greens Handler Marketing Agreement, (Jan. 27, 2007) available at [www.caff.org/policy/documents/lgph\\_agreement.pdf](http://www.caff.org/policy/documents/lgph_agreement.pdf). There is a parallel regime in Arizona. There are other private standard setting and certification regimes, such as GlobalGAP (for "good agricultural practices"), an organization formed by major European retailers; and a private international organization, the Global Food Safety Initiative assesses certification regimes in accordance with a set of meta-standards. Once a certification regime has itself been certified at this level, buyers who have previously decided to accept any of the other approved certifications should be willing to accept it. See generally Joanne Scott, *The SPS Agreement* (200 ); Hanson and Humphrey, cited in note

<sup>48</sup> U.S. Food and Drug Administration, "FDA, USDA, Cornell University Announce Produce Safety Alliance,"(Nov.4,2010).Available at [www.fda.gov/NewsEvents/PressAnnouncements/ucm232503.htm](http://www.fda.gov/NewsEvents/PressAnnouncements/ucm232503.htm).

the more limited role of identifying significant deviations from that baseline in particular cases.

### **C. The Delaware Chancery: The Specialized Court as a Contextualizing Regime**

Consider now the setting where there are a large number of highly complex transactions that share general features, but where each transaction has significant idiosyncratic features, and the common background conditions shift rapidly; that is, the market is thick only in general and uncertainty is high. This is the setting in which, for example, the legal rules governing the obligations of boards of directors in corporate acquisitions are applied. The uncertainty arises not from the unforeseeable, unintended consequences of incorporation of new actors, products and production processes into a highly interdependent endeavor, as in maintaining the safety of a food supply chain. Rather the uncertainty arises through the strategic interaction of actors intent on manipulating open-ended rules in volatile environments to advance their separate interests. Actors in such an environment can take collective, if not necessarily coordinated, actions to reduce the very uncertainty to which their own behavior contributes, with the aim of reducing the chance of judicial error in ex post application of standards like fiduciary duty. That collective action takes the form of reliance on expert judges with significant experience in the field: reliance, that is, on a specialized court of equity. The specialization of the court together with its equitable powers assure parties that, despite the impossibility of codifying decision rules, judicial decisions will be taken with the fullest possible awareness of current understandings of good practice.

One way to understand why a majority of U.S. public corporations choose Delaware as an incorporation state is that it serves to allocate to the Delaware Court of Chancery jurisdiction to resolve fiduciary duty issues. Delaware corporate law is enabling, that is, it gives corporations wide latitude to adopt specific rules governing their behavior. In fact, Delaware corporations appear not to accept that invitation, writing articles of incorporation and bylaws that largely address formal issues like meeting dates and the like because a corporation's circumstances and the evolution of the market for

corporate control are too uncertain to specify ex ante conduct rules that will govern all of the corporation's activities in the future.<sup>49</sup> The result is that serious issues are covered instead by a standard -- the director and officer's overriding obligation of fiduciary duty - - that is applied by an expert court ex post.<sup>50</sup> Thus, a corporation assures that the gaps in its articles of incorporation and bylaws as a result of uncertainty will be filled by a standard applied by a court with the expertise to reduce the likelihood of error in application by incorporating in a jurisdiction that has sufficient scale of incorporations that its judges develop the necessary experience and expertise.<sup>51</sup>

The cost of recourse to context, like its benefit, also goes up with uncertainty. A crude generalization would be that an increase in uncertainty more than proportionately increases the cost of ex post recourse to context by generalist courts: The uncertainty erodes constraints on judicial misuse of context and augments the incentive for moral hazard-based litigation. But increasing the quality of the adjudicator can change the relationship between uncertainty and resort to context, reducing the probability of error and thus increasing the potential benefits and reducing the potential costs.<sup>52</sup> This is what

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<sup>49</sup> See Robert Daines and Michael Klausner, *Do IPO Charters Maximize Firm Value? Antitakeover Protection in IPOs*, 17 J. L. Econ. & Org. 83 (2001).

<sup>50</sup> See, e.g., Leo E. Strine Jr., *If Corporate Action is Lawful, Presumably There Are Circumstances in Which it is Equitable to Take that Action: The Implicit Corollary to the Rule of Schnell v. Chris-Craft*, 60 Bus. Law. 877 (2005).

<sup>51</sup> Henry Hansmann, *Corporation and Contract*, 8 Am. L. & Econ. Rev. 1 (2006), and Michael Klausner, *Corporations, Corporate Law and Networks of Contract*, 81 Va. L. Rev. 757 (1995), address the advantage of a specialized court of chancery in applying corporate law.

<sup>52</sup> For example, in Lisa Bernstein's description of the role of the International Cotton Advisory Committee in the cotton industry, industry specified context operates to avoid conflict in periods of low uncertainty; shared understandings and relational dealings reduce the number of disputes. See TAN *supra*. However, when uncertainty grows, so do the number of disputes as a party's potential losses rise. This year, the unusual volatility in cotton prices has resulted in more defaults -- reportedly some 10 percent of all commercial contracts -- and more arbitration requests than any time since records have been kept starting in 2000.<sup>52</sup> Leslie Joseph, *Cotton Contracts, Made to be Broken*, WSJ, Oct. 25, 2011, available at <http://online.wsj.com/article/SB10001424052970204777904576651503911757210.html?KEYWORDS=cotton+industry>. In this circumstance, the International Cotton Advisory Committee, the leading trade group and the designator of context, selects the arbitration panels. The use of industry expert arbitrators, who know the context, allows arbitrators to resort to context even as uncertainty increases, thus extending the range over which context can be usefully incorporated before uncertainty so increases the risk of mistake and moral hazard based litigation that resort to context makes things worse and the curve turns down.

the Delaware Chancery does for sophisticated corporate litigants attempting to come to grips with the uncertainty caused by their very sophistication: The judges know the litigants' context well enough to be able with high reliability to identify and sanction opportunist behavior. Through this specialization, the Delaware Chancery Court itself becomes a type of contextualizing regime in which contractual innovation evolves.

#### **IV. STABILIZING THE RELATIONSHIP BETWEEN GENERALIST COURTS AND CONTEXTUALIST REGIMES**

Contextualizing regimes can be fragile and, as a result, the innovations they produce can be short-lived. A much noted and discussed example of this vulnerability is insurance law. After a long period in which generalist judges modified common law doctrines to create in effect a contract law for insurance, courts have undermined the doctrinal structure they had created. But this failure does not seem to reflect any limit of the common law; rather it points to the need for a stabilizing conception of the relation between generalist courts and the contextualizing regimes, in the case of insurance the development of standard coverage terms.<sup>53</sup>

The provision of insurance is highly regulated by the states so as to balance the need to safeguard the solvency of insurers with the requirement of broad accessibility of coverage to consumers on fair terms. To assure adequate risk pooling and reduce the effects of adverse selection, coverage of certain types of insurance is mandatory. Thus, all states have compulsory automobile liability insurance in some form. To ensure actuarial precision, moreover, terms specifying the conditions of coverage have to be standardized by statute or regulation across the risk pool, so consumers desiring a particular type of coverage must accept the terms of the industry standard. The 1943

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<sup>53</sup> We introduce the example of how courts responded to the emerging contextualizing regime in insurance contracts with a note of caution as to its general applicability. This example concerns innovation in consumer adhesion contracts and so might be an imperfect guide to how generalist courts will either support or impede emerging innovations in commercial relationships.

New York Standard Fire Insurance Policy, for example, is used in nearly every state, and incorporated into the standard homeowner's policy. To underscore the extreme limitations on consumer choice in this domain, agreements between insurers and insured have been called "super-adhesion" contracts.

In view of pervasive regulation and standardization of insurance, and the resulting restrictions on the consumer's capacity to bargain over terms, courts from roughly the 1960s through the end of the 1980s modified general rules of contract to reach decisions protecting consumer interests while also creating incentives for insurers and regulators to clarify and strengthen the overall regime. One of the most important adjustments of general doctrine was the elaboration of a strong variant of *contra proferentem*, under which a court, encountering an ambiguity in an agreement, immediately decides for the policyholder, rather than undertaking the usual interpretive efforts to determine the parties' meaning. Another was judicial defense of the policyholder's reasonable expectations of coverage, explicit language in the agreement notwithstanding. As Page Keeton summarized the doctrine over forty years ago: "The objectively reasonable expectations of applicants and intended beneficiaries regarding the terms of insurance contracts will be honored even though painstaking study of the policy provisions would have negated those expectations."<sup>54</sup> Had courts applied these doctrines with consistent rigor, and had insurers and regulators responded in kind, the result would likely have been an ongoing clarification and updating of what counts as an unambiguous policy term, and what expectations of insurance coverage policyholders may reasonably have.

For reasons we do not yet fully understand, such a systematic dialogue was never institutionalized. Leaving aside the behavior of the insurers and the regulators, about which the literature is largely silent, the courts' inconsistent protection of reasonable expectations; their embrace of general principles of contract law that undercut both that

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<sup>54</sup> Robert E. Keeton, *Insurance Law Rights as Variance with Policy Provisions*, 83 Harv. L. Rev. 961, 970 (1970).

doctrine and the strong form of *contra proferentem*, confusing a regulatory, supervisory role with a traditional doctrinal role of contract interpretation; their fitful oversight of regulators—despite clear authority to hold them to account; and, most generally, their lack of understanding of the role of the judiciary in the emergent constellation of insurance law—all contributed significantly, perhaps decisively to the disorganization of the regime.

The appeal, but also the limit of reasonable expectations as a stand-alone doctrine was its generality. The doctrine, a creature of the common law, can be applied beyond insurance<sup>55</sup> to the vast majority of adhesion contracts to which consumers consent in mass-market settings. Indeed, at least one state has already extended the reasonable expectations doctrine broadly to reach all standard form consumer contracts,<sup>56</sup> and scholars have generally conceded that there “is no principled justification for it being limited to insurance policies.”<sup>57</sup>

But as the doctrine became un-tethered from its original setting in insurance, and as that setting itself changed in ways that generalist judges could not themselves directly register, the indeterminacy of the reasonable expectations model led to scrutiny of the context in individual cases, and thence to unpredictable decisions (“the opinions speak of expectations without satisfactorily pointing to their source”<sup>58</sup>) and judicial error—the costs of which have arguably been borne by consumers in the former of higher

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<sup>55</sup> Kenneth S. Abraham, *Judge Made Law and Judge-Made Insurance: Honoring the reasonable Expectations of the Insured*, 67 Va. L. Rev. 1151, 1181 (1981). See also, Ethan J. Leib, *What is the Relational Theory of Consumer Form Contract?*, mimeo 2011 at 15-16.

<sup>56</sup> See *Kloss v. Edward D. Jones & Co.*, 54 P. 3d 1 (Mont. 2002).

<sup>57</sup> David W. Slawson, *The New Meaning of Contract: The Transformation of Contracts Law by Standard Forms*, 46 U. Pitt. L. Rev. 21,52 (1984).

<sup>58</sup> Abraham, *supra* note --- at 1163.



premiums.<sup>59</sup> Thus, many courts have been reluctant to apply the doctrine except in cases of egregious abuse, and when it is applied it has been the subject of sustained scholarly criticism.<sup>60</sup>

Generalist courts have consequently abandoned the understanding of reasonable expectations as a mandate to evaluate the conformity of an agreement to the larger goals of insurance policy, regardless of the clarity of the contractual language; instead they apply the doctrine to resolve residual ambiguity. As the Supreme Court of West Virginia recently put it:

'[i]n West Virginia, the doctrine of reasonable expectations is limited to those instances . . . in which the policy language is ambiguous.' This Court has explained that '[t]he doctrine of reasonable expectations is essentially a rule of construction, and unambiguous contracts do not require construction by the courts.

With regard to *contra proferentem*, generalist courts merely revert in insurance cases to traditional, general contract principles. This turns the doctrine (back) into a rule of last resort, to be applied against the drafter only after the usual interpretive means of ascertaining the parties' intent have failed. The upshot is that the insurance-law regime adumbrated by Keeton is in disarray.

This outcome might have been avoided if courts, instead of re-imposing general contract doctrines, had instead used their power of administrative review to induce regulators to seek clarification of insurance terms and policies. In that case, the doctrinal adjustments would have functioned as a judicially administered incentive system—rewarding clarity achieved by the parties under the regulator's aegis, and penalizing failure to achieve this result—rather than an as open-ended invitation to judges themselves to determine in particular cases what the parties ought to have intended. For instance, some codes obligate the insurance commissioner to disallow a policy form

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<sup>59</sup> Susan M. Popik & Carol D. Quackenbos, *Reasonable Expectations After Thirty Years, A Failed Doctrine*," 5 Conn. Ins. L.J. 425, 431-32 (1998).

<sup>60</sup> Popik & Quackenbos, *supra* note --- at 431-32.; Stephen J. Ware, *A Critique of the Reasonable Expectations Doctrine*," 56 U. Chi. L. Rev. 1461, 1492 (1989); Mark C. Rahdert, *Reasonable Expectations Revisited*, 5 Conn. Ins. L.J. 107, 113-15 (1998).

containing or incorporating by reference ambiguous or misleading clauses; similar statutes mandate disapproval of a form whose provisions are unfair, inequitable, or contrary to the state's public policy. Instead, generalist courts preferred to defer to the pro forma decisions of regulators, and treat their assent to forms and policies as an expression of legislative will, binding the judiciary and the parties to eventual contracts. In the end, the opportunity to create a regulatory regime in which the courts acted as a facilitator of regulatory intervention and update was missed.

## V. CONCLUSION

As developments in the cotton industry and insurance suggest, contextualizing regimes, at least in some forms, are hardly new.<sup>61</sup> But, as the preceding discussion has again intimated, expectations that these innovative contractual forms as then constituted would inevitably expand and multiply, or more modestly that they were stable fixtures of the legal landscape, were frustrated by events. Changes in the broad context within which regimes operated at times disrupted and disorganized them.<sup>62</sup>

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<sup>61</sup> In post World War II Western Europe, particularly in the then West Germany, the spread of contextualizing regimes from domains such as labor law and rent control into the many areas touched by the expanding welfare state was seen as inevitable both by those who lamented the decline of the “market order” founded on private autonomy and those who welcomed the turn in private law to the protection of “material” values associated with the “social” market economy.<sup>61</sup> In the US in the same period Henry Hart and Albert Sacks gave a prominent place to contextualizing regimes (which they called “institutional settlements”) in their account of private legal ordering as it had emerged from the New Deal. Franz Wieacker, *A HISTORY OF PRIVATE LAW IN EUROPE* (1995). In the U.S. in the same period Henry Hart and Albert Sacks gave a prominent place to contextualizing regimes (which they called “institutional settlements”) in their account of private legal ordering as it had emerged from the New Deal. See note – supra.

<sup>62</sup> A salient example is the breakdown—especially marked in the US, but detectable elsewhere as well—of familiar forms of collective bargaining and dispute resolution as the result of changes in workplace organization and deep transformations of civil society, including the massive entry of women into the workforce and the insistence by minorities and identity groups of various kinds of an end to discrimination at work.<sup>62</sup> See Katherine Van Wezel Stone, *Post-War Paradigm in American Labor Law*, 90 *Yale L. J.* 1509 (J 1981): 1509; same, *The Legacy of Industrial Pluralism: The Tension Between Individual Employment Rights and the New Deal Collective Bargaining System*, 59 *U. Chi L. Rev.* 575 (1992). The welfare state encountered everywhere problems of accountability and efficiency that slowed, and sometimes completely stopped its progress, and undermined efforts to create regimes protective of the interests of welfare beneficiaries. By the mid-1990s it seemed to many that “political” intrusions into party autonomy served neither the parties nor the broader interest of social equity, and that the future of contract was likely to be not institutionalized, domain specific deviations from the general principles of the common law of contract, but a re-affirmation of them.

In retrospect it seems that both of these earlier and contrary views are erroneous. Contextualizing regimes, taken one by one, are not robust, self-perpetuating institutions. But neither are generalist courts able to accommodate innovation in business practices and contract by simple application of the principles of the common law. Rather, while individual frameworks may be fragile, the family of contextualizing regimes is robust, as actors facing novel circumstance—today the persistence of uncertainty—create new types of governance structures, or when possible adapt existing ones, to institutionalize the contracts that support innovative business arrangements. The question, then, is how to manage the relation between generalist courts, with their necessarily limited knowledge of particular domains, and contractual arrangements which interpret particulars in accordance with the common interests of the actors: how, that is, to maximize the chances that generalist courts respect the arrangements the parties have created, while retaining the capacity to police opportunistic exploitation of the very innovative structures the regime has developed.

Casual empiricism, informed by the foregoing discussion, suggests three candidate solutions. The first is statutory: Subject a particular domain to regulatory oversight, thereby notifying courts of the likelihood that doctrine will have to be adjusted to the purposes fixed by regulation. The history of the insurance-law regime illustrates how much easier this is said than done. The second solution is the creation of a specialized court. The Delaware Chancery Court is an exemplar of a well functioning, court-centric contextualizing regime. But while the Delaware Chancery has adjusted well to a high-uncertainty environment, many specialized courts have struggled to adjust to changed circumstances. It seems implausible that specialized courts are inherently more adaptive than specialized administrative agencies. The third solution in effect denies that innovative regimes pose distinct problems to generalist courts, and simply trusts the latter's capacity to discern their purposes. The generalist courts' partial and ambiguous response to contracting for innovation and new forms of preliminary agreements shows

both that some courts do have the requisite capacity, but also that it would be risky to rely on the usual process of adjudication to conform doctrine to innovation.

But the fact that there is no obvious and familiar solution to the problem of regulating relations between generalist courts and contractual innovation hardly warrants the conclusion that there is no solution at all. Given the variety and mutability of these innovations we may doubt that there is a single solution applicable to all types of relations. We may suppose instead that the nature of the proper relation between generalist court and contextualizing regime is itself contextual, dependent on the type of regime. If that is so, then understanding the different types is a first and necessary step towards thinking about the relation and how it might be improved in various settings. That is the step we have tried to take here.

## Contracts as Technology

Kevin E. Davis\*

### 1. Introduction

Most economists agree that the creation and dissemination of technological innovations is one of the few definite sources of sustained economic growth.<sup>1</sup> Take the case of the garment industry in Bangladesh. In April 1980 a company named Desh Garments Ltd. opened one of the first shirt factories in the country. According to William Easterly, Desh owed its success in part to its collaboration with a major South Korean textile producer, the Daewoo Corporation. In return for royalties and commissions amounting to 8 per cent of sales, Daewoo trained Desh employees in how to make shirts and market them to the world. In other words, Daewoo transferred technology to Desh. So what were the most critical kinds of technology that Daewoo transferred? New looms? New dyes? New cutting or finishing techniques? No. According to Easterly, the two Daewoo-provided technologies that were critical to Desh's success were: bonded warehouses and back-to-back import letters of credit. The warehouses allowed Desh to obtain imported fabrics duty-free and the letters of credit helped them to obtain relatively low-cost financing by, effectively, posting the payment obligations generated by their sales as collateral.

To the extent it is about the letters of credit this story should be an inspiration to contract lawyers. The moral of the story is that contractual innovations are forms of technological

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<sup>1</sup> William Easterly, *THE ELUSIVE QUEST FOR GROWTH: ECONOMISTS' ADVENTURES AND MISADVENTURES IN THE TROPICS* (2001).

progress that can generate economic growth. Purists probably would not recognize these kinds of knowledge as forms of technology, preferring to reserve that term for things we learn about how to manipulate the natural world.<sup>2</sup> But the term ‘technology’ can also be defined more broadly as “useful knowledge about how to produce things at low cost.”<sup>3</sup> Knowledge about back-to-back letters of credit fits comfortably within this broader definition.

Not all contractual innovations create as much value for society as back-to-back letters of credit. In fact, some may destroy value. Either the way, given their potential economic impact it is worth studying who creates them, why and under what conditions.

Studies of contractual innovation are now quite common, but our understanding of the phenomenon lags behind our understanding of other kinds of technological innovation. Existing literature – with some notable exceptions<sup>4</sup> – has focused heavily on innovations in a single context: widely-used terms of financial contracts, typically bonds or corporate charters, drafted by large US law firms.<sup>5</sup> This narrow focus is unfortunate. There are good reasons to believe that significant amounts of contractual innovation occur in other contexts and we should learn more about those processes. For instance, it would be good to know more about innovation generated by users of contracts rather than third party providers such as law firms. It would also be good to know more about other kinds of third party providers because the distinctive regulatory treatment

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<sup>2</sup> [Joel Mokyr;] The Oxford English Dictionary defines technology as “[t]he branch of knowledge that deals with the mechanical arts or applied sciences...” The New Shorter Oxford English Dictionary, Vol. 2 (1993) at 3235. But see, [Nelson].

<sup>3</sup> Easterly, *supra* at 150.

<sup>4</sup> The seminal and very general treatment of this topic is Charles J. Goetz & Robert E. Scott, *The Limits of Expanded Choice: An Analysis of the Interactions Between Express and Implied Contract Terms*, 73 Cal. L. Rev. 261 (1985).

<sup>5</sup> Henry T. Greely, *Contracts As Commodities: The Influence of Secondary Purchasers on the Form of Contracts*, 42 Vand. L. Rev. 133, 160–61 (1989); Michael J. Powell, *Professional Innovation: Corporate Lawyers and Private Lawmaking*, 18 L. & SOC. INQUIRY 423 (1993); Marcel Kahan & Michael Klausner, *Standardization and Innovation in Corporate Contracting (Or “The Economics of Boilerplate”)*, 83 Va. L. Rev. 713 (1997); Michael Klausner, *Corporations, Corporate Law, and Networks of Contracts*, 81 Va. L. Rev. 757 (1995); Stephen J. Choi & G. Mitu Gulati, *Innovation in Boilerplate Contracts: An Empirical Examination of Sovereign Bonds*, 53 Emory L.J. 929, 982–89 (2004); Mitu Gulati and Robert Scott, *The Three and a Half Minute Transaction: Boilerplate and the Limits of Contract Design*, Columbia Center for Law and Economic Studies Working Paper No. 407 (October 5, 2011).

of law firms gives them both advantages and disadvantages in the production of innovation. For similar reasons it would be good to know more about innovation produced for reasons other than direct pecuniary gain by actors such as trade associations and academics.<sup>6</sup> Most importantly of all, it would be good to know more about how contractual innovations become widely used, how they are transmitted from the various categories of innovators to both users and other innovators.

All of these lines of inquiry have parallels in the general literature on technological innovation. There is extensive literature on the respective roles of for-profit research and development on the one hand and user innovation or academic or government research and development on the other. That general literature also highlights the fact that the impact of innovations depends upon how widely and rapidly they are adopted. This demonstrates the need to focus on mechanisms that help people to overcome skepticism and fear born of uncertainty about the effects of adopting new products.<sup>7</sup>

This Article provides a general model of the demand and supply of contractual innovations and then surveys the kinds of organizations likely to supply such innovations. Unlike some previous work in this vein the analysis emphasizes the importance of both the generation and dissemination of innovations. Like previous analyses it reveals that profit-oriented actors such as law firms have limited incentives to generate innovative contracts for use by others. However, there are other potential generators of innovation, including users of contracts, trade associations and legal information providers. The difficulty is that, except for the trade associations, it is not clear that potential innovators have appropriate incentives to disseminate their innovations.

Section 2 discusses the factors that determine the value of contracts, and by extension contractual innovations. Section 3 shifts to focus on the supply of innovation. It describes

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<sup>6</sup> I have explored the role of trade associations in drafting contracts in earlier work. See, Kevin E. Davis, *The Role of Nonprofits in the Production of Boilerplate*, 104 Mich. L. Rev. 1075 (2006).

<sup>7</sup> See generally, Joel Mokyr. *THE GIFTS OF ATHENA: HISTORICAL ORIGINIS OF THE KNOWLEDGE ECONOMY* (2002).

mechanisms for both generating innovations and facilitating their adoption through dissemination. Section 4 uses this analysis as a basis for generating hypotheses about the likely sources of contractual innovation. Section 5 briefly discusses implications for public policy, including interventions such as enhancing intellectual property rights, relaxing rules concerning the unauthorized practice of law, and creating or expanding publicly-sponsored clearinghouses for contracts. Section 6 concludes.

## 2. The value of contractual innovation

### 2.1. Overview

Boiled down to its essence, a contract is a mapping which specifies legal obligations that apply to each contracting party in any given state of the world. Each contract is a product of interaction between documents that purport to record the parties' agreements ("contractual documents") and rules used to construe and enforce those documents ("contract law"). Innovations in contracting can involve innovations in either contractual documents or contract law. The focus here is on innovation in contractual documents.

To understand the value of contractual innovation we have to understand the determinants of the value of contracts. These factors include the incentives created by the contract and the expected enforcement costs. The level of uncertainty about the effects of the contract is also relevant, taking into account the extent to which that uncertainty can be resolved through the passage of time and accrual of precedent as well as through affirmative efforts to acquire information. Thus the value of a contract to its parties will reflect the net effect of the behavior it induces, taking into account enforcement costs and the levels of reading costs, investigation costs, and residual uncertainty the parties have chosen to incur. The influence of each of these



factors is discussed below. A rational actor should decide whether to adopt one contractual document or another based on a rational assessment of these costs and benefits. In practice this calculation will require a fair amount of guesswork.

## 2.2. Intrinsic value

The principal determinant of the value of adopting a contract is the value of the changes in behavior it induces, including enforcement activity, net of the purely mechanical costs of creating the document. For example, a contract for sale of goods gives the parties incentives to participate in what is typically expected to be a mutually beneficial exchange. The incremental benefits of the incentives created by the contract have to be discounted to reflect the expected costs associated with enforcing the contract, taking into account not only the likelihood of a dispute but also the possibilities of either litigation or settlement. In theory, the costs of creating a contractual document also have to be considered. In the days when producing a document involved scribes, or even typewriters and carbon paper, these costs were substantial. In modern societies the advent of mass literacy, word processors and scanners has made these costs much less significant. However, in cases involving complex contracts the costs of recording an agreement may not be trivial.

The value of any given contractual document will depend on the environment in which it is used. Perhaps most importantly, in many cases the value of a particular document will depend on the ease with which it can be legally enforced. For instance, in the United States innovations in contracts for forward sales of onions are essentially valueless because since 1958 such contracts have been rendered legally unenforceable by the Onion Futures Act. In many other countries, contracts are not worth the paper they are written on because legal enforcement is

prohibitively costly or the outcomes of legal proceedings are radically uncertain. At the same time, in those countries there may be features of the contracting environment which serve as substitutes for certain contractual innovations. Most notably, rather than relying on rules set out in contracts to allocate goods and services a society might rely upon the internal rules of organizations such as the family, the corporation or the state to allocate goods and services. Societies in which significant amounts of goods and services are allocated within households or vertically integrated firms, or by the state, will place relatively little value upon contractual innovations.

Contractual innovations can enhance the intrinsic value of a contract in several ways. Some involve specifying new combinations of obligations and thereby opening up new forms of mutually beneficial exchange. For example, Creative Commons licenses allow copyright holders to place more limited sets of obligations on licensees than other licenses.<sup>28</sup> There appear to be many cases in which granting the added flexibility costs copyright holders less than it is worth to licensees, thus enabling more mutually beneficial licensing arrangements to be concluded. It can also be useful to change the specification of the states of the world that trigger certain kinds of obligations. Take for instance catastrophe bonds. These are financial instruments whose payouts are conditioned on the non-occurrence of catastrophic events such as hurricanes or

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<sup>28</sup> Creative Commons is a non-profit organization that has created a series of copyright licenses that are an attempt to develop the copyright spectrum between the end points of “public domain” and “all rights reserved.” The licenses range in degrees of restriction according to four different dimensions: attribution, commercial use, derivative works, and “share-alike.” The first, attribution, merely requires that the user give the author, artist, or creator credit. The second dimension allows the author to stipulate that his or her work can only be used in non-commercial enterprises. The third dimension refers to whether the license permits or prohibits the creation of derivative works based on the original work. So, for example, an “attribution non-commercial no-derivative” license essentially boils down to “free advertising.” For instance, a musician could release a song under this contract that would allow private individuals to share this work with friends as long as they kept the artist’s name attached to the work and didn’t adapt it in any way. The fourth dimension, if applied, requires that any individual who does create a derivative work only distribute that work under an identical Creative Commons license. These licenses have been made available, free of cost, to the public. Creative Commons, About Creative Commons, <http://creativecommons.org/about/> (last visited July 1, 2008).

earthquakes.<sup>29</sup> They are used primarily by insurance companies to transfer the risks of catastrophe-related liabilities to the holders of the bonds. It turns out that not only do some debtors find it useful to have their repayment obligations extinguished in the event of a catastrophe,<sup>30</sup> some creditors are more than willing to accept the risk of non-payment in these contingencies because these risks are easy to diversify. Finally, some contractual innovations can create value by reducing enforcement costs. Arbitration clauses arguably serve this purpose.

Innovations which remove ambiguities or inconsistencies in the specification of obligations may affect both incentives and enforcement costs. The more precisely the document specifies the actions to be undertaken in any given contingency, the less room there is for disagreement about how to proceed when that contingency arises. So for example, in the newest version of their standard-form General Contract terms, the American Institute of Architects (AIA) has included provisions intended to address the unexpected discovery of human remains, burial sites, other archaeological materials, and wetlands. Under the terms of the contract, upon “encountering” or “recognizing” any of these features, the Contractor is obligated to suspend “any operation that would affect them,” as well as to notify both the Owner and Architect. In turn, the Owner is then obligated to take prompt action in order to gain the necessary governmental authorization for the resumption of work. In the meantime, the Contractor may continue to work on unaffected operations. If these events should affect the cost of completion or the time required, the Contractor may request for adjustments in contract time and price, in accordance with Article 15 of the agreement, which generally addresses claims and disputes.

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<sup>29</sup> Goran Mijuk, *Catastrophe Bonds Are a Savvy Hedge Against Disaster*, BARRON’S DAILY STOCK ALERT (June 30, 2008), available at [http://online.barrons.com/article/SB121461411581212747.html?mod=b\\_hps\\_9\\_0001\\_b\\_this\\_weeks\\_magazine\\_home\\_left&page=sp](http://online.barrons.com/article/SB121461411581212747.html?mod=b_hps_9_0001_b_this_weeks_magazine_home_left&page=sp) (last visited Jul. 1, 2008).

<sup>30</sup> These benefits are likely to be particularly significant for inhabitants of the developing world whose low-income makes them highly vulnerable to economic shocks, especially if climate change increases the incidence of extreme weather conditions.

The previous iteration of this form, A201-1997, merely contained clauses addressing “concealed conditions” and the Owner’s obligations to obtain all necessary permits and approvals. It was not entirely clear how those provisions applied in cases of concealed conditions that require the Owner to engage in distinctive interactions with government authorities. By addressing the matter explicitly the revised form seems likely to reduce the likelihood of costly disputes over the parties’ obligations when these contingencies arise.

Innovations can also respond to changes in the contracting environment. The recent history of arbitration clauses in consumer contracts in the United States is one of continuous innovation, driven in large part by changing legal standards.<sup>31</sup> In the early 1980’s the Supreme Court of the United States began to demonstrate increasing willingness to enforce arbitration clauses in consumer contracts, even in the face of contradictory state law.<sup>32</sup> In response, many companies rewrote their consumer contracts to include arbitration clauses. However, the Supreme Court’s 2001 decision in *Green Tree Financial Corp. v. Bazzle* temporarily dimmed the appeal of arbitration by holding that class arbitration was permitted if the arbitration agreement was silent on the matter.<sup>33</sup> After the decision in *Bazzle* many companies rewrote their arbitration clauses to ban class actions. However, between 2005 and 2010 four state supreme courts and five circuits held that class arbitration waivers were substantively unconscionable in cases involving low-value claims.<sup>34</sup> Their stated concern was that without access to a class action it would be practically impossible for consumers with low value claims to bring meritorious claims against vendors. In response some companies attempted to revise their arbitration clauses to

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<sup>31</sup> For a history see David Horton, *The Shadow Terms: Contract Procedure and Unilateral Amendments*, 57 UCLA L. Rev. 605 (2010).

<sup>32</sup> *Cone Mem. Hosp. v. Mercury Constr. Corp.*, 460 U.S. 1 (1983); *Southland Corp. v. Keating*, 465 U.S. 1 (1984).

<sup>33</sup> 539 U.S. 444 (2003).

<sup>34</sup> Horton, *supra*.

maintain the ban on class arbitration while addressing courts' concerns about deterrence of low value claims. Professor David Horton traced the history of AT&T's response:

In 2001, AT&T unilaterally inserted an arbitration clause that prohibited class actions and included several other remedy-stripping provisions, including one that eliminated any right the plaintiff might have to recover attorney's fees. In 2005, after several more unilateral amendments to its procedural terms, AT&T unilaterally removed the remedy-stripping terms but did not delete the class arbitration waiver. In December 2006 and again in January 2007, AT&T unilaterally overhauled its class arbitration waiver, disclaiming its own right to recover attorney's fees, allowing plaintiffs to attend the arbitration in person, by phone, or to waive a hearing, and providing a bounty of \$5000 and double attorney's fees for any plaintiff who recovers more than AT&T's last written settlement offer.<sup>35</sup>

AT&T's revised arbitration clause was eventually upheld by the Supreme Court of the United States in *AT&T Mobility v. Concepcion*.<sup>36</sup>

Innovations are not, however, necessarily beneficial to society. This is as true for contracts as for other forms of technology.<sup>37</sup> And even when innovation is beneficial on balance, the benefits and costs may not be equally distributed.

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<sup>35</sup> Horton, *supra*, 654-655.

<sup>36</sup> *AT&T Mobility v. Concepcion*, 131 S. Ct. 1740 (2011).

<sup>37</sup> For an apocalyptic analysis of the implications of advances in nuclear technology, biotechnology and nanotechnology see Bill Joy, *Why the future doesn't need us* WIRED 8.04 (2003).

In fact, contractual innovations may not even be mutually beneficial to the parties who adopt them. This is because contracts serve both to create and redistribute value. In the presence of asymmetric information, better-informed parties have an incentive to propose innovative terms that redistribute value in their favor. AT&T's ban on class arbitration might be a case in point.

Contractual innovations can also generate negative externalities.<sup>38</sup> The classic examples are financial contracts that magnify contracting parties' risk of insolvency and thereby jeopardize the solvency of their creditors.<sup>39</sup> In extreme cases these kinds of innovations can throw entire economies into turmoil. These are the sorts of concerns that once led renowned investor Warren Buffet to call derivatives contracts "financial weapons of mass destruction."<sup>40</sup>

Even if a particular contractual innovation is, on balance, beneficial to society, it may benefit some members of society more than others. For instance, some contractual innovations might increase the relative earnings of people with legal training. Others might be biased in favor, and thus increase the relative earnings of, people with training in the law of a particular jurisdiction, such as New York or England.<sup>41</sup>

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<sup>38</sup> For an argument that provisions such as class waivers generate negative externalities see, Kevin E. Davis and Helen Hershkoff, *Contracting for Procedure*, 53 William & Mary L. Rev. 507 (2011).

<sup>39</sup> For a review of theoretical literature showing that financial innovations need not generate social benefits see Peter Huang, *A Normative Analysis of New Financially Engineered Derivatives*, 73 SO. CAL. L. REV. 471 (2000).

<sup>40</sup> Warren Buffett, LETTER TO SHAREHOLDERS OF BERKSHIRE HATHAWAY INC. (2002) at 15.

<sup>41</sup> Here parallels might be drawn to the phenomenon of skill-biased technological innovation. A technological innovation is said to be biased in favor of a particular factor of production when it increases the relative (marginal) productivity of that factor of production and so increases its relative earnings. If the bias in favor of a particular factor is sufficiently strong then an innovation may increase the relative earnings of a factor even as the supply of that factor increases. So for example, since the late 1970's technological change in the US appears to have been strongly biased in favor of skilled labor — over that period the earnings of skilled workers relative to unskilled workers increased even as the relative supply of skilled workers also increased. Acemoglu is careful to distinguish the concepts of factor-biased and factor-augmenting technological change. He suggests that factor-biased technological change increases the relative demand for the factor in question. Meanwhile, factor-augmenting technological change makes that factor more productive in physical terms but may not increase the relative demand for it. For example, adoption of labor-augmenting technology might allow individual factory workers to produce more output for any given combination of inputs yet reduce the earnings of labor by reducing the demand for labor relative to capital. Daron Acemoglu, *Technical Change, Inequality, and the Labor Market*, 40 J. ECON. LIT. 7 (2002).

### 2.3. Uncertainty and methods of resolving it

Sometimes parties, including parties who have ‘drafted’ a document, will be uncertain about the obligations it creates. This may be either because they have not reviewed the applicable documents and laws with sufficient care, or because those document or laws are ambiguous. This kind of uncertainty can limit the value of a contract in two main ways. First, it can dilute desirable incentives, or even create perverse incentives, for one party or another. Second, uncertainty can lead to disagreements between the parties that in turn lead to costly litigation. Take for example a contract with a liquidated damages clause at risk of being deemed an unenforceable penalty. Assume that if the clause is unenforceable then only minimal damages will be awarded. The greater is the likelihood that the clause will be unenforceable, the less effective it will be in motivating performance. In addition, the more that the parties disagree about the likelihood of enforcement the more likely they are to incur litigation costs.

The value of adopting a contract may also depend on the extent to which third parties are uncertain about its effects. This is most likely to be the case if the parties to the contract value the ability to transfer interests in it to third parties, either directly or indirectly. For example, parties to intellectual property licenses might value the ability to assign them to joint venture partners, bondholders might value the ability to sell their holdings on the secondary market, or banks might value the ability to sell participations in their loans to other banks. Similarly, firms will typically value the ability to sell indirect interests in their material contracts to investors so as to maximize the proceeds from issuing securities.

To some extent uncertainty about the effects of a contract is resolved automatically with the passage of time. This occurs mainly as users of the contract become entangled in disputes. In the course of resolving their disputes the parties typically attempt to determine the effect of the

contract and the resulting information is often revealed to interested observers. Disputes that result in litigation and binding judicial interpretations of contractual documents are particularly informative.

There are three proactive ways in which people can resolve uncertainty about the effects of a particular contractual document. The first is by incurring what we might call “reading costs.” Reading costs depend in part on the inherent complexity of the contract – the number of distinct contingencies provided for and the amount of detail with which the parties’ obligations are specified in each contingency. Reading costs also depend on the clarity of the language in which the contractual document and the applicable body of contract law are expressed. Some documents are simply more readable than others. Here it is important to take into account not just the contractual document itself but also any available commentary, such as users’ guides or annotations. Last but not least, the magnitude of reading costs also depends on how much the document and the associated contract deviate – in terms of both language and substance – from documents with which the reader is already familiar.

This last point suggests that the reading costs associated with a contractual document will decline as potential readers become familiar with the document. This in turn implies that the value of adopting a given contractual document will increase to the extent that it either is already familiar to potential readers, or is expected to become familiar to such readers while it is in use. This is why it is sometimes said that the value of these documents depends on how frequently they have been used in the past and how widely they will be used while in force. Kahan and Klausner call these two effects “learning effects” and “network effects” respectively.

A second way to resolve uncertainty about a contract is to investigate the person who drafted the contractual document. In other words, it may be possible to draw inferences about the



contract from the trustworthiness of the drafter. Trustworthiness might stem from the personal values and predilections of the individuals involved or the values embedded in an organizational culture. For instance, when it comes to drafting good documents it may be sensible to trust people or organizations known to be obsessively farsighted and thorough. Trustworthiness might also be a reflection of the incentives facing the drafter. A firm that is likely to lose significant amounts of business if it drafts a one-sided contract has an incentive to be trustworthy.

At least in principle, a third proactive way of resolving uncertainty, and shaping the manner in which that uncertainty is resolved, is through the lawmaking process. Drafters could initiate litigation or lobby for legislation designed principally to clarify the meaning of their documents.

Rational parties should only incur reading costs and investigation costs to the point where the benefit of resolving any remaining uncertainty equals the incremental reading, investigation or litigation or lobbying costs. In some situations it will be optimal to choose one strategy or the other. For instance, in very adversarial situations the optimal strategy might be to read carefully. If the drafter is considered to be highly trustworthy, it might be rational to forgo reading altogether. Of course, in some situations a combination of reading, investigation, litigation and lobbying might be optimal.

Innovations can also influence reading costs. By definition, an innovative document represents a departure from an existing document. If the existing document is familiar to readers then the innovation will tend to increase reading costs. The less comparable the innovative contract is to familiar alternatives, the greater the incremental reading costs. Increasing the number of potential readers has the same effect. If the innovative contract will cause many people in an organization to incur additional reading costs it will be relatively unattractive. The

same consideration limits the value of innovation in settings where the ability to transfer a contract is very valuable. This implies that we should see relatively little innovation in the contracts embodied in securities that are intended to be widely traded. Similar reasoning suggests that innovation is relatively unlikely to be valuable in contracts that are likely to be material to investors in the organizations bound by the contract.

Some innovations are designed to enhance readability or comparability. This is the main purpose of revisions designed to adopt plain language. Innovations in materials that supplement contractual documents, such as annotations or training manuals, can also serve to reduce reading costs. Meanwhile, labeling documents in accordance with a standardized scheme can facilitate both comparison and access to supplementary materials. This is especially true if the labels are machine-readable. For example, embedding XML codes in contractual documents can make it easy for individual contractual terms to be searched for and linked to texts that explain their import, even as they are cut and pasted from one document to another.<sup>44</sup>

### 3. The supply of innovation

Supplying innovations involves two types of processes: processes for generating innovation and processes for disseminating them to prospective users. The two types of processes are interrelated because contractual innovation is almost always cumulative, meaning that the nature and quality of innovation depends on the quality of the documents to which the innovator has access. The more widely an innovative contract is disseminated, meaning the easier it is to find and review, the easier it will be for other actors to innovate. The cumulative nature of

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<sup>44</sup> Larry Cunningham, *Language, Deals and Standards: The Future of XML Contracts*, 84 WASH. U. L. REV. 313 (2006).

contractual innovation means that the incremental benefits of making a contract readable and comparable go beyond the benefits to users of that contract. The benefits are also reaped by people who use innovations enabled by the initial innovation.

### 3.1. Generating innovations

A great deal of attention has focused on obstacles to contractual innovation. A great deal of attention has been focused on innovation that flows from deliberate investments in research and development aimed at capturing the pecuniary benefits of either using or selling the resulting contractual documents. Inability to capture those pecuniary benefits presents a significant obstacle to this form of innovation. However, the significance of this obstacle is unclear because innovation can also be generated through other processes, including innovation aimed at capturing indirect pecuniary benefits or non-pecuniary benefits as well as through learning-by-doing.

#### *For-profit innovation*

One way of generating innovation is through deliberate investments in research and development by profit-seeking actors. What level of investment is required to create an innovative contract? Facts revealed in the course of a copyright dispute between two insurance companies provide a hint. The plaintiff American Family Life Insurance Co. (AFLAC) complained that the defendants had infringed its copyrights in four insurance policies. AFLAC's witnesses testified that each policy took between eight and nine months to create, with drafting

requiring between three to six months.<sup>51</sup> As for the effort that went into the drafting process, the court summarized the evidence as follows:

With respect to the drafting process itself, AFLAC explains that numerous factors had to be considered by those individuals involved, which included representatives from the company's actuarial, claims, marketing, compliance, and underwriting departments. Indeed, before drafting could commence, AFLAC had to decide which new conditions and treatments to cover; which new benefits to provide and on what terms; which existing benefits, if any, to change; which definitions and/or other provisions to add or change; and which order was best. Moreover, once the process was underway, each draft was reviewed and revised “repeat[edly]”....Factors considered included “whether the proposed language appropriately described the specific benefits to be provided . . . ; whether the overall language was consistent with the actuarial department's understanding of the anticipated coverage; what effect the new policy language would have on claims; whether claims administrators had clear guidelines for making benefit determinations; [and] whether the benefits and other provisions would be easily explainable to potential policyholders . . . .” ....Finally, AFLAC spent some time ensuring its “narrative” language style - as compared to the “terse, nondescriptive” style employed by some of its competitors - would be “readily understood by consumers.”<sup>52</sup>

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<sup>51</sup> Am. Family Life Ins. Co. of Columbus v. Assurant, Inc., No. 1:05-CV-1462, 2006 U.S. Dist. LEXIS 8781, 2006 WL 4017651 (N.D. Ga. Jan. 11, 2006), 3. (AFLAC v. Assurant).

<sup>52</sup> AFLCA v. Assurant, supra, 5-7.

Meanwhile the defendants – who were found to have infringed copyright by copying two of the plaintiff’s policies virtually word for word – claimed to have paid an outside law firm over \$540,000 to draft their policies.<sup>53</sup>

Inability to appropriate the benefits of innovation is often seen as the great obstacle to profit-oriented innovation. The level of investment in research and development ought to be an increasing function of the anticipated value of innovations, the productivity of investments in research and development, and the extent to which the investor will appropriate the value of innovations. It is often difficult for drafters of documents to appropriate the all of the benefits that flow to people who use their products. This is mainly because documents are easy to copy. Once a producer has given one person access to a document there is often a significant risk that it will be copied by others. Producers typically do not receive any direct benefits from copiers. Consequently, producers can typically capture only a fraction of the social benefits created by their innovations. This generally implies that producers will have sub-optimal incentives to invest in innovation – it is not in their interest to invest in innovation to the point where the costs of their investment equal the social benefits of innovation.

The situation would be different if intellectual property laws provided greater protection for producers of contractual documents. Contracts are protected by copyright, as “original works of authorship,” but only the most blatant and literal forms of copying violate that copyright.<sup>55</sup> Copyright in a document is not infringed by using similar language embodying the same idea, much less by different language.<sup>56</sup> It has also been held that the specific language of a contract or

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<sup>53</sup> AFLAC v. Assurant, *supra*, 10.

<sup>55</sup> See generally Goetz & Scott, *supra*, at 292 n.78; Paul G. Reiter, Annotation, *Copyright, Under Federal Copyright Laws, of Forms, or Form Books*, 8 A.L.R. Fed. 869 (1971).

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a business form cannot be copyrighted where the use of that language is essential to expressing a particular underlying idea.<sup>57</sup>

Third parties who generate innovations for use by others face another obstacle to appropriating the value of their innovations – prospective users may find it difficult to observe and verify the value of the innovation. The benefits of a good contract are often invisible: accidents are avoided because parties have responded to incentives to take precautions and disputes are forestalled because obligations are clear. Users will not pay for what they cannot see. At the same time, the ill effects of a poorly drafted contract are often highly visible: unpleasant surprises, confusion, litigation. A drafter who provides a poor quality document may or may not be legally liable for these costs, but its reputation may suffer. Consequently, third parties who provide contracts for use by others may bear the downside risk of innovation but little of the upside.<sup>58</sup>

*Innovation aimed at capturing indirect or non-pecuniary benefits*

Incentives to invest in innovation can be bolstered by the prospect of receiving indirect or non-pecuniary benefits. There are situations in which it is valuable for a firm to develop a reputation for creating innovative contracts, typically as a way of attracting prospective clients. For instance, a law firm or investment bank may be happy to let other people in on its last great idea in order to attract clients who want to benefit from the next idea.<sup>59</sup> In addition, many technological innovations are produced by actors who are not motivated by the prospect of profit. Classic examples are weekend hobbyists and academic scientists. In this kind of process the pace of innovation depends on the supply of appropriately motivated actors as well as their

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<sup>58</sup> Claire A. Hill, *Why Contracts Are Written in “Legalese”*, 77 Chi.-Kent L. Rev. 59 (2001); [Bernstein].

<sup>59</sup> This is the explanation given for Wachtell Lipton’s investment in creating the poison pill. See Powell, *supra*.

access to funding (e.g. from the state or charitable institutions), and prior innovations. Similarly, contractual innovation might be driven by academics or well-intentioned bureaucrats who review and suggest improvements to existing contractual documents.

### *Learning-by-doing*

Technological innovations are not necessarily the products of deliberate and costly research or development. Instead, some innovations are by-products of the use of previous generations of technologies. In other words, innovation might result from learning-by-doing, or more appropriately, learning-by-trading. In this case the nature of innovation in a given field, starting from a given technological base, will be an increasing function of levels of activity. It seems intuitive that this kind of process will play a role in contractual innovation. So for example, the revisions to the AIA document to address burial grounds on construction sites may have been an organic product of experience rather than the result of a deliberate search for ways to improve the contract.

### 3.2. The importance of cumulative innovation

Technological innovation is generally cumulative; for the most part it involves applying existing knowledge in new contexts or combining existing technologies in new ways. Contractual innovation is no different. Many innovations are incremental innovations that

involve small tweaks to existing documents. For example, notwithstanding the substantial investment AFLAC made in revising its insurance policies, the final products still only involved additions to and revisions of earlier versions, with only “some” of the revisions characterized as “extensive.” The drafting process would undoubtedly have been much less productive if AFLAC had been forced to draft a new policy from scratch. Given the importance of cumulative innovation, it is critically important to treat access to contractual documents as a crucial determinant of the quality of innovation.

### 3.3. Dissemination

Dissemination involves the transmission of innovations from innovators to potential users. Transmission involves both sending and receiving information, and so it encompasses not only publishing information but also searching for and assimilating it.

Drafters who are users benefit from disseminating innovative documents to potential counterparties, transferees and their agents. In cases where the contractual document is regarded as an integral part of the user’s product offerings, as is arguably the case for firms such as insurance companies and credit card issuers, dissemination is likely to be part and parcel of a broader marketing campaign. Reducing reading costs for these actors makes it more likely that they will trade with the drafter. For drafters who produce documents for use by others, dissemination can provide direct pecuniary benefits in the form of fees received for selling access to the documents. There may also be indirect benefits in the form of revenues from selling complementary products, such as explanatory materials, training programs, dispute resolution services or legal advice.



Drafters may also benefit from disseminating contracts because they anticipate reciprocity. Scholars of innovation have identified many contexts in which communities of user-innovators share their innovations with one another. They may do this because they expect to benefit from similar behavior on the part of other drafters in the not-too-distant future. This interpretation is particularly plausible when the costs of dissemination, including both the direct costs and other costs stemming from loss of exclusive access to an innovation, are low. So, for example, the owner of a garment factory might share copies of his novel letter-of-credit documentation with the owner of a soccer ball manufacturer on a ‘you scratch my back, I’ll scratch yours’ basis.

In principle, users might also share contracts without expecting to receive direct economic benefits in return. Some scholars have speculated that these kinds of sharing norms arise among user-innovators when there are significant but indirect net economic benefits for the group as a whole.<sup>60</sup> This is likely when sharing does not undermine incentives to innovate; dissemination through sharing generates considerable social benefits; the direct costs of sharing are low; and, the costs of enforcing norms that require sharing are also low.

The costs of dissemination have several components. The costs of transmission are now almost trivial, consisting mainly of the costs of uploading, storing and downloading documents. The costs of ensuring that these transmissions are received by users are more substantial. These include the costs of making contractual documents readable, comparable and searchable. They also include the costs of developing explanatory materials and tools for searching for documents that meet the needs of specific users. The costs of developing search tools and making them familiar to potential users should not vary with the size of the database being searched. To this extent there may be economies of both scale and scope in the dissemination of contractual

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<sup>60</sup> Katherine J. Strandburg, *User Innovator Community Norms at the Boundary between Academic and Industry Research*, 77 *FORDHAM L. REV.* 2237 (2009).

documents. In other words, firms that are already in the business of disseminating large numbers of documents, both contractual and otherwise, will tend to have lower average costs than other firms.

Innovations in information technology promise to reduce the direct costs of dissemination. For example, wiki technology can now be used to facilitate sharing of innovative contractual provisions. Wiki technology does not only reduce the costs of disseminating innovations but may also help to sustain sharing norms by making it possible for those who share to be rewarded through public recognition of their contributions.

For users the potential costs of dissemination also include loss of competitive advantage. So for example, an insurance company like AFLAC might benefit from blocking other insurance companies from using its policies.

#### 4. The sources of innovation

Understanding both what makes for a valuable contractual innovation and the processes and resources required to generate and disseminate such innovations helps to shed light on what kinds of organizations are likely to produce and disseminate valuable contractual innovations. Much of the recent literature has focused on the role of law firms, but in fact they are only one of several distinct sources. First, there are users, who play fundamentally different roles from third parties who provide documents for use by others. Among those third parties law firms have to be treated separately because they are subject to distinctive regulatory privileges and requirements. Then it is important to distinguish between third parties who are motivated to innovate by the prospect of direct pecuniary gains, and third parties such as trade associations or academics which are motivated by other factors. Although these different sources of innovation should be

treated separately for analytical purposes, in practice the distinctions may become blurred as different types of actors combine and collaborate.

These sources can be compared along several dimensions. First, they vary in terms of their ability to appropriate the pecuniary benefits from innovation and dissemination and their responsiveness to pecuniary incentives. Second, they vary in terms of their ability to tap into the benefits of learning-by-doing. Third, they vary in terms of their access to previously drafted agreements that might serve as a basis for follow-on innovations. Fourth, they differ in terms of their ability to exploit economies of scale and scope in disseminating documents. Finally, they differ in terms of their inherent ability to help prospective users overcome uncertainty about the effects of adopting novel documents. For instance, users who provide novel documents might find it difficult to elicit trust from their counterparties because they have an incentive to prepare biased terms, i.e., terms that redistribute value in their favor. Meanwhile, third parties will find it difficult to inspire trust because their incentive is to minimize the kind of effort required to ensure that the contract is valuable to the users. If the user values transferability then the producer of a novel contract faces the additional challenge of inspiring confidence that it will become widely used. Generally speaking, third parties who already deal with large numbers of users and who can make credible commitments to continue doing so are best positioned to make the case that their documents will become widely used.

#### 4.1. Users

Users, or at least experienced users, are uniquely suited to producing innovations that enhance incentives because they typically will be most familiar with the scenarios in which the contract will be used, the likely contingencies, and the consequences associated with each

contingency. In other words, users of contracts are able to learn-by-doing in a way that third parties are not. On the other hand, users do not have special access to prior documents that might provide a basis for innovation.

Users' incentives to innovate are not necessarily optimal from a social perspective. Users have weak incentives to invest in innovations that produce small benefits for themselves, even if benefits to other users would be large. Innovations that reduce litigation costs might, for example, fit this description if the odds of any given user experiencing litigation are small. Users whose documents govern high stakes transactions, or who plan to use the documents repeatedly, stand to gain more from innovation and so have stronger incentives to innovate.

Users also do not necessarily have optimal incentives to disseminate their innovations. They often have incentives to produce innovations that reduce the reading costs of members of their organization, potential counterparties and transferees.. For instance, a large insurance company has an incentive to produce a training manual that explains its policies to its own employees. Similarly an insurance company, are another firms that offer standardized contracts of adhesion to large numbers of unsophisticated parties will have incentives to invest in documents and supplementary materials that are readable and comparable, especially if the counterparties have reason to worry about costly surprises buried in the details of the contractual document. This explains why an insurance company like AFLAC would invest in redrafting its documents in plain language. Sometimes though, no special effort is required to reduce counterparties' reading costs. For instance, both parties may have read the document thoroughly in the course of negotiating its terms. Similarly, bond issuers have incentives to disseminate their indentures broadly, both to attract purchasers in the primary market and to make them familiar to potential purchasers in the secondary market.

Beyond these cases, users have no incentive to invest in dissemination of contracts to third parties. Many innovative contracts simply remain in the drawers of the relevant parties. In principle, users might also share contracts without expecting to receive direct economic benefits in return, but I have not yet come across any economically significant examples. This situation may, however, change with advances in information and communications technology and greater use of mechanisms such as the Harvard Contracts Wiki.<sup>61</sup>

#### 4.2. Law firms

Law firms in most states have legally sanctioned monopolies on dispensing individualized legal advice, which is frequently defined to include a) drafting documents with legal effects and b) representing people in judicial dispute resolution.<sup>62</sup> Both these kinds of work require the firms to maintain up-to-date knowledge of the law and given them privileged access to a stock of contractual documents. That knowledge is also valuable in the production of contracts. In theory, the resulting synergies should give law firms an advantage over other third-party producers of contractual documents. Those advantages should carry over to the production of contractual innovations. Law firms should be especially well-placed to generate innovations that respond to changes in the applicable law or information revealed by disputes in which they are involved.

On the other hand, like other non-users law firms will find it difficult to appropriate the gains from producing contractual innovations. It is also important to keep in mind that many law firms are large organizations that specialize in producing financial contracts and material contracts for

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<sup>61</sup> See, HARVARD CONTRACTS WIKI at: <http://www.ackwiki.com/drupal/>.

<sup>62</sup> American Bar Association, Report of the Task Force on the Model Definition of the Practice of Law (2003) (describing state laws restricting unauthorized practice of law).

companies with many outside investors. These are precisely the situations in which the value of contractual innovation is relatively low.

Law firms have limited incentives to distribute innovative contracts beyond their fee-paying clients. This kind of dissemination may help to attract new clients, but it may result in some loss of competitive advantage for the firm.

#### 4.3. For-profit producers

Law firms are not the only types of firms that produce contractual documents for use by others. Some of their competitors focus exclusively on producing legal documents (in addition to contractual documents, many sell documents such as wills, powers of attorney, or articles of incorporation).<sup>63</sup> Many others offer contractual documents alongside related goods or services. Firms such as Bloomberg, Lexis, and Westlaw provide access to contractual documents along with access to databases containing a wide variety of legal and non-legal information. Some firms provide legal documents along with services such as incorporations, patent applications and searches.<sup>64</sup> Another strategy is to supply documents together with referrals to attorneys. Customers receive a document together with a referral to an attorney who can advise them on its effects and suitability for their purposes.<sup>65</sup> Other businesses supply documents together with software that helps users to store and modify them.<sup>66</sup> Still others offer documents together with opportunities to purchase advertising space on the webpages that host them.<sup>67</sup>

All third party providers of contractual documents have incentives to disseminate their documents by publishing them and making them searchable. By providing access to many kinds

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<sup>63</sup> See, for example, US Legal Forms at <http://www.uslegalforms.com>.

<sup>64</sup> See, for example, LegalZoom, at <http://www.legalzoom.com>.

<sup>65</sup> See for example, <http://www.rocketlawyer.com>.

<sup>66</sup> See Business-in-a-Box at <http://www.biztree.com>.

<sup>67</sup> See, for example, <http://www.onecle.com>.

of documents through the same channels these providers can exploit economies of scale and scope in the development of dissemination mechanisms. To the extent they deal with novice users, third party providers probably also have incentives to make their documents readable. Some users may feel more comfortable with documents written in incomprehensible legalese but it seems reasonable to presume that more people will be comfortable with documents that are at least superficially comprehensible.

It is less clear that non-law firm third party providers have incentives to innovate along other dimensions, such as ensuring that their documents create the desired incentive effects and are adapted to changes in the legal environment. This is mainly because, as noted above, the value of these kinds of innovations is difficult to communicate to the unsophisticated casual users targeted by many of these firms. These firms expressly disclaim any intention to provide documents that are tailored to the needs of specific users because to do otherwise would violate prohibitions on the unauthorized practice of law.

Providers of legal information may be exceptions. These firms are in the business of accumulating comprehensive information about changes in the law, disputes litigated in public fora, and increasingly, executed contracts filed with government agencies.<sup>68</sup> It should not be difficult for them to track the subset of that information relevant to particular contractual documents. For example, it should not be difficult for a firm that is compiling a database of judicial decisions to run a daily search for decisions quoting the language from specific documents. Such a firm should also have the expertise to search the database of contracts filed with the SEC for language capturing a concept it would like to add to an existing document. As a result, legal information firms ought to have the capacity to generate contractual innovations

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<sup>68</sup> Some law firms may, however, have superior access to information about unreported disputes such as commercial arbitrations.

designed to respond to changes in the legal environment. The legal information industry is also highly concentrated, presumably because the high fixed costs of creating these databases pose high barriers to entry. Consequently, each legal information firm tends to have access to large numbers of potential users. This should enhance their ability to convince users that innovative forms will be widely used. For all these reasons, legal information firms should be able to give law firms a run for their money in terms of their ability to generate and market innovative contracts. Their incentives to innovate are, however, still muted by the difficulty of communicating the value of their innovations to prospective users.

#### 4.4. Trade associations<sup>69</sup>

Trade associations are organizations with mandates to promote the welfare of their member firms, and in some cases, the industry as a whole. Many trade associations produce standard form contracts designed for the use of industry participants. Some distribute them free of charge to the public, others limit access to fee-paying members, others charge substantial amounts for access to the documents.

There are several reasons why trade associations are likely to be sources of innovation. First, trade associations have strong incentives to innovate because they are particularly well-positioned to appropriate the resulting benefits. To the extent that the benefits flow to its members, the association can recoup those benefits through membership fees.<sup>70</sup> Second, trade associations may have privileged access to documents, information and ideas from users. Users

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<sup>69</sup> This section draws on Davis, *supra*.

<sup>70</sup> Goetz & Scott, *supra*, at 293, 303; Kahan & Klausner, *supra*, at 762; Lisa Bernstein, *supra* at 110-111 and *Private Commercial Law in the Cotton Industry: Creating Cooperation Through Rules, Norms, And Institutions*, 99 Mich. L. Rev. 1724, 1742-43 (2001); and Robert B. Ahdieh, *The Role of Groups in Norm Transformation: A Dramatic Sketch, in Three Parts*, 6 Chi. J. Int'l L. 231, 249-252 (2005) (discussing role of groups in solving collective action and coordination problems).



may be willing to contribute to a trade association-led drafting project on a voluntary basis when they would not be willing to do so for another user or an entity like a law firm or a legal information firm. Third, as nonprofits, trade associations benefit from more favorable tax treatment than for-profits. Fourth, trade associations may be relatively trustworthy. In the absence of a profit motive, and with an appropriate governance structure, a trade association has incentives to abide by commitments to produce fair and balanced contracts. Fifth, a trade association with broad membership may have the ability to induce a large proportion of its members to adopt a new contract.

The most sophisticated trade associations invest in both innovation and dissemination. A good example is the AIA. It regularly updates its contracts to take account of new developments, including changes in construction practices and recent judicial decisions. The AIA also invests in making its documents easy to adopt. For example, all of the AIA's documents are available in both paper and electronic formats. The electronic versions are embedded in a software package that contains blank documents, and allows users to save completed documents together with data about the changes that have been made to the standard form. The latest version of the software package is fully integrated with popular word processing and spreadsheet programs and so permits data, such as costs, to be drawn directly from a spreadsheet. The AIA also publishes synopses of each document, clause-by-clause guides and podcasts, and offers online training courses. Some of these materials are specifically designed to explain the impact of revisions to the documents.

At least one trade association goes a step further toward reducing the uncertainty associated with its documents and intervenes directly in litigation concerning the documents it produces.

Since 2000 the International Swaps and Derivatives Association (ISDA) has filed amicus briefs in over 20 cases involving interpretation of the documents it produces.<sup>71</sup>

#### 4.5. Academics

In other contexts, academics play a significant role in innovation. Little attention has been paid to the role of academics in contractual innovations. One would think that academics' ability to contribute to innovation would be constrained by their relatively limited access to up-to-date contracts and information about user needs derived from direct experience. A group of academic economists are typically credited with the invention of catastrophe bonds. However, there are several examples of contractual innovations generated by academics.<sup>72</sup> Muhammad Yunus, a former academic, is credited with the invention of micro-lending. A group of law professors and computer scientists founded Creative Commons. These examples provide modest evidence that academics (or former academics) and their collaborators can be involved in at least the process of creating novel sets of obligations. The academics appear to have been motivated principally by intellectual curiosity, altruism, and possibly, the desire for intellectual recognition rather than pecuniary benefits.

Academic actors that are inclined to innovate are probably also inclined to invest in disseminating those innovations, subject to resource constraints. So for example, Creative Commons makes its innovative licenses freely available and does not appear to be motivated, either directly or indirectly, by economic benefits accruing to any discrete group of users. Its stated objective is to "...increase the amount of creativity (cultural, educational, and scientific

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<sup>71</sup> See ISDA, "Amicus Briefs", available online at: <http://www2.isda.org/functional-areas/legal-and-documentation/amicus-briefs> (last visited April 22, 2012).

<sup>72</sup> Richard Sandor, Ken Froot, as well as Neil Doherty and a group of professors at the Wharton School.

content) in “the commons” — the body of work that is available to the public for free and legal sharing, use, repurposing, and remixing.”

Academic institutions and other mission-driven organizations are also well-suited to establish and maintain platforms that disseminate user innovations. For example, the University of Missouri-Columbia, has sponsored the creation of a comprehensive collection of contracts culled from filings with government agencies. The contracts wiki established by Harvard Law School is a means of disseminating innovative proposals on a clause-by-clause basis.<sup>73</sup>

## 5. Implications for public policy

Users and law firms have limited incentives to disseminate their work. Other for-profit providers have incentives to invest in dissemination but may not have strong incentives to invest in improving the intrinsic quality of their documents. Trade associations and academic actors may be important sources of additional innovation and often have incentives to disseminate their products. Nonetheless, it is plausible that the overall supply of contractual innovation will be sub-optimal. This in turn suggests that some form of public intervention ought to be considered. A thorough analysis of the possible interventions would require separate treatment. In the hopes of inspiring such an effort, here are some preliminary thoughts about three possible interventions: enhancing intellectual property rights, loosening restrictions on who is authorized to practice law, and expanding the role of public actors in disseminating contracts.

### 5.1. Intellectual property rights

One way to stimulate innovation might be to strengthen intellectual property rights over contractual documents. This could be done, for instance, by allowing copyright holders to

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<sup>73</sup> See, HARVARD CONTRACTS WIKI at: <http://www.ackwiki.com/drupal/>.

prevent copying of works that are ‘derived’ from rather than close-to-literal copies of their documents. This would enhance drafters’ legal rights to appropriate the benefits their documents confer upon copiers and thereby increase the pecuniary benefits of innovation. This should in turn serve to stimulate innovation by actors motivated by the prospect of pecuniary gains.

Enhancing intellectual property rights is undesirable to the extent that rightsholders fail to conclude licensing agreements with people who would derive benefits from copying or who would generate benefits for others by using the copy as a basis for further innovation. This kind of bargaining failure may occur because of the costs associated with identifying rights holders, and agreeing upon the terms of or drafting licensing agreements. So for example, if the AIA begins licensing its documents but does not manage to conclude licenses with all potential copiers the cost to society includes the losses suffered by people who are driven to less valuable substitutes. If those people would have drafted innovative improvements on the AIA forms then the cost to society includes the losses suffered by anyone who would have copied the improved documents.

Intellectual property rights might also be problematic in a more fundamental sense. They may allow rightsholders to appropriate the benefits of copying documents that are valuable simply because they are familiar, rather than because of their intrinsic value. This kind of redistribution of value to drafters can be particularly problematic when the potential copiers are competitors. Take for example an insurance company whose policy has become familiar purely by happenstance – for example, because it happened to be the object of judicial interpretation – rather than because it represents any particularly valuable innovation. Permitting the incumbent company to bar competitors from using the standard form gives it an advantage over those competitors, including those who are able to offer the same policy at a lower price. This kind of

anti-competitive effect is socially costly and, as in this example, the social costs need not be offset by the benefits of innovation.

## 5.2. Regulation of unauthorized practice of law

Another way to stimulate the supply of contractual innovation might be to relax restrictions on what types of actors are permitted to engage in the practice of law. As we have already noted, prohibitions on unauthorized practice of law can be interpreted to prevent firms that are not law firms from drafting contracts. The more tailored the contract is to the needs of an individual user, the more likely it is to run afoul of these prohibitions. Some online vendors use computer software to draft customized contracts based on customers' responses to detailed questions about their objectives and circumstances. The more tailored the form purports to be, the greater the risk of the firm being liable for unauthorized practice of law.

The rules concerning who is authorized to engage in the practice of law also make it difficult to create hybrid entities that both engage in the practice of law and produce contractual documents. This is because US lawyers are typically barred from splitting fees with or practicing jointly with nonlawyers. So for example, it would not be possible for Bloomberg Law to create an inhouse law firm to capitalize on the experience of the firm's lawyers when updating the documents in the Bloomberg database.

This regulatory scheme may well be justified on consumer protection grounds. It does, however, come at the cost of giving free-standing law firms exclusive rights to draft certain types of documents. This is costly to society to the extent that competition from other types of producers, including alliances between law firms and other types of entities, is desirable. There are plausible reasons to believe that other types of producers will have inherent advantages over

law firms in producing innovative contracts, and even if they do not have any clearcut advantages additional competition may be intrinsically desirable.

### 5.3. Dissemination by public actors

Public action can also help to address concerns about inadequate dissemination of innovative contracts by having government agencies participate directly in dissemination. In the U.S. context, the most notable example is the U.S. Securities and Exchange Commission which administers laws that require publicly listed firms to disclose material contracts to which they are parties. This disclosure requirement is designed primarily to aid in corporate governance by making it easier for investors to obtain information about the economic condition of issuers of securities. In other words, the main objective is to solicit information about the impact of the contract on its user. But the rule obviously has the added effect of compelling dissemination of information about the contract itself.

Few public agencies appear to disseminate contracts for their intrinsic value. An exception is the World Bank, which has compiled a database of sample agreements relating to infrastructure projects structured as public-private partnerships.<sup>74</sup> The database is part of a broader effort to assist developing countries improve the quality of their infrastructure with private involvement, and is funded by a group of publicly-sponsored aid agencies.

## 6. Conclusion

Prominent scholars have expressed concern about the volume of contractual innovation, especially in modern U.S. law firms. The analysis in this Article suggests that though important,

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<sup>74</sup> See, PPP IN INFRASTRUCTURE RESOURCE CENTER FOR CONTRACTS, LAWS AND REGULATION (PPPIRC), <http://ppp.worldbank.org/public-private-partnership/>

the volume of contractual innovation that takes place in law firms is not necessarily of broad social concern. Of greater interest is the overall volume of innovation in society, and there are many sources of contractual innovation besides law firms.

Other potential producers of innovation face significant obstacles. The obstacle posed by inability to appropriate the pecuniary benefits earned by copiers is well known. But there are other ways of deriving pecuniary benefits from innovation. This is most obvious in the case of user-innovators, whose benefit from innovation will not be commensurate with the social benefits but may still be substantial. There are also a variety of indirect pecuniary benefits associated with producing innovative contracts. Finally, some innovators may not be motivated primarily by pecuniary benefits.

Of potentially greater significance are the factors that discourage innovators from disseminating their contracts. Dissemination, both to users and potential innovators, is crucially important to realizing the value of contractual innovations. The obstacles to dissemination, particularly for user-innovators, have not received sufficient attention in the recent literature. Those obstacles and public interventions that might help private actors to overcome them all warrant further study.





*Brown v. Cara*, the Type II Preliminary Agreement, and the Option to Unbundle

Victor P. Goldberg

Traditional Anglo-American contract law recognized a sharp distinction. Either the parties had an enforceable agreement or they didn't. Contract-like preliminary agreements—a memorandum of understanding (MOU), letter of intent, or agreement to agree—were typically not enforceable. That line has eroded in recent decades.<sup>1</sup> The modern approach now relies on Judge Leval's decision in *TIAA*.<sup>2</sup> He divided the world into three categories: (1) all major terms were set and the signing was a mere formality (Type I); (2) terms were left open, but the parties were obliged to negotiate in good faith (Type II); and (3) the unenforceable. The Type II agreement was Leval's innovation. But what does it mean? How can it be applied? Leval proposed a multi-factor test to determine into which of the three boxes a MOU would fall. The workability of that test is at least questionable.

One way of approaching that question is to take a sample of litigated preliminary agreement cases and see how the courts have resolved them as Schwartz and Scott<sup>3</sup> have done. The advantage of such an approach is that one might be able to discern patterns of enforcement. The disadvantage is that it relies on the courts' characterization of the facts and, as Judge Posner noted, the judge's role is to decide cases, not to be the research assistant for scholars.<sup>4</sup> The facts as distilled in the decisions need bear little relation to the underlying facts. An alternative approach, which I will follow here, is to focus more intently on a specific case—*Brown v. Cara*. The obvious disadvantage of this strategy is that it is dangerous to generalize from a single case (or, more derisively, anecdote).

In *Brown v. Cara* the Second Circuit, interpreting New York law, found that a Memorandum of Understanding (MOU) was a Type II preliminary agreement. While the New York Court of Appeal had applied the Leval framework in the past, there was no New York precedent finding a Type II agreement. Nor has the New York Court of Appeals found such an agreement subsequently. So, *Brown v. Cara* remains the leading case recognizing a Type II agreement in the nation's most prominent

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<sup>1</sup> Eisenberg, *The Emergence of Dynamic Contract Law*, 88 Cal Law Rev 1743, 1809.

<sup>2</sup> *Teachers Ins. and Annuity Ass'n of America v. Tribune Co.* 670 F.Supp. 491 S.D.N.Y., 1987.

<sup>3</sup> Robert E. Scott & Alan Schwartz, *Precontractual Liability and Preliminary Agreements* 120 Harv. L. Rev. 661.

<sup>4</sup> "And especially in cases where there is no published dissent, judicial opinions exemplify 'winners' history.' The appellate court will usually state the facts as favorably to its conclusions as the record allows, and often more favorably. . . . The tendency I have described is abetted by the reluctance of academic commentators to expand their study of cases beyond judicial opinions. Rarely will the commentator get hold of the briefs and record to check the accuracy of the factual recitals in the opinion." Richard A. Posner, *The Problems of Jurisprudence*, 1990, pp.210-211.

commercial jurisdiction. Ironically, this is despite the fact that the opinion was not rendered by the New York court.

*Brown v Cara* has managed to make its way into at least one Contracts casebook thus far.<sup>5</sup> The basic problem as framed by the court, seemed simple enough. Cara owned a piece of property in Brooklyn the value of which could be considerably enhanced if the property could be rezoned. Brown would invest in getting approval for a more valuable land use and, if successful, it would build the project. However, the costs of drafting the various agreements (operating agreement, construction agreement, etc.) would be substantial. So, rather than write an enforceable contract, they entered into a MOU that defined some aspects of their relationship, but left a lot open. If the rezoning failed, those contract-drafting costs could be avoided by waiting. If it succeeded, Cara might take advantage of the absence of a formal agreement by bypassing Brown. Brown works; Cara reaps. By finding some sort of agreement the court could constrain Cara's opportunism.

By reframing the problem a quite different picture emerges. Transforming Cara's property into a more valuable use requires a number of discrete, perhaps overlapping, acts—rezoning, construction, leasing, management, and, perhaps, selling all or part of the enhanced property. There are, apparently, some economies from bundling these activities and an owner, like Cara, would want the opportunity to take advantage of them. However, there are some costs as well and the owner would want to maintain the option to unbundle under certain circumstances. The parties could design their relationship to reflect the appropriate balance between Cara's flexibility and Brown's reliance. And they could do this by designing the appropriate contract. I want to stress two features of these contracts. First, contrary to the assertions of Brown's counsel and the court, writing such a contract would be cheap and easy. Second, there are a number of plausible structures and these will have different implications for the protection of Brown's reliance and on his ability to share in the potential capital gains or losses that might result from the efforts.

In its decision, the court imposed some sort of obligation on Cara and afforded Brown some protection. The court did not say what the remedy for breaching a Type II agreement would be, but if it had won, Brown would almost certainly have been limited to reliance damages. Cara would get the increased value of the property and would compensate Brown for the expenses it incurred producing the increased value. That is also the remedy suggested by Schwartz & Scott.<sup>6</sup> In effect, the remedy establishes a default rule with the implicit assumption that the parties would not be able to contract around it. If they could, after all, what

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<sup>5</sup> Robert Scott & Jody Kraus. *Contract Law and Theory*. \_\_\_\_.

<sup>6</sup> In their analysis, if the project is abandoned it is because the passage of time has produced negative information. In *Brown v. Cara*, the information was positive—the project is worth undertaking, but Cara prefers to do so without Brown.

is the sense of finding an obligation? However, as noted, contracting would not have been that difficult.

*Brown v. Cara* illustrates a significant gap in the Leval framework. Before invoking Leval's multi-factor test (or any other test such as the one suggested by Schwartz & Scott), the court should first consider the question: could the parties have easily contracted over the issue. If, as in this instance, they could have, then the court should refuse to find an enforceable agreement, whether Type I or Type II. These are, after all, sophisticated parties with access to counsel. If they want the benefits of legal enforcement, then they should design their relationship accordingly. If there were only one plausible contract structure, then imposing it by implication might be acceptable, but here there were a number of plausible structures, leading to quite different outcomes. One type of contract would have given Brown a rough equivalent of the reliance damages; alternative plausible structures, however, would have allowed Brown to share in the upside. Bypassing the formal contract requirement leaves it to the courts to choose. The courts exercise that choice indirectly, by determining whether the parties have entered to an agreement and if so, whether it is of the Type I or Type II variety.

My presumption when I began this project was that it would provide a good window on how to litigate a Type II claim. That turned out to be wrong. The plaintiff argued, almost exclusively, that the MOU was a Type I agreement. A Type II claim was thrown in pretty much as an afterthought. The court, right or wrong, reached its conclusion with very little help from the litigants.

Section 1 provides the background for the decision. It includes a description of the transaction, the MOU, and the dispute. It also summarizes the key aspects of the pre-appeal litigation—the complaint, the magistrate's decision, and the district court's opinion. The appeal will be the focus of Section 2. In Section 3 I will turn to the question ignored by the parties and the court: how could the parties have designed an enforceable contract instead of the MOU? In particular, it will emphasize the tradeoff between the economies of bundling the different phases versus the value of the option to unbundle.

## 1. The Background

### a. The Deal.

Cara owned a piece of property at 100 Jay Street in Brooklyn that was being used as a parking lot. Zoning restrictions precluded residential use and limited the size of any new building on the property. Cara and Brown entered into an MOU in March 2000, with the intention of getting the property rezoned and building and managing a project.<sup>7</sup> The exact scope of the project would not be determined until the parties had obtained the rezoning and concomitant approvals. The initial plan

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<sup>7</sup> Cara and Brown both had associated companies, a fact that we can safely ignore.

was for a mixed use building with twelve stories of residential units, office space, ground floor retail, and underground parking. The MOU alluded to some sort of joint entity (joint venture or partnership, or perhaps something else) that would be formed in the future.

To simplify slightly, Cara would have to do virtually nothing other than contribute the property.<sup>8</sup> Brown (also referred to as JMB) would provide the services that would, if successful, transform the property:

Brown provides his company and individual experience, lender relationships, architectural/engineering relationships, legal relationships and governmental relationships to lead the development effort. This will include, but not be specifically limited to, the rezoning process, conceptual design of the project, conceptual budgeting, arranging for possible financing avenues and helping to establish an effective marketing plan.<sup>9</sup>

In addition, "Brown will build the project with union labor, if needed."<sup>10</sup>

Brown agreed to pay development costs (largely legal and design related) up to \$175,000. Revenues from parking, retail and similar activities would be split equally. Brown would receive 60% of the revenues from the sale or rental of apartments.<sup>11</sup> The parties recognized that "time is of the essence"<sup>12</sup> and that they "intend to enter into a formal contract shortly."<sup>13</sup> The MOU concluded with their agreeing "to work together in accordance with the terms and conditions outlined above."

In the next year and a half the project was designed, the rezoning successful, and all the approvals were granted. Instead of the twelve-story structure initially proposed, the approved plan called for a 23-story building. Brown's out-of-pocket expenses exceeded the \$175,000 figure; subsequently it claimed to have spent \$350,000 with an additional \$400,000 for the value of Brown's time.<sup>14</sup> The rezoning resulted in a substantial increase in the value of the property. According to the plaintiff, the value increased from about \$3 million to \$18 million.<sup>15</sup> In the months following the successful rezoning the parties engaged in negotiations on a number of matters. Two written manifestations were a set of dueling term sheets and multiple drafts of an operating agreement. Some aspects of the term sheets are of particular interest—I will return to them below. Negotiations broke down when Brown sent Cara a form

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<sup>8</sup> The parties differ on the extent of Cara's expected involvement. Cites.

<sup>9</sup> MOU, clause 2.

<sup>10</sup> MOU, clause 5. I suspect that this meant that if Brown did build the project, he would accede to New York rules and use union labor.

<sup>11</sup> MOU, clauses 7,8, and 9.

<sup>12</sup> MOU clause 12.

<sup>13</sup> MOU, clause 13.

<sup>14</sup> Cite?

<sup>15</sup> Brown Declaration, Exhibit J.

construction contract with terms unacceptable to Cara.<sup>16</sup> Brown claimed that it had inadvertently sent the wrong form. In the court's words, "Cara's displeasure and offense were so deep that he refused to continue with negotiations and ceased all communication and collaboration with JMB."<sup>17</sup> The parties disagree as to whether Cara's pique was genuine or an opportunistic attempt to take all the increased value for himself. Cara might have viewed the proffered construction contract as an attempt by JMB to increase its share of the gains.<sup>18</sup> The negotiations over the term sheet suggest that this is not implausible.

b. The Post-Rezoning Documents

In September 2002 Brown sent a proposed term sheet to Cara. A revised term sheet was agreed to shortly thereafter. There were a few substantial differences between the two. And, importantly, there were two significant terms that were identical. I will get to those shortly, but first I will highlight some of the differences, which give the flavor of the terms remaining open after the MOU. Brown proposed that it would have exclusive control of all decisions, except for certain major decisions, like sale of all the assets, which would require joint approval. The revised Term Sheet gave Brown exclusive decision-making authority over construction, but otherwise the parties would share equally in control. Brown proposed that both parties guarantee the construction loan, but the final Term Sheet made Brown solely responsible. Brown proposed that its cash contribution be repaid with interest (12%) out of the cash flow prior to the 60/40 and 50/50 shares specified in the MOU. The revised term sheet excluded the interest and changed the sharing rate on the apartments to 55/45. In the revised agreement, Cara could terminate for cause (Brown's failure to pursue its pre-construction obligations or failure to close the construction loan by a set date) by paying all costs incurred by Brown; it could also terminate for no cause if it compensated those costs and paid a "success fee of \$2.5 million representing the enhanced value of the Property as a result of the rezoning process."<sup>19</sup> Brown's initial proposal would have allowed either party to terminate if the construction loan had not been closed within 36 months. If so, Cara would have to repay the cash expended by Brown plus \$2.5 million for the enhanced value. There were other differences, but this is enough to illustrate how much remained open.

The term sheets included two identical clauses: a buy/sell clause and a non-binding clause:

Either member (the "initiating Member") may force the other Member to either purchase the Initiating Member's interest or sell its interest

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<sup>16</sup> According to Cara, "Brown's proposed CMA [Construction Management Agreement] contained substantive terms concerning his fees that went far beyond what the Term Sheet provided, and which Cara felt were substantially in excess of market rates for the proposed transaction." Brief for Defendant, p. 13.

<sup>17</sup> Cite.

<sup>18</sup> Text at n. \_\_\_.

<sup>19</sup> Clause 8.

to the Initiating Member at a price proposed by the Initiating Member at any time if there is a deadlock on an issue as to which the consent of both Members is required or after the 3d anniversary of completion of Construction.

\* \* \*

This Term Sheet represents only proposed points that may or may not eventually become part of a definitive operating agreement for the Company. Neither party shall be bound or obligated by any of the terms hereof, any prior term sheets or correspondence or any other discussions unless and until a formal written operating agreement and related agreements containing all of the material terms of the Company and construction and development of the Project have been executed and delivered by each of the parties.

I will return to the buy/sell clause in Section 3. The nonbinding clause indicates the importance of written documents embodying all the material terms. The absence of such a clause in the MOU is subject to different interpretations. Silence could mean that the agreement was meant to be enforceable; alternatively, one could argue that if the detailed term sheet was nonbinding, then the MOU with even less detail should be nonbinding as well. I prefer the second interpretation, but for my purposes it is sufficient to note that disclaiming enforceability of a MOU or other pre-contractual document should not have been too hard.

The parties exchanged four drafts of an operating agreement, but never settled on a final version. They dispute how close they were when Cara walked away. Cara says there remained a number of significant open terms; Brown claimed that the parties were in the final “wordsmithing” stage.<sup>20</sup> The drafts were roughly seventy pages, single-spaced, and incorporated most of the terms included in the second Term Sheet. The simple buy/sell agreement of the Terms Sheet ballooned to three pages of text without really altering anything.

Finally, there were the two construction contracts. Perhaps the most interesting point about them is that despite Brown’s claim that the wrong form had been sent, the “right” form never did get sent.<sup>21</sup> It was not clear why Brown might have two different forms and why one would have been more favorable to Cara, although Brown did provide an explanation in his Declaration:<sup>22</sup>

It was in or about this time that Mr. Cara requested a draft of the construction management agreement that would be entered into between our LLC and JMB for the construction of the Project. At the

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<sup>20</sup> Plaintiff brief, p. \_\_.

<sup>21</sup> Nor could I find any evidence in the record of the terms of the second contract; I have only had partial access to the record, so it is possible that the terms of both contracts were produced.

<sup>22</sup> Brown Declaration, (para 37). The LLC was the limited liability company that Brown presumed would be formed under the MOU.

time, I was in Florida. I called my office and asked them to send Mr. Cara a form of contract. Unfortunately, my office staff misunderstood which form of contract I wanted them to forward to Mr. Cara. The one that was forwarded was a form that would be appropriate for dealings between parties operating at arm's length. It was not the correct form for the contract between JMB and the LLC.

c. The Litigation, Round One

In its complaint Brown asserted six cause of action. First, it asked for a declaratory judgment that the MOU was "in full force and effect and that it creates a binding joint venture agreement between Brown and Cara."<sup>23</sup> The second cause was for breach of contract; it asked for specific performance or, in the alternative, damages of not less than six million dollars. The third, fourth, and fifth causes of action were for breach of fiduciary duty, breach of trust, and for an accounting of any future revenues or profits. The final cause of action was in quantum meruit claiming that Cara had unjustly retained all the benefits resulting from Brown's efforts.

Brown and JMB are entitled to judgment in an amount equal to the fair and reasonable benefit and value of the services and Project approvals obtained, provided and/or paid for by Brown and/or JMB, which corresponds to: (i) 50% of the value of the Property attributable thereto, in an amount to be proven at trial, but not less than six million dollars; (ii) 60% percent of all revenue from the sale or rental of residential units in the Project; and/or (iii) and 50% of the revenue from the parking, retail, office, signage and other revenues from the Project.<sup>24</sup>

The matter was referred to a magistrate judge who granted summary judgment for Cara on the first two claims but denied Cara's motion on the remaining claims. Brown conceded that if he failed on the first two claims, that claims three through five would also fail.<sup>25</sup> The district court accordingly dismissed those claims as well. The magistrate judge held, and the district court agreed, that the MOU was an unenforceable preliminary agreement:

[T]here were clearly open terms to be negotiated regarding the scope of the final Project ... [and] the existence of these open terms strongly supports the defendant's argument that at the time the MOU was signed, neither party had agreed to all of the terms under which the parties would move forward to complete the Project.... [T]he size and complexity of the proposed construction project, the extensive

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<sup>23</sup> Cite, paragraph 62.

<sup>24</sup> Complaint, paragraph F. This would involve some double counting since the value of the property would depend on the future revenues.

<sup>25</sup> Lower court opinion at \_\_\_.

negotiations over the Term Sheets and lengthy drafts of proposed agreements exchanged between the parties after rezoning was achieved clearly demonstrate[] that at the time the MOU was executed, there was no binding contract because there were too many open terms.<sup>26</sup>

The quantum meruit claim was allowed to proceed to discovery. “The evidence indicates that Defendant Cara has not met the burden of establishing the absence of any genuine issue of fact with regard to the question of whether Plaintiffs may have provided and Defendant Cara may have accepted valuable services for which Plaintiff expected compensation, which if left uncompensated would give rise to unjust enrichment.”<sup>27</sup> The denial of summary judgment on this cause was not appealed.

What of the Type II claim? The Magistrate stated that Brown had not pressed the Type II argument. “The Magistrate correctly concluded that ‘Plaintiffs have not pressed this argument’ because they mentioned this issue solely in one sentence in a footnote in 75 pages of legal memoranda.”<sup>28</sup> As we shall see, the Court of Appeals disagreed. Brown was granted a preliminary injunction. In February 2005 the injunction was suspended and shortly thereafter Cara conveyed the property to a third party.<sup>29</sup>

## 2. The Decision.

The litigation was quite nasty. The tone is illustrated by the opening of Brown’s reply brief: “Appellants submit this Reply Brief in further support of their appeal, and in opposition to Appellees’ brief, which is riddled with lies by omission, quotes taken out of context, and other equally devious ploys in a calculated effort to mislead this Court.”<sup>30</sup> Most of the plaintiff’s brief argued that the MOU was a Type I agreement. The agreement, it said, was to set up a joint venture. All the details—financing, the construction contract, the operating agreement, etc.—could be deferred until a condition subsequent, the rezoning, had occurred. None of those open elements was essential to the establishment of the joint venture. I confess that I find this implausible; the court of appeals gave the argument short shrift and turned to the theory less argued—it was a Type II agreement.

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<sup>26</sup> Lower court opinion at \_\_\_\_.

<sup>27</sup> Lower court opinion at \_\_\_\_.

<sup>28</sup> Cara Brief, p. \_\_\_\_ . Cara continued: “While Plaintiffs protest that they did ‘assert this argument,’ the undeniable fact is that their 42-page Memorandum of Law devoted only a single sentence in one footnote to this issue (Docket No. 22 at 30 n.5), and their 32 page Reply Memorandum of Law (Docket No. 29) and various supporting Declarations did not discuss this issue at all.” At p. \_\_\_\_ . See also Brown Reply Brief, p. 39.

<sup>29</sup> Cara’s Brief, p. \_\_\_\_ . Can check to find out to whom and what has been done with the property in the intervening six years.

<sup>30</sup> Cite.



The plaintiff did argue, barely, that the agreement was a Type II agreement. Seventeen pages of the Reply Brief were devoted to the Type I argument, while the Type II claim warranted less than three. And most of those three were only concerned with the question of whether the Type II argument had been preserved, not with the merits of the argument itself. The court rejected the position taken by the magistrate, district judge, and defendant that the plaintiff had waived any claim of a Type II agreement. It also rejected the defendant's claim that New York law did not recognize Type II agreements.<sup>31</sup> It then turned to considering the five factors that would determine whether there existed a binding Type II agreement.

- (1) whether the intent to be bound is revealed by the language of the agreement;
- (2) the context of the negotiations;
- (3) the existence of open terms;
- (4) partial performance; and
- (5) the necessity of putting the agreement in final form, as indicated by the customary form of such transactions.<sup>32</sup>

The court concluded:

Measuring the MOU by the relevant factors in light of this limited contractual goal it is clear that it is a binding preliminary agreement to work toward the goal of developing the Jay Street Property within a defined framework, preserving for later negotiation in good faith business, design, financing, construction, and management terms necessary to achieve the ultimate goal of developing and exploiting the Jay Street Property.<sup>33</sup>

All five factors, said the court, favored finding the existence of a Type II Agreement. I will not go through the court's analysis of all five. Two factors are enough to get the flavor of the court's reasoning. With respect to the second prong, the court said:

[T]he parties elected to negotiate a general framework within which they could proceed while preserving flexibility in the face of future uncertainty. While it was possible in the abstract to negotiate a more definitive contract, using determinative methodologies to be applied to open issues, the context of the negotiations did not require derivation of such algorithms if the parties opted instead for a more open arrangement. The MOU is evidence of such an arrangement, and, as a Type II agreement, is

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<sup>31</sup> Footnotes 1 and 2 of the opinion.

<sup>32</sup> Cite. These are essentially the same factors regarding the existence of a Type I agreement, although the court gives them different weight.

<sup>33</sup> Cite.

consistent with the context of the negotiations.<sup>34</sup>

The court appears to be saying that a “determinative methodology” existed that could have resulted in an enforceable agreement, but that the parties did not have to use it. Alternatively, it might have meant that the “algorithm” existed in principle, but that implementation was not feasible. I will return to this in the next section where I will show that implementation was feasible.

Turning to the third factor, where the existence of open terms creates a presumption against finding a binding contract as to the ultimate goal, these same omissions may actually support finding a binding Type II agreement. The MOU leaves open terms critical to every aspect of the Jay Street Project, from design, to business structure, to ownership and management. However, these omissions do not warrant against finding the MOU enforceable as a Type II agreement. In view of indeterminate regulatory and market conditions, JMB and Cara simply elected to pursue rezoning first, leaving finalization of project design and execution for later negotiation within the framework described in the MOU.<sup>35</sup>

If the existence of open terms counts in favor of finding a Type II agreement, what will count against it? Perhaps the court meant only that it is not unreasonable in this situation to defer the open issues until the rezoning question is resolved. But there is a big difference between “simply elected” and “not unreasonable,” and the court doesn’t provide any guidance on how it got from the one to the other.

So, the court concluded that this was a Type II agreement. That did not mean that the plaintiff had won, however. It only meant that the plaintiff now had to prove that the Type II agreement had in fact been breached—that Cara’s refusal to continue the negotiations was not in good faith. That would not be easy. Had Cara walked away right after the rezoning had been completed, that would most likely have failed a good faith test. But that is not what happened. Cara hung on for over a year, negotiating the term sheets and four drafts of the operating agreement. I suspect that would be enough to satisfy a good faith standard, but that remains a jury question.

What if Brown were to win? What remedy would be available? Allowing Brown to recover expectation damages “would, in effect, be transforming an agreement to negotiate for a contract into the contract itself.”<sup>36</sup> In Farnsworth’s words: an “award based on [the expectation interest] would give the injured party the ‘benefit of the bargain’ that was not reached. But if no agreement was reached and \* \* \* it cannot even be known what agreement would have been reached, there is no way to

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<sup>34</sup> Cite.

<sup>35</sup> Cite. Internal citations omitted.

<sup>36</sup> *Goodstein Const. Corp. v. City of New York*, 80 N.Y.2d 366, 604 N.E.2d 1356, 590 N.Y.S.2d 425. (1992) [get pages cites]

measure the lost expectation.”<sup>37</sup> In *Goodstein*, the defendant breached an agreement that had given the plaintiff an exclusive right to negotiate. Plaintiff sued for \$800 million lost profits; the court allowed recovery only for \$1 million in reliance damages. “[A] party’s alleged failure to bargain in good faith is not a but-for cause of [plaintiff’s] lost profits, since even with the best faith on both sides the deal might not have been closed [and] attributing [plaintiff’s] lost profits to [defendant’s] bad faith may be speculative at best.”<sup>38</sup> However, some courts have held expectation damages to be an acceptable remedy and at least one court has shown willingness to grant specific performance.<sup>39</sup>

### 3. Discussion.

The project contains a number of discrete steps, running from rezoning through construction, to managing the completed project. This suggests that the parties believed that they perceived some economies from bundling them all together with a single provider. The greater the perceived economies, the more reliant the owner would be on the future performance of the provider. I need take no position on whether the economies could be real and substantial; the MOU suggests that the parties believed that there would be some. Casual observation suggests that the advantages of bundling are not great—certainly construction and management of the final project are often provided by independent entities.

Assuming that there are at least some economies to bundling, the owner would have a number of concerns about committing to a particular provider for the entire project. There is the usual potential holdup problem; as the project goes forward, the provider could reshape the deal, taking advantage of the owner’s vulnerability. Brown’s sending the “wrong” construction contract and some of the proposed language of the first term sheet might have been manifestations of this. In addition, during the process the owner would acquire information. It would learn things about the provider’s competence, character, and financial ability, and about the availability of alternative providers. The option to unbundle, to replace the

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<sup>37</sup> 1 Farnsworth, Contracts § 3.26a, at 314 [check page] Professor Eisenberg would disagree:

A final issue raised by the enforcement of commitments to negotiate in good faith concerns the appropriate measure of damages. Where such a commitment is part of a bargain, the injured party should be awarded expectation damages. Of course the deal might have broken down even if the other party had negotiated in good faith. However, because that party’s wrongful acts made it impossible to determine what would have happened if she had acted in good faith, she should bear the burden of proving the deal would have broken down even if she had so acted. If expectation damages are too uncertain, the court should award reliance damages measured by out-of-pocket costs or, where appropriate, by lost opportunities. ( Eisenberg, *The Emergence of Dynamic Contract Law*, 88 Cal Law Rev 1743, 1809)

<sup>38</sup> *Goodstein Constr. Corp. v. City of New York*, 145 Misc.2d 870, 876, 548 N.Y.S.2d 393 [quoting *Arcadian Phosphates v. Arcadian Corp.*, 884 F.2d 69, 74, n. 2 (2d Cir.) ].

<sup>39</sup> *Stanford Hotels Corp. v. Potomac Creek Associates, L.P.*, 18 A.3d 725 D.C., 2011.

provider, could turn out to be quite valuable even if it meant sacrificing some of the economies associated with there being a single provider. However, giving the owner the discretion to terminate subjects the provider to the risk alluded to in the Introduction—the provider works, the owner reaps. And, of course, the costs of designing the relationship *ex ante* and enforcing it *ex post* must be taken into account as well. The structure of the transaction would reflect the answers to these questions.

Brown's counsel proposed one solution to the problem:

W]hen a real estate development project requires a very substantial discretionary governmental approval or permit, without which the project would not be possible, it is typical for co-venturers who are seeking the government approval to wait until that permit is issued and the project becomes definite before incurring the expense of preparing detailed documents, such as an LLC operating agreement. Co-venturers often first execute a skeletal agreement setting forth the essential business terms of the joint venture that is sufficient to bind the parties to their joint venture and postpone creation of expensive and time consuming detailed documents until the project becomes "real" by issuance of the necessary governmental approval.<sup>40</sup>

Deferring the costs of negotiating the detailed contract documents would indeed be a sensible policy. However, Brown failed to explain how the MOU set forth the "essential business terms." In particular, it failed to specify whether Cara would have the option to unbundle and, if so, what would happen if Cara chose to exercise that option. If the costs of designing and negotiating an enforceable agreement dealing with that were prohibitive, then perhaps the MOU would have been the best they could do. However, designing such an agreement would not have been difficult. In a sense, all that was necessary was a mechanism for pricing Cara's option to unbundle.

Suppose that there are substantial economies from bundling the phases from rezoning through construction, marketing, and managing into a single agreement, but that the owner wants some discretion to adapt as it learns more. What sort of contract solutions would be available?<sup>41</sup> First, the contract could initially be only for

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<sup>40</sup> Declaration of Eric Goldberg, cited in Plaintiff's Brief, p. \_\_.

<sup>41</sup> One solution would eschew interfirm contracts and would simply merge the two firms—pure vertical integration. Or, more generally, the pieces of the project can be combined in different bundles. There is no reason to believe *a priori* that it is more efficient to combine rezoning with construction than it is to combine rezoning with ownership. Cara could sell the property outright or it could sell the property to an entity in which it maintains a part ownership stake. There are numerous variations on this theme. There are both benefits and costs to putting the different steps into a single entity. Pricing the property before the rezoning is achieved creates additional problems. While it is possible that in certain circumstances some form of integration at the pre-rezoning stage

the rezoning effort. If the rezoning were successful, then the owner would be free to hire anyone for the next phase. However, if the owner chose someone else, it would have to pay the initial provider's costs (or some fraction thereof). Easy enough to write. It would give the initial service provider a cost advantage over competitors at the subsequent phase. If the costs incurred are high, the lock-in effect could be considerable. This sort of mechanism is commonly used in other contexts. "Turnaround" fees in the movies are an example. Note that this is roughly the equivalent of the reliance damages that would have been assessed if the jury were to find a Type II agreement had been breached.

Second, the owner could have the right to terminate without cause by paying a fixed fee. The term sheet (and the last version of the operating agreement) both included such a mechanism, the "success fee." However, they did not decide on a success fee until well into the project. It might well be difficult to determine *ex ante* what the structure of termination fees ought to be. That could be resolved by deferring the decision to a third party, perhaps an arbitrator. As long as the mechanism is defined, the agreement would be enforceable.

Finally, a variation on the previous mechanism is a buy/sell arrangement. This is hardly esoteric. The parties, as noted, had included such a mechanism in the term sheets and draft operating agreement. Rather than have an outsider determine the value, the parties can do it themselves. If, after some defined milestone (perhaps following the rezoning), either party wanted to go it alone, it could trigger a buy/sell. It would name a price at which it would be willing to either take full ownership of the property or sell out. Since the property would have been solely owned by the owner, the deal would require that the owner convey all the property if the counterparty succeeds; if the owner succeeds, the counterparty would simply give up any claim it had to the property. After the buy/sell is triggered the counterparty would then determine whether it should take the money or pay for the property. Note that with this mechanism, as well as the previous one, if the owner buys out the service provider, the payment would be roughly equivalent to the expectancy damages—the provider's share of the gains.

The parties could have opted for a zero price on Cara's option—namely, no agreement. A finding of "no agreement" would have meant that Brown would have borne the initial costs without any protection from Cara's decision to use someone else for the next phases of the project. Brown's counsel (and the magistrate and trial judge) made this point:

Essentially Cara would have this Court conclude that Brown acted as a mere volunteer at all times, expending hundreds of thousands of dollars to obtain the Property's rezoning for Cara's . . . sole benefit

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would be viable, that does not seem plausible in the context Brown and Cara found themselves in, and I will pursue this no further.

based solely on the hope that Cara -- someday -- would see fit to enter into a binding agreement with Brown. The Magistrate quite properly rejected that absurd position:

Indeed, the Court finds that it is disingenuous for Cara to argue that Brown expended two years of time and effort and significant funds -- over \$350,000 in costs alone -- to obtain the rezoning of the Property, a result that would exclusively benefit Cara . . . on the pure hope that Brown could possibly participate in the development of the Property.<sup>42</sup>

Is it really that absurd? If Brown believed that Cara would incur high costs of switching to another supplier at any future phase of the project, then it might well have found the risk worth bearing. In *Trianco, LLC v. International Business Machines Corp.*<sup>43</sup> the court did indeed find that a party would incur pre-agreement costs with only the hope that an agreement would come to pass. The case is unusual in that it relied on *Brown*, but the roles were reversed. The *defendant* argued that theirs was a Type II agreement while the plaintiff argued that no agreement existed. Because the plaintiff had conceded that IBM had acted in good faith, it would have lost if the court had found an agreement; so it argued instead for unjust enrichment. The court used *Brown* against the plaintiff:

If one acknowledges the role of a preliminary agreement such as is recognized under New York law, one cannot allow a party to recover under unjust enrichment for the performance promised in order to secure the “hoped-for” contract and future negotiation. Trianco made a business decision to enter into the Teaming Agreement and help IBM secure the government contract *without the expectation of being directly compensated* for this help. Instead, Trianco believed that in exchange for their work they would be able to negotiate a satisfactory subcontract with IBM. Unfortunately this did not occur.... To compensate Trianco for the expenditures promised to obtain a return promise of future negotiations would undermine the legal concept of binding preliminary agreements.<sup>44</sup>

Ironically, if this reading were adopted in the remand of *Brown v. Cara*, if Cara were found to have acted in good faith, then Brown’s quantum meruit claim, which survived summary judgment, would have failed.

My point is fourfold. First, contrary to Brown’s counsel’s argument, it would not have been very difficult to have written an enforceable contract initially. Second, the provider’s fate if the owner were to terminate at any stage would depend on the structure of that contract. The structure, in effect, prices the option to unbundle.

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<sup>42</sup> Cite.

<sup>43</sup> 583 F.Supp.2d 649 E.D.Pa.,2008.

<sup>44</sup> At 655. (emphasis added)

One approach would result in a payoff similar to reliance damages (if a Type II agreement were breached) and another would result in a payoff similar to expectation damages (if a Type I agreement were breached). Third, all the contract solutions provide room for the parties to negotiate over the operating agreement and construction agreement. They simply define what would happen if the parties fail to agree. There would be no need to argue about whether the failure to agree stemmed from the lack of good faith by one of the parties. Finally, the parties did not have to leave the question to the vagaries of the judicial system. Brown could easily have determined if it needed protection, if so, how much, and whether it would have a stake in the upside if the rezoning were successful.

#### 4. Concluding Remarks

The Leval framework has caught on in many jurisdictions. But what of New York? *Brown v. Cara* is one of the few decisions applying New York law to find the existence of a Type II agreement. However, as in *TIAA*, the decision was by a federal court interpreting New York law, a law which did not exist.<sup>45</sup> The New York Court of Appeal has yet to endorse the notion that there exist enforceable Type II agreements. Indeed, the one opinion that even mentioned a Type II agreement was, at best, skeptical: “The parties debate whether the settlement is a Type I or Type II preliminary agreement as used in federal line of cases, such as *Brown v. Cara*, 420 F.3d 148 [2d Cir.2005] and *Teachers Ins. & Annuity Assn. of Am. v. Tribune Co.*, 670 F.Supp. 491 [S.D.N.Y.1987]. While we do not disagree with the reasoning in federal cases, we do not find the rigid classifications into ‘Types’ useful.”<sup>46</sup>

Ironically, the Court of Appeals, in rejecting Brown’s Type I claim noted that if Brown had desired, it could have entered into a fully binding contract:

JMB argues that, given the circumstances, this level of detail was impossible to achieve when the MOU was signed. Assuming this to be true does not make the MOU a more binding contract, however. Moreover, *we are not convinced that, had they so desired, the parties could not have negotiated a fully binding contract* regardless of the unknown. Contracting parties faced with similar uncertainty routinely negotiate objective methodologies by which open terms are later to be determined. *See, e.g., Carmon*, 614 N.Y.S.2d at 556 (“It is well settled that an agreement to agree, in which material terms are left for future negotiations, is unenforceable unless a methodology for determining the material terms can be found within the four corners of the agreement or the agreement refers to an objective extrinsic event, condition, or standard by which the material terms may be determined.”). JMB may claim that

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<sup>45</sup> Other decisions also were by federal Courts of Appeal: *Vacold LLC v. Cerami* 545 F.3d 114, Fed. Sec. L. Rep. P 94,871 C.A.2 (N.Y.),2008; *Adjustrite Systems, Inc. v. Gab Business Services, Inc.* 145 F.3d 543 C.A.2 (N.Y.),1998; and *Arcadian Phosphates, Inc. v. Arcadian Corp.* 884 F.2d 69 C.A.2 (N.Y.),1989.

<sup>46</sup> *IDT Corp. v. Tyco Group* 13 N.Y.3d 209, 213 N.Y.,2009.

such an exercise would have been pointless until the rezoning process was completed. Of course, that says no more than that JMB, rather than expending the resources necessary to achieve a fully-binding agreement, decided to assume the risk that the parties would not, in the end, be able to “work together.”<sup>47</sup>

Why the court finds it dispositive for a Type I claim, but, apparently, irrelevant for a Type II claim, I know not. The availability of a “methodology” (multiple methodologies, actually) should, I maintain, counsel against imposing an agreement, whether Type I or Type II, on the parties.

There were, I have shown, a number of plausible contractual solutions to the problem and these would have yielded different outcomes. Which is right? It would depend on how the parties reckon the gains from bundling the provider’s tasks and the value of the option to unbundle. How that would work out in any given context, we can’t say. And that is precisely the point. By requiring an enforceable contract, we require that the parties engage in the balancing exercise. Their needs are not well served by having a court determine after the fact which of the different contract structures should be imposed on the parties.

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<sup>47</sup> Cite. (italics added)



Innovation and the Organizational Contract: Lessons from Income Trusts

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## I. Introduction

In recent years, following changes in practice, there has been increased scholarly attention paid to business organizations other than corporations.<sup>1</sup> While some alternative organizational forms such as the limited liability company (LLC) have become very popular in recent years, the experience with the business trust is mixed.<sup>2</sup> Two empirical phenomena relating to trusts help motivate this paper. First, there has been considerable growth in the value of assets owned and managed by trusts.<sup>3</sup> Second, in the United States the assets owned and managed by business trusts tend to be financial claims on other assets.<sup>4</sup> That is, the use of trusts has grown considerably, but as financing vehicles, not as business entities themselves.

For those who believe in the value of freedom of contract, there is something odd about the dearth of operating business trusts. Hansmann points out that the trust form offers the asset partitioning advantages of the corporation (particularly as manifest in the Delaware Statutory Business Trust, which treats the trust as a legal entity), but with virtually unfettered discretion over the terms of the “corporate contract.”<sup>5</sup> Corporate law regimes, even liberal ones such as that of Delaware, contain mandatory rules that may not be optimal for particular corporations. Adopting the trust form would avoid wealth-reducing restrictions on freedom of contract in corporate law while sacrificing none of the advantages of legal personhood.

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<sup>1</sup> See, e.g., Larry Ribstein, *THE RISE OF THE UNINCORPORATION* (New York: Oxford University Press, 2010).

<sup>2</sup> See discussion of the trust for business purposes in, e.g., John H. Langbein, *The Secret Life of the Trust: The Trust as an Instrument of Commerce*, 107 *Yale L.J.* 165 (1997); Steven Schwarcz, *Commercial Trusts as Business Organizations: Unraveling the Mystery*, 58 *Business Lawyer* 559 (2003); Henry Hansmann and Ugo Mattei, *The Functions of Trust Law: A Comparative Legal and Economic Analysis*, 73 *New York University L. Rev.* 434 (1998); Henry Hansmann, *Corporation and Contract*, 8 *American Law and Econ. Rev.* 1 (2006); Henry Hansmann, Reinier Kraakman and Richard Squire, *Law and the Rise of the Firm*, 119 *Harvard L. Rev.* 1333; Paul Miller, *The Future for Business Trusts*, 36 *Queen’s Law Journal* (2011); and Robert Sitkoff, *Trust as “Uncorporation”: A Research Agenda*, *Univ. Ill. L. Rev.* 31 (2005).

<sup>3</sup> See, e.g., Langbein, *supra*; Sitkoff, *supra*; Schwarcz, *supra*.

<sup>4</sup> *Ibid.*

<sup>5</sup> Hansmann, *supra*.

This article investigates the apparent reluctance to adopt innovative organizational contracts by examining evidence from a recent episode in Canada in which the business trust form enjoyed a burst of tremendous growth, followed by an even more sudden decline. As Part II explains in greater detail, adoption of the “income trust” form dramatically changed the Canadian business scene in the early years of this century. There were significant tax advantages associated with the form that at the very least contributed to the growth of the trust, if not explained it entirely<sup>6</sup>; following tax reform in 2006 that eliminated these advantages, virtually no new business trusts emerged. But along with the potential tax advantages of the trust form was considerable governance freedom relative to a corporation. The scope of potential governance innovation associated with the income trust phenomenon was far-reaching.

In this article I rely on the rise and fall of the income trust to develop a greater understanding of the apparent hesitation of businesses to exploit the innovation opportunities that the trust form presents. After explaining the basics of the income trust in Part II, I turn in Part III to examining what insight empirical experience with income trusts can offer into adoption of the trust form generally. Part III outlines several hypotheses as to why there has been a hesitation to exploit the contractual freedom of the trust form. One hypothesis is that the trust form has not been adopted because innovation simply is not valuable; that is, whatever mandatory governance rules are associated with the corporate form do not reduce value, or in any event do not reduce value sufficiently to justify organizational innovation.<sup>7</sup> Part III relies on data from income trusts to test this hypothesis in different ways, including an event study to measure abnormal returns

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<sup>6</sup> See, e.g., Benjamin Alarie and Edward Iacobucci, Tax Policy, Capital Structure and Income Trusts, 45 Canadian Business Law Journal 1 (2005); Tim Edgar, The Trouble with Income Trusts, 52 Canadian Tax J. 819 (2004).

<sup>7</sup> For discussion of the potential irrelevance of restrictions on freedom of contract in corporate law, see, e.g., Roberta Romano, Answering the Wrong Question: The Tenuous Case for Mandatory Corporate Laws, 89 Colum. L. Rev. 1599 (1989); Bernard Black, Is Corporate Law Trivial? A Political and Economic Analysis, 84 Northwestern L. Rev. 543 (1990). For discussion of the apparent lack of value in innovating by adopting the trust structure, see Hansmann, *supra*.

associated with governance innovation in income trusts, and a study of the costs of converting to an income trust.

The evidence on the value of innovation is mixed, as Part III discusses. On the one hand, trusts do depart systematically from corporate law on some governance dimensions,<sup>8</sup> and there is evidence that the market views these departures favourably; but on the other hand, there have been virtually no new business trusts post-tax reform despite low costs of conversion. Part III reconciles these mixed results by pointing to the influence of tax law. One possibility is that while governance innovation was rewarded in the income trust conversions that took place, the transaction costs of such innovation exceeded the benefits, and innovation was only incidental to the tax benefits of adopting the income trust form. A different possibility is that the governance benefits of innovating to the trust form depended on the tax treatment that existed during the boom; that is, there were significant governance benefits from innovating, but these were linked to tax. In particular, as Part III discusses; tax law strengthened commitments to pay out the organization's cash flow to investors. Either possibility casts doubt on the value of governance innovation *per se*.

The other key hypothesis discussed in Part III concerns imperfect and/or asymmetric information and organizational innovation. It could be that uncertainty about the governance impact of organizational change deters innovation.<sup>9</sup> This is especially true if there is asymmetric information: if corporate managers are perceived to have better information than investors about the governance impact of adopting the trust form, lemons logic<sup>10</sup> suggests that a decision by the

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<sup>8</sup> Anita Anand and Edward Iacobucci, An Empirical Examination of the Governance Choices of Income Trusts, 8 Journal of Empirical Legal Studies 147(2011).

<sup>9</sup> For a discussion of informational problems around non-standard governance terms, see Marcel Kahan and Michael Klausner, Corporations, Corporate Law, and Networks of Contracts, 81 Virginia Law Review 713 (1997).

<sup>10</sup> George Akerlof, The Market for "Lemons": Quality Uncertainty and the Market Mechanism, 84 Quarterly Journal of Economics 488 (1970).

managers to adopt the form will breed suspicion that the innovation would be good for managers and bad for shareholders. This would obviously impede innovation.

The evidence from Canadian income trust experience is also mixed on the informational implications of innovation. On the one hand, it is apparent that adoption of the form increased over time, which is consistent with the existence of imperfect information: as the market learned about the form, more trusts were created. On the other hand, novel governance arrangements, relative to standard corporate law rules, were rewarded by the market throughout the period, as Part III discusses. Moreover, the creation of business trusts effectively ceased after tax reform, indicating that greater knowledge of the form was not sufficient to induce adoption. If there was valuable learning during the period, it appears to have been related to greater appreciation of the tax benefits of the form, not the governance benefits.

Aside from considerations relating to value and information, Part III also considers some alternative hypotheses about innovation to the trust form, such as legal uncertainty about limited liability and the possible conservatism of lawyers. Neither of these hypotheses is a plausible explanation of the pattern of income trust adoptions: there was (or at least should have been) little uncertainty to begin with about limited liability, and various statutes all but eliminated any residual uncertainty by 2004, yet no trusts were created after tax reform; and given the widespread understanding of the trust form by 2006, and in any event the stake that many advisors had in the form given their practices to that point, it is not plausible that advisor reluctance to recommend the form caused the drop-off in trusts post-2006.

In drawing inferences from the evidence from the Canadian trust experience, it is important to appreciate that alternatives to the trust that would also permit significant innovation in governance are not available under Canadian law. American commentary has rightly pointed

not only to the trust, but to alternatives, especially the limited liability company, as allowing much greater freedom of contract than the corporation.<sup>11</sup> Canadian law does not contemplate such alternative forms as the LLC. Adoption of the business trust form is therefore the natural alternative to the corporation, and the demise of trusts post-2006 is not the result of a diversion to a different alternative.

On balance, the lesson of the income trust experience in Canada is that governance innovation away from the standard corporate form is not especially valuable. If there are tax advantages of the trust form, and especially if these tax advantages interact with governance changes, then innovation may be worthwhile. Otherwise, there appears to be little to gain from innovation.

## II. Income Trusts: The Basics

Income trusts became popular toward the end of the 1990s, and grew steadily in number in the early 2000s.<sup>12</sup> There are many variations on the basic structure, but the essence of an income trust is that public investors buy units in a trust, which in turn buys equity and debt of an underlying business organization, "the operating corporation."<sup>13</sup> While the typical structure is much more complicated than the following, at root, the basic structure is depicted in Figure 1.

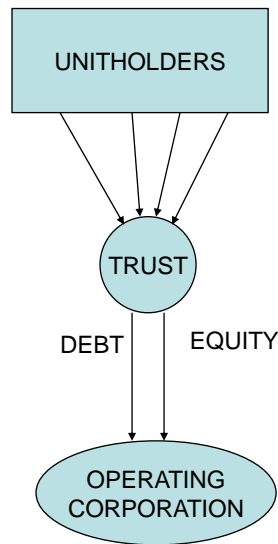
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<sup>11</sup> See, e.g., Ribstein, *supra*; Hansmann, *supra*.

<sup>12</sup> Alarie and Iacobucci, *supra*; Anand and Iacobucci, *supra*.

<sup>13</sup> Either a corporation or some kind of limited partnership. The nature of the operating entity has no meaningful effect on the empirical results set out below.

**Figure 1**



Prior to 2006, the tax advantages of the form in Canada were as follows.<sup>14</sup> The trust is a flow-through vehicle for tax purposes and thus does not pay income tax (as long as it distributes its income to unitholders). The operating corporation issues very high levels of debt to the trust, thus increasing the corporation's interest expenditures and reducing its income tax burden, ideally to zero. The very high levels of debt adopted by the operating corporation would create serious agency costs of debt, including bankruptcy costs, if issued to third parties. However, the debt is in essence held by the sole shareholder of the operating corporation, the trust, which mitigates the agency costs of debt: there is no point in enhancing shareholder value at the expense of creditors when the shareholders are themselves the creditors. Thus, by interposing the trust between investors and the operating business and establishing significant intra-organizational debt, the organization does not create excessive agency costs of debt, but reduces

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<sup>14</sup> See Alarie and Iacobucci, *supra*.

entity-level income taxes: the operating corporation has very high interest expenses and thus low income, and the trust has flow-through tax status. Because personal and corporate income taxes are imperfectly integrated in Canada, and because some investors such as pension plans are tax exempt, the structure reduces the total tax burden of investors and the business.

The tax advantages of the trust form were clear prior to reform in 2006, but there were (and remain) governance differences as well. The trust is governed by trust law, not by corporate law. This creates contractual freedom on a number of important dimensions. Rather than being bound by mandatory rules that govern corporations in Canada,<sup>15</sup> such as those requiring annual meetings, or shareholder votes on certain matters, the trust relies on its Declaration of Trust (“DOT”) to establish such rules without corporate law’s constraints. To be sure, income trusts typically have a corporation somewhere in the organizational chart, suggesting that some entities within the firm will be governed by corporate law. But the body at the top of the ownership chain that exerts control over the business is governed by trust law, not corporate law, suggesting that there is considerable scope for meaningful innovation on governance matters within the income trust. Part III describes the exercise of this freedom by trusts in practice.

While income trust activity quickly ramped up to its peak levels in the middle of the last decade, its decline arrived even more abruptly. Amendments to the Canadian Income Tax Act were announced on October 31, 2006, which came to be known, with the usual understated language of the financial press, as the “Halloween Massacre.”<sup>16</sup> The impact of the amendments, which phased in until 2011, was largely to nullify the tax advantages of the income trust (except

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<sup>15</sup> There are thirteen Canadian corporate law statutes under which a business may incorporate. Each province and territory has a corporate statute, and the federal government has one as well. The statutes closely resemble one another, however, and have a number of mandatory rules: see Anand and Iacobucci, *supra* for greater discussion.

<sup>16</sup> See, e.g., Shirley Won, “Income Trust Funds Putting on a New Face”, *Globe and Mail*, Friday March 12, 2010 <http://www.theglobeandmail.com/globe-investor/funds-and-etfs/funds/income-trust-funds-putting-on-a-new-face/article1498242/> (“Income trusts are undergoing a makeover as the deadline from the 2006 Halloween massacre edges closer”).



for real estate investment trusts (REITs)). The only remaining tax advantage of the income trust form is for businesses that earn income with foreign operations; income from these operations is not subject to tax at the trust level. Only two income trusts (other than REITs) have gone public since 2006, and they expressly did so because their income is largely earned abroad and thus could minimize trust-level taxes.<sup>17</sup> Given the frenzy to convert immediately before October 31, 2006, this halt was strikingly sudden.

Income trusts have been studied on a number of dimensions, with the empirical focus typically lying on the tax implications of the choice to adopt the form. Studies find, in what would be unsurprising to practitioners, that the benefits of tax savings are empirically significant.<sup>18</sup> There has been much less attention to governance at trusts.

Anand and Iacobucci examine the DOTs of 187 income trusts listed on the Toronto Stock Exchange (TSX) between 1997 and 2005 and compare the governance choices to a variety of mandatory corporate law rules.<sup>19</sup> While on some matters (e.g., fiduciary duties), the trusts mimic corporate statutes, on others (e.g., derivative actions) they depart significantly. Part III discusses these results in greater detail.

The news media treated the novel governance arrangements in the trust context as leading to inferior governance. The *Globe and Mail* concluded that governance at income trusts was like

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<sup>17</sup> The trusts are Eagle Energy Trust, which issued its prospectus in November 2010 (see discussion of its tax status at <http://www.eagleenergytrust.com/Strategy.aspx>) and Parallel Energy Trust which went public in 2011. For discussion of whether these two trusts might spark a boom in foreign-asset income trusts or “FAITs,” see David Parkinson, “An income trust breakthrough... or oil-patch Betamax” *Globe and Mail*, April 6, 2012: <http://www.theglobeandmail.com/globe-investor/investment-ideas/david-parkinson/an-income-trust-breakthrough-or-oil-patch-betamax/article2393707/>.

<sup>18</sup> See, e.g., Lawrence Kryzanowski and Ying Lu, In government we trust: rise and fall of Canadian income trust, 35 *Managerial Finance* 784 (2004); Ben Amoako-Adu and Brian Smith, Valuation effects of recent corporate dividend and income trust distribution tax changes, 25 *Canadian Journal of Administrative Sciences* 55 (2008).

<sup>19</sup> Anand and Iacobucci, *supra*.

the “wild west”<sup>20</sup> given the absence of mandatory rules and oversight, and that this resulted in “minor league” governance.<sup>21</sup> There has, however, been little scholarly attention paid to the relationship between governance innovation in income trusts and value.

One study examines governance and value, but does so in an unsatisfactory way. Boyer et al. note certain differences in investor protection between corporations and income trusts, including the absence of certain shareholder remedies at trusts, and adopts the premise that governance at income trusts is a matter for concern.<sup>22</sup> The article compares returns of income trusts to a governance score created by the Globe and Mail newspaper to determine whether returns are higher to compensate for the weaker governance. The study finds no statistically significant variation in returns contingent on governance. The authors conclude that investors in income trusts are inadequately compensated for the risk associated with poor governance.

As Boyer et al. take poor governance as a premise, they do not account for the possibility that the governance arrangements at income trusts, though unconventional, are not inferior to governance at corporations. The Boyer et al. study also confronts a problem that arises in examining ex post returns: it is not clear whether poor governance should lead to higher returns over time. It would depend on a number of considerations, especially shareholder expectations about the impact of governance.<sup>23</sup> I avoid these problems in Part III by focusing on an event study.

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<sup>20</sup> Elizabeth Church and Janet McFarland, “Income trust boards: The new ‘Wild West’” October 25, 2006, *The Globe and Mail*.

<sup>21</sup> Andy Hoffman, “Trusts Under the Spotlight” October 19, 2005, *The Globe and Mail*.

<sup>22</sup> Martin Boyer et al., *Income Trusts Governance and Performance: Time for a Post-Mortem*, in George Ellison, *STOCK RETURNS: CYCLICITY, PREDICTION AND ECONOMIC CONSEQUENCES* (New York: Nova Science Publishers, 2009).

<sup>23</sup> Gompers et al., in contrast, include a careful discussion of how actual stock returns should relate to good governance, noting that if good governance were underappreciated by the market at the beginning of the period, returns of firms with better governance should be higher than firms with worse governance: see Paul Gompers, Andrew Metrick and Joy Ishii, *Corporate Governance and Equity Prices*, 118 *Quarterly J. of Econ* 107 (2003).

While there clearly were tax benefits associated with the income trust, there was also the opportunity to adopt innovative governance arrangements. Trusts took this opportunity. In the next section I examine the income trust experience to attempt to discern why the governance freedom associated with the trust form has not made it a more attractive option generally, and why the income trust surge died when tax rules removed its advantages.

### III. Why Not Business Trusts?

In this part I rely on evidence from the Canadian business trust experience to test a number of hypotheses about the reluctance of businesses to become trusts. Two hypotheses are the focus. The first hypothesis, an application of Occam's Razor, is that business trusts are not more prominent because the governance freedom that the trust provides is not especially valuable.<sup>24</sup> The second hypothesis is that informational deficiencies in the marketplace about the governance effects of the trust form have impeded its adoption. As I show, the evidence on both hypotheses is mixed, though the first hypothesis is the more plausible. This Part also discusses, though less extensively, other hypotheses such as the agency costs of lawyers hypothesis, and uncertainty about limited liability.

Before turning to the analysis, I describe here the data that I rely on throughout this Part. Anand and Iacobucci establish a list of 187 income trusts that either went public in an IPO, or converted to the trust form from a publicly-held corporation, over the period 1997-2005 that listed on the Toronto Stock Exchange, and that made available on SEDAR (the Canadian equivalent of EDGAR) significant documents such as the Declaration of Trust.<sup>25</sup> Anand and

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<sup>24</sup> See Hansmann, *supra*.

<sup>25</sup> Anand and Iacobucci, *supra*.

Iacobucci compare the governance choices of trusts to 25 provisions of mandatory Canadian corporate law, as found in the CBCA.

I both extend and contract this sample for some purposes in this article. First, I extend the database by gathering governance information on income trusts formed in 2006. Second, for the purpose of determining the effect on firm value from governance choices, I frequently focus in this section on the subset of trusts that were the result of a conversion rather than an IPO. There is no statistically significant difference in the pattern of governance choices of IPO trusts and conversions,<sup>26</sup> but only in the latter can one conduct an event study of stock price movements at a key date in the process of adopting a trust. Over the period 1996-2006, there were 55 trusts that listed on the Toronto Stock Exchange, converted from public company status, and whose stock prices were available at least on the day that the proposed governance choices of the trust were made public.

#### i) The Value of Contractual Freedom

There are several different ways in which the experience with income trusts in Canada sheds light on the value of innovation in the governance structures of publicly traded businesses. I focus on three in this subsection. First, as a preliminary matter, if governance freedom were valuable, trusts would deviate from mandatory corporate law rules. If income trusts routinely adopted corporate law approaches to governance despite the trust structure's freedom to do otherwise, it would suggest that there is little to gain from a governance perspective from adopting the trust form. Second, if exercising the freedom to innovate created value, one would expect positive stock price reactions to such innovation. Third, if the trust form provides valuable governance benefits, one would expect adoption of the form regardless of tax benefits,

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<sup>26</sup> Anand and Iacobucci, *supra*.

unless the costs of adopting the form are significant. The evidence relating to the first two questions suggests that innovation is beneficial all things equal; the evidence from the third, however, indicates that innovation is not especially valuable.

a) The Governance Choices of Income Trusts

If the freedom of contract associated with the trust form were valuable to business, one would expect to observe that income trusts deviate considerably from mandatory corporate law rules. Anand and Iacobucci study the governance choices of income trusts extensively.<sup>27</sup> The following are some key findings, with a fuller explanation left to that paper. Trusts frequently deviate from mandatory corporate law. Anand and Iacobucci divide the mandatory provisions that they study into four categories: rules governing directors and officers; rules governing shareholder rights, such as voting; rules governing shareholder remedies, such as the derivative action; and rules governing transactions, such as approving a merger. Whether trusts adopt the CBCA approach or not depends on the nature of the rule. On some matters, especially rules governing transactions, trusts almost uniformly adopt existing corporate law rules. On other matters, especially those relating to shareholder remedies, trusts almost uniformly deviate. The director and officer and shareholder rights categories are more mixed.

To provide some specific examples, there is considerable overlap on rules concerning annual shareholder meetings between DOTs and the CBCA. A further area of overlap concerns the duties of care and loyalty, the CBCA versions of which are replicated in the majority of DOTs. On other matters, there is almost no overlap between the DOTs and the CBCA. For example, unitholder remedies are limited compared to shareholder remedies in the CBCA. The CBCA sets out a detailed scheme allowing shareholders to bring derivative actions; not a single income trust in the sample adopts a derivative action procedure. The CBCA has a mandatory,

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<sup>27</sup> *Supra.*

extremely broad oppression remedy. It is broad in its subject matter, “unfair” conduct; broad in its contemplated complainants, which include creditors and other “proper persons” whom the Court approves as complainants; and broad in the range of actors subject to an order, including directors and officers, as well as controlling shareholders. Not a single trust in the Anand and Iacobucci sample adopted the oppression remedy. Finally, there are some matters where there is considerable variance across trusts. To cite an example that I discuss further below, some trusts mimicked the CBCA requirement that the board comprise only individuals, while others provided that the board (of trustees, rather than directors) could include a corporation.

Anand and Iacobucci study possible causes of variation in trust choices, including the identity of the lawyer and underwriter advising on the deal (neither is significantly related to governance choices), whether the trust was created by a conversion from a public company or from an IPO (not significant), industry (significant), headquarter location (significant), and timing (significant, with trusts created later in the sample more frequently adopting standard CBCA rules). For my purposes here, the important point is that there is variation. Given that income trusts in fact systematically depart from conventional corporate law rules, especially in some key areas of governance like shareholder remedies, it is reasonable to infer *prima facie* that innovation may be valuable, at least in the context of a firm that is adopting the income trust form.

This conclusion is especially plausible given the similar choices that conversion and IPO trusts made. While managers in an IPO largely internalize the costs and benefits of their governance choices,<sup>28</sup> managers in conversions do not since shares have already been sold to the public. Given the tax advantages associated with the income trust form, it may be that

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<sup>28</sup> Michael Jensen and William Meckling, Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure, 3 Journal of Financial Economics 305 (1976)

shareholders would vote in favour of a conversion despite the proposed adoption of sub-optimal governance rules: the tax benefits may outweigh the governance costs. Since managers control the agenda, they could be strategic in inducing adoption of governance rules in conversions that favour managers at the expense of investors. But Anand and Iacobucci do not find systematic differences in the governance choices of trust IPOs and conversions, which suggests that the governance choices are not the result of managerial strategic behavior.<sup>29</sup>

#### b) The Value of Innovation: Evidence from Conversions

There is implicit evidence that adopting unconventional governance terms in the income trust context is value-enhancing given the systematic choice to do so, and given that there is no discernible difference between the choices of IPO firms and firms that convert to trusts. In this section, I explore the value implications of the governance choices of income trusts by conducting an event study involving conversions to the trust form. As noted above, I have data on 55 public companies that converted to income trusts. I explore whether adoption of unconventional governance rules increased market value; if so, there is evidence that innovation is valuable, all things equal.

I investigate the effects on value by examining the abnormal returns to a listed corporation's stock around the date of the circulation of the governance provisions for the proposed income trust. Description of the governance provisions is found in the firm's Management Information Circular that describes in detail the proposed plan of arrangement that would involve a conversion to an income trust.

The announcement of the proposed conversion itself is not a relevant event date for two reasons. For one, the effect on stock price at the announcement date is insufficiently targeted, given that it reflects both anticipated tax benefits as well as any anticipated governance benefits

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<sup>29</sup> *Supra.*

or costs from the conversion. For another, the details of the governance of the trust are not found on the announcement date, but rather emerge with the distribution of the circular associated with the meeting at which shareholders will vote on converting to trust. It is this date of circular distribution that I study. More specifically, I examine the window around the date that the circular containing the details of the plan of arrangement was posted on SEDAR.<sup>30</sup>

The basic empirical strategy is to conduct an event study of abnormal returns around the time of the announcement of governance details, and then regress these abnormal returns on governance choices to determine if the effects of deviations from the CBCA are positive or negative.

There are some caveats worth noting. Because anticipated governance changes would already be reflected in the stock price, there is pressure on abnormal returns toward zero around the event date. For example, if announcement of conversion to an income trust immediately creates expectations of certain valuable governance changes, then the adoption of those changes in fact may not have much of an effect on abnormal returns even if the changes are clearly positive for firm value. For there to be significant results in the event study, there must be some surprises in the proposed governance arrangements.

While event studies generally rely on the market's failure to anticipate fully a particular event, such reliance may be more problematic in the present setting: given the earlier public proposal to convert to the income trust form, the announcement of governance arrangements is entirely anticipated by the market; only the exact *content* of the arrangements is imperfectly known. The market's anticipation of specific governance arrangements that are generally known

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<sup>30</sup> While there is often a one business day lag between filing with SEDAR and the posting of the document on SEDAR's public website, there are private services that will provide investors with same-day delivery of the relevant documents. I assume, therefore, that the documents are public, and the market price will react, on the same day as filing with SEDAR. I also test longer event windows, however, just to be sure.



to be coming is likely more accurate than other kinds of market anticipation (like anticipating a takeover date, for example).

Despite this bias against significant results, there is a significant methodological advantage to studying reactions to the (possibly) unanticipated details of an anticipated announcement. In many event studies, there is a concern that an announcement may signal some information that clouds inferences about stock market reactions. For example, studying reincorporations to Delaware may convey some information about the market's view of Delaware corporate law, but if such reincorporations were associated with other value-affecting transactions (such as takeover activity), then the effects of the reincorporation may be clouded by the anticipated effects of the other value-affecting transaction.<sup>31</sup> In the present context, the announcement of a profoundly value-affecting transaction, the conversion to an income trust, has already been made, so signalling associated with the transaction announcement as a whole has already taken place. For example, if firms anticipating higher incomes, and hence higher income taxes, were disproportionately likely to convert to an income trust, then there could be a positive signal associated with the announcement of the conversion. This could invite a positive stock reaction to the announcement independent of the substantive advantages of the form. Such signals would already have been impounded in the stock price by the time the announcement of the governance details was made (though I consider the possibility that governance choices themselves signal information below).

In summary, the effect of the anticipation of the circular is that abnormal returns are pushed toward zero. While I nevertheless detect significant associations between returns and governance choices, the importance of anticipation means that with the event study results I can

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<sup>31</sup> See Roberta Romano, Law as a Product: Some Pieces of the Incorporation Puzzle, 1 *Journal of Law, Econ. and Organization* 225 (1985); Robert Daines, Does Delaware Law Improve Firm Value?, 62 *Journal of Financial Economics* 525 (2001).

only make inferences about the directional impact of governance choices on value, and not about the magnitude of these effects. Even these inferences are subject to the caveat that with respect to many governance choices, there was little variation across trusts, which renders inferences about value unavailable. It could be that there are very large gains (or losses) from governance innovations, but these arise largely because of uniform deviations from the CBCA (e.g., no trust adopts the oppression remedy) and thus are not detectable in the present study. The study provides evidence on value only in respect of deviations from the CBCA that were not uniform.

Another possible caveat is that the relationship between abnormal returns and the governance choices found in the circular is potentially affected by financial information contained in the circular. The circular contains financial statements, which may affect market values, depending on whether the results are new, and on the market's previous expectations. This is unlikely to undermine the central aim of this article. The key objective is to determine whether average abnormal returns on the event date depend on governance choices: is deviating from mandatory law associated with positive or negative abnormal returns? That circulars may contain other value-relevant information potentially muddies the association between market reactions and governance details, but should not introduce a bias. Only if governance choices were somehow related to current period financial results would there be concern about the noise introduced by the non-governance related new information in the circular.

In any event, to minimize possible concerns about extraneous influences on returns, I conducted the study with two different samples. One involves all 55 conversions; the other involves 45 conversions that did not include new financial information in the circular. For the sample of 45, the financial statements in the circular had already been released to the public. I present below the results from the sample of 45 firms, though note that the results are not

qualitatively different when relying on the sample of 55 firms (except that the significance of some coefficients drops to some extent, as one would expect with the introduction of noise).

The central empirical goal is to detect the extent to which specific governance choices may drive variation in abnormal returns. To this end I run regressions of abnormal returns (and standardized abnormal returns) on various governance choices. Optimal governance choices may depend on the nature of the corporation's assets<sup>32</sup>, which in turn complicates inferences about the relationship between abnormal returns and particular choices. It could be that conformity with the CBCA on some dimension is optimal for some corporations but not for others. This in turn might imply no observable relationship between a particular kind of governance choice and abnormal returns for the sample as a whole even if there is a strong relationship at the firm level. If, however, there is a systematically positive reaction to the failure to adopt a mandatory CBCA provision, this indicates that governance innovation in income trust conversions creates value all things equal.

There is one more caveat to mention. The observed effects of innovation on stock returns do not net out the costs of innovation, in this case the costs of the conversion, which are likely to have been priced into the stock when the conversion was announced. It could be, for example, that the costs of conversion are greater than the governance benefits, but conversion takes place and the governance benefits realized because of significant tax benefits. Hence it could be that even though there is a positive effect on abnormal returns from governance on the circular date, the net effect of governance innovation on value was negative.

With these caveats in mind, I turn now to describing the particulars of the empirical approach. I take three approaches to the governance variables that may have an association with

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<sup>32</sup> See, e.g., Edward Iacobucci and George Triantis, Legal and Economic Boundaries of the Firm, 93 Virginia Law Review 515 (2007).

value. First, I consider the impact of resemblance to the CBCA generally. Anand and Iacobucci provide an index of similarity to the CBCA by adding up the number of provisions out of 25 that an income trust adopts that resemble the corresponding CBCA provisions.<sup>33</sup> Second, as noted above, Anand and Iacobucci categorize the 25 provisions into four categories, provisions relating to (a) directors and officers, (b) shareholder rights, (c) shareholder remedies and (d) transactions. I examine the association between abnormal returns and governance choices as reflected by these four sub-indices. Third, I consider individual provisions with dummy variables set to one if the provision resembles the CBCA. A positive coefficient on the governance variables in the regressions suggests that adopting the CBCA is a value-enhancing surprise from the market's perspective, while a negative coefficient suggests that the market welcomes deviation from the CBCA.

#### *Average Abnormal Returns*

The following are the results from the event study of abnormal returns of 45 conversions around the event date, which is the day that the circular containing governance details was made public. These 45 firms did not disclose new financial information in their circulars. To calculate abnormal returns, I estimated the market model,  $R_i = \alpha + \beta R_m$ , where  $R_i$  is the daily return of each firm and  $R_m$  is the daily market return, using data from Bloomberg for most trusts, but for four trusts where the Bloomberg database had gaps I relied on the Canadian Financial Markets Research Centre database. The market return was derived from the S&P/TSX Composite Daily Total Return index. I used data from five months of daily returns, where possible, before the conversion for each firm to calculate the market model. All firms in the sample had return data

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<sup>33</sup> *Supra.*

for the event date, but some did not have data for the following days; this explains why N varies depending on the size of the window.

**Table 1**

Income Trusts, Date of Posting of Circular to SEDAR	Average Daily Abnormal Returns (z-statistic)
1 day window N=45	-0.65 %* (-1.88)
2 day window N=44	-0.42 % (-1.03)
3 day window N=42	-0.41% (-1.01)

\* Significant at 10% level.

There is some evidence that the market was disappointed with governance choices on average, but statistical significance is marginal and disappears over event windows longer than one day. If there were such disappointment, this might support the hypothesis that corporate managers relied on the tax advantages of the income trust form even more than the market anticipated to ensure shareholder support for a conversion that would bring about undesirable governance changes. But Anand and Iacobucci do not discern systematic differences between IPO and conversion choices on governance.<sup>34</sup> This earlier result combined with the weak statistical significance of the negative returns casts doubt on the managerial self-interest theory.

#### *Abnormal Returns and Governance Choices*

In this section I seek to determine whether abnormal returns are associated with governance choices by regressing abnormal returns on governance choices. These governance variables are the only right hand side variables in the regressions. Other firm-specific factors may relate to the choice of governance provisions; indeed, Anand and Iacobucci find a variety of apparent influences, such as firm location and industry, on governance choices.<sup>35</sup> But these other

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<sup>34</sup> *Supra.*

<sup>35</sup> *Supra.*

firm-specific factors are known at the date of the circular publication and are only relevant to the value of governance changes insofar as they interact with governance choices to affect value in significant ways. In unreported regressions I could find no significant interactions. Given the sample size, however, it is possible that governance terms do interact in significant ways with firm-level characteristics but I cannot detect this. Thus, while the results that follow are suggestive of the association between abnormal returns and governance choices, they cannot reveal the precise causes of the association.<sup>36</sup>

I use two alternative left hand side variables in the regressions: each firm's abnormal returns; and each firm's standardized abnormal returns. Regressions with the former allow intuitive interpretation of the coefficients, while regressions with the latter better control for high variance around the estimate of abnormal returns.

I begin by examining whether abnormal returns might be caused by overall resemblance to the CBCA. For each firm, Anand and Iacobucci construct an index of resemblance to the CBCA by determining the number of 25 mandatory provisions in the CBCA that each firm adopts in its DOT. I regress abnormal returns on this index. The results are in Table 2, with alternative left hand side variables listed in the top row, the right hand side variables in the first column, and p-values in parentheses.

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<sup>36</sup> One variable that I did include as a right hand side variable in robustness checks was timing of the conversion as measured by the number of months from the beginning of the sample. It may be that market reactions evolved over time such that abnormal returns would systematically vary with timing. This variable was significant in some regressions (abnormal returns fell over time), but more importantly for my results, the governance provisions that were significant without the timing variable remained significant with the timing dummy, though sometimes at lower levels of significance, perhaps reflecting sample size. The interaction of timing and governance variables was not, however, significant, nor were other such interacted variables.

**Table 2**

	1-day abnormal return  N=45	1-day standardized abnormal return  N=45	2-day average daily abnormal return  N=43	2-day standardized average daily abnormal return  N=43	3-day average daily abnormal return  N=42	3-day standardized average daily abnormal return  N=42
Intercept	0.027 (0.087)	9.09 (0.053)	0.020 (0.048)	6.99 (0.037)	0.017 (0.087)	4.92 (0.107)
CBCA index	-0.002** (0.033)	-0.85** (0.016)	-0.002** (0.017)	-0.622** (0.016)	-0.002** (0.033)	-0.460** (0.050)
R-squared	0.102	0.128	0.132	0.134	0.109	0.093
Adjusted R-squared	0.081	0.108	0.111	0.113	0.087	0.070

P-values in parentheses

\*\* Significant at 5% level

Given that the index increases with the number of CBCA provisions that an income trust proposes to adopt, Table 2 suggests that the more a firm resembles the CBCA, the *lower* the value of the firm. More precisely, markets were systematically, and negatively, surprised by the number of CBCA provisions that firms adopted. This result is robust across event windows and across normalized and raw abnormal returns. The coefficient for raw abnormal returns, which was consistent across event windows, indicates the magnitude of the effect: each additional CBCA provision adopted out of 25 is associated with a drop in abnormal returns of 0.2% (the largest number of CBCA provisions adopted by a firm was 17, and the smallest was 9). It is essential when interpreting this association to appreciate that the change in returns reflects only the market's surprise. If markets were good at anticipating governance choices, the observed change in returns may understate significantly the association between governance and abnormal returns.

The next stage of the investigation is to probe deeper into the particular kinds of provisions that lower value. The higher the index as a whole, the lower is firm value, but particular provisions that make up the index may or may not have this negative effect. I rely on four sub-indices that Anand and Iacobucci establish by adding up the number of CBCA provisions that a trust adopts along four different dimensions: a directors and officers index that concerns CBCA provisions relevant to directors and officers (9 provisions); a shareholder rights index (10 provisions); a shareholder remedies index (4 provisions); and a significant transactions index (2 provisions). The results are in Table 3.



**Table 3**

	1-day abnormal return  N=45	1-day standardized abnormal return  N=45	2-day average daily abnormal return  N=43	2-day standardized average daily abnormal return  N=43	3-day average daily abnormal return  N=42	3-day standardized average daily abnormal return  N=42
Intercept	-0.007 (0.817)	0.063 (0.994)	-0.014 (0.458)	-2.856 (0.636)	-0.034 (0.123)	-7.846 (0.243)
Dirs/offrs	-0.003** (0.021)	-0.822** (0.021)	-0.003*** (0.001)	-0.877*** (0.001)	-0.003*** (0.001)	-0.693*** (0.006)
Shldr Rights	-0.003 (0.924)	-1.147 (0.239)	0.002 (0.455)	0.184 (0.791)	0.005* (0.082)	0.839 (0.320)
Trans- actions	0.008 (0.320)	4.976 (0.017)**	0.004 (0.403)	1.798 (0.211)	0.002 (0.722)	1.557 (0.255)
Shldr Remedies	-0.007 (0.817)	2.072 (0.524)	0.010 (0.153)	4.550* (0.052)	0.008 (0.264)	3.029 (0.167)
R-squared	0.1715	0.289	0.313	0.351	0.3044	0.278
Adjusted R-squared	0.0886	0.218	0.241	0.282	0.2292	0.200

\*\*\* Significant at 1% level

\*\* Significant at 5% level

\* Significant at 10% level

There is a robust, statistically significant association between abnormal returns and one sub-index, the directors and officers index. The less the income trust resembled a corporation with respect to board governance, the more positive the market reaction. Innovation was welcomed.

In an attempt to pin down further the particular associations driving the results, I examine the effects of choosing specific governance terms. Each governance variable is a dummy variable with a value of 1 if the firm chooses to adopt in its DOT the analogous mandatory provision in the CBCA, and 0 if the firm deviates from the CBCA. I regress abnormal returns on

all the CBCA dummies. Perhaps unsurprisingly given the number of variables and the size of the dataset, none of the coefficients on the variables is significant (not reported).

An empirical revelation of the governance variables that matter most to value is not available given the sample size, but clues from empirics and theory are available. The sub-index testing revealed that the market particularly seemed to welcome deviations from CBCA provisions on directors and officers. One particular innovation in this area was conspicuous. Rather than requiring directors to be individuals, as does the CBCA, many DOTs allowed for trustees that were themselves corporations, and in addition allowed for a sole trustee, something that is not possible for public companies under s. 105 of the CBCA.

The restriction on the nature of the directors/trustees found in the CBCA and similar statutes could have a significant effect on value. Income trusts with a single corporate trustee typically appoint trust companies to serve as trustee. In the pure debt context, these companies are known for their passivity.<sup>37</sup> An income trust with a corporate trustee is more likely to have a board that will focus only on collecting cash from the operating corporation and passing that cash to unitholders. In contrast, an income trust with individual trustees is more likely to have an active board that would exercise its own business judgment in a manner similar to boards of holding companies. A corporate board structure could therefore have potential costs and benefits.

On the potential costs side, there is a danger that management of the operating corporation may operate with relatively little oversight from the board. This could exacerbate agency costs. On the other hand, the same feature, trustee passivity, could conceivably bring benefits. As noted above, the operating corporation owes the trust a significant amount of debt.

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<sup>37</sup> Yakov Amihud, Kenneth Garbade and Marcel Kahan, A New Governance Structure for Corporate Bonds, 51 *Stanford Law Review* 447 (1999).

But this debt is not arm's length: the equity of the operating corporation is also owned by the trust. The contractual commitment to pay out cash from the operating corporation to the trust is relatively weak since the trust and corporation are non-arm's length and can renegotiate the debt payments between themselves. Where the board of the operating corporation includes the members of the board of trustees of the trust, it is obviously easy to renegotiate the non-arm's length debt. It may be more difficult, in contrast, to renegotiate debt with passive, arm's length corporate trustees. If corporate trustees are reluctant to take an active role in governance, they may resist managerial efforts to renegotiate debt payments down. It may be, therefore, that the unconventional corporate trustee structure better commits the income trust to cash distribution than a conventional board of individual trustees. To the extent that cash payments mitigate agency problems, the corporate trustee may improve governance relative to a board of individual trustees.

As a matter of theory, then, the most likely cause of the observed relationship between governance of directors and officers and value is the choice whether to adopt s. 105 in the DOT. Altering the board's governance structure to allow sole corporate trustees has a plausible impact on value and is much more likely to matter than the other governance matters reflected in the directors and officers sub-index.<sup>38</sup>

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<sup>38</sup> On the sections in which there was considerable variation across trusts, sections 108(1) and 108(2) concern the resignation of trustees and when they cease to hold office, neither of which appears to be of fundamental importance. Section 109 concerns the threshold for removing sitting directors by vote, which, given that there are annual elections by majority vote for the trusts in this sample, only would affect the possibility of a proxy contest outside a regular annual meeting. Given the rarity of successful proxy contests generally, and the presumably small effect of not being able to launch a removal campaign mid-year, it seems unlikely that s. 109 would have a profound effect on value. The common deviation from s. 120 was to be more permissive of self-dealing transactions than the CBCA provision, in part because of the presence of a single, corporate trustee that would prevent disinterested voting by the board on any self-dealing transaction. It is possible that this would have a significant impact on firm value, but it would depend on the frequency of self-dealing and the advantages of the more permissive rules. The existing rules, which rely on disinterested voting, do not seem particularly onerous, which makes it less plausible that deviations are likely to have a significant impact on value.

In summary, it is apparent that there is a negative relationship between adoption of particular CBCA terms and firm value; in particular, firms that deviated from CBCA rules governing directors and officers realized more favourable market reactions. Innovation appears to create value for the sample of firms that convert to income trusts.

There are caveats worth repeating: the magnitude of the effect is not knowable from this study because of anticipation of governance choices by the market, and because some provisions were adopted, or not adopted, uniformly across trusts. Moreover, assuming that the costs of the conversion were anticipated by the market once the conversion was announced, the observed positive effects on the announcement of the governance details in the circular are not net of the costs of conversion. I consider the net benefits of governance innovation in the next section.

#### c) Post Tax Reform Evidence

On October 31, 2006, the federal government announced that it was ending the tax advantages of the income trust structure, with the benefits to be eliminated gradually until they were zero by 2011. This had a profound impact on existing income trust value, as one would expect. What was less clear at that time, however, was whether the trust form would continue to thrive despite the tax changes. We have seen evidence that firms that converted and adopted innovative governance structures were rewarded with higher market values; would the adoption of trusts continue post-tax reform?

The answer is unambiguously no. Since the Halloween Massacre announcement, basically the only new trust vehicles have been REITs, which were unaffected by the tax reform; only two business trusts have been announced since, and they owned foreign assets, the income from which would not be subject to trust level taxation. Indeed, several trusts have converted back to the corporate form.

How can one reconcile the post-2006 experience with the evidence canvassed above that governance innovation was rewarded by the market? One possibility is that the costs of converting to a trust exceed the governance benefits. When the tax and governance benefits are both available, the benefits of conversion exceed the costs, but when only the governance advantages are available, the benefits of the innovation do not justify the costs of conversion.

To investigate this possibility further, I gathered data on the costs of conversion. All corporations converting to a trust did so in an arrangement process. The circular contains information about the costs of the arrangement. I collected these costs for the 55 firms in the sample. The costs of a conversion to an income trust vary considerably, ranging from a low of \$200,000 to a high of \$110 million. Obviously, some conversions, particularly ones involving more than one entity, are more complicated than others. The costs of the arrangement as a percentage of total market capitalization ranged from a low of 0.02% to a high of 6.9%. The high was very clearly an outlier, however, with only six conversions being more costly than 1% of equity, and only two being higher than 3% . The median cost of conversion as a percentage of firm value was only 0.4%.

The costs of converting to a trust are not large. Given that almost no business trusts have been created since the tax reforms, there is doubt about the economic value of innovative governance structures.

#### d) Conclusions on the Value of Innovation

The evidence on the value of innovation in governance that the trust structure permits is mixed. On the one hand, trusts clearly took advantage of contractual freedom to adopt innovative governance rules, and moreover the market reacted favourably to such innovations. These results suggest that the innovation that the trust form allows is valuable. On the other

hand, converting to an income trust is not especially costly, with a median cost of conversion of 0.4% of the value of equity, yet only two businesses have adopted the trust form since the announcement of the tax reforms in 2006. This result casts doubt on the value of innovation that the trust allows.

Several possible explanations of favourable reactions to governance innovation, yet no innovation post tax reform, are worth considering, but are ultimately implausible. One is that there are agency problems. For example, corporate managers may be reluctant to adopt the trust form precisely because the governance innovations are valuable to shareholders; such value may come at the expense of managerial private benefits, particularly if it relates to discipline over free cash flow. One could conjecture that the tax benefits of conversion were so great that managers were in effect compelled by market pressures to adopt the trust form pre-2006. Following 2006, however, the gains from adopting the trust form were smaller and there was insufficient pressure on them to convert.

There are significant problems with this agency cost hypothesis in light of other evidence. Most fundamentally, not only have no public companies converted to the trust form since 2006, there have only been two trust IPOs, and both of these were motivated by tax breaks on foreign income. Even if managerial agency problems in existing companies were impeding adoption of the trust post-2006, this would not explain the extreme rarity of trust IPOs.

Another agency problem that has been suggested to possibly impede adoption of the trust form is that between businesses and lawyers.<sup>39</sup> If lawyers have human capital devoted to the corporate form, or if they simply are unaware of the advantages of the trust form, they may fail to advise businesses about the trust's potential advantages. This possibility does not plausibly explain the experience in Canada. Some lawyers built very successful practices around the trust

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<sup>39</sup> See, e.g., Sitkoff, *supra*.

form in the pre-2006 period. These lawyers would have liked nothing better than to continue their practice of advising on conversions or IPOs to trusts, but there were (almost) no takers after the tax reform. In any event, knowledge about the trust form became widespread in this period such that lawyers were almost certainly not needed to suggest the trust as a possibility in the first place.

Another, ultimately unsatisfactory possibility that might explain the co-existence of apparent gains in value from innovative governance trust structures with the failure to adopt the trust post tax reform is the threat of government regulation. As noted above, there was considerable concern in the Canadian business press about the freedom to innovate on governance within the income trust structure.<sup>40</sup> Indeed, Canadian academics have written articles starting with the premise that the trust governance structures were worse for investors than the corporate structure.<sup>41</sup> The evidence outlined above that markets seemed to prefer innovative governance structures would challenge these views, but even so such views gathered political momentum in the pre-2006 period. Indeed, eventually various proposals were made to close the perceived governance gap between corporations and trusts such that the latter would be subject to similar mandatory rules as the former.<sup>42</sup> In announcing a proposed uniform Act for governments to adopt, a committee of the Uniform Law Conference of Canada put out a report entitled, “The *Uniform Income Trusts Act: Closing the Gap Between Traditional Trust Law and Current Governance Expectations.*”<sup>43</sup> The Act would have restricted governance choices for income trusts along a number of dimensions (though interestingly, not on significant matters

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<sup>40</sup> See, e.g., Globe and Mail, “Wild West”, *supra*

<sup>41</sup> See, e.g., Boyer et al., *supra*.

<sup>42</sup> See Miller, *supra*.

<sup>43</sup> Uniform Income Trusts Working Group of the Uniform Law Conference of Canada, “The *Uniform Income Trusts Act: Closing the Gap Between Traditional Trust Law and Current Governance Expectations*” August 2006: [http://www.chlc.ca/en/poam2/Uniform\\_Income\\_Trusts\\_Act\\_Report\\_En.pdf](http://www.chlc.ca/en/poam2/Uniform_Income_Trusts_Act_Report_En.pdf).

such as the oppression remedy).<sup>44</sup> It could be, therefore, that concern over future regulation has inhibited adoption of the trust.<sup>45</sup>

The problem with this theory is that after 2006, the political pressure to reform trust governance disappeared; with almost no new trusts, and the conversion of existing trusts back to corporations, there was and remains little impetus for reform. It might have been true that had businesses continued to exploit the freedom of the trust form in large numbers, legislative reform might have arisen. But such mass adoptions of the form did not materialize. Individual businesses would soon have realized that their decision to adopt the trust would not have been associated with many other like decisions, which would have in turn left them reasonably assured that legislative reform was unlikely to come about. But they nevertheless did not adopt the trust form. This suggests that anticipation of legislative intrusion was not a significant factor explaining why the business trust did not survive tax reform.

The most plausible explanations, in my view, for the disappearance of the trust with tax reform, despite the apparent gains in value that governance innovation had created, is that the tax system pre-2006 and the valuable innovations in governance were related. There are two different ways in which they might have been related. First, the most straightforward interpretation of the data is that while governance innovation was valuable all things equal, that is, was valuable when a conversion was already taking place for tax reasons, it was not sufficiently valuable on its own to justify the costs of conversion. Gains from innovation were merely incidental to the tax motivations for adoption of the income trust structure. If this explanation holds, given that the median costs of conversion were only 0.4% of the value of equity, the inference is that governance innovation is not particularly valuable.

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<sup>44</sup> See Miller, *supra*.

<sup>45</sup> Such pressure may have inhibited unconventional terms pre-2006: there were fewer deviations from the CBCA as time went on, all things equal; see Anand and Iacobucci, *supra*.



The second possibility is that governance innovation was indeed a significant source of gains for income trusts, but these innovations depended on the tax context that existed at the time.<sup>46</sup> I have hypothesized, and there is empirical support for the conclusion, that an important governance innovation was the designation of corporations as trustees, rather than individuals as is required for corporations. In particular, this innovation may have rendered more credible the commitment to pay out free cash flow because passive corporate trustees may have been less likely to renegotiate the intra-organizational debt than an active individual trustee. But tax law was also creating incentives for the income trust to stick to the operating corporation's debt obligations.<sup>47</sup> If the debt were renegotiated to a lower amount, perhaps so managers would have greater discretion over the cash, there would have been a greater tax bill for the organization because of lower deductions for interest paid. It is possible, therefore, that both the governance innovation of corporate trustees and tax law together rendered stronger the commitment to pay out free cash.

There is another way of looking at tax-governance relationship. With the pre-2006 tax rules in place, there was a clear advantage to establishing and maintaining large intra-organizational debt. With such incentives to pay out cash in place, there was less of a need to rely on other disciplines on corporate managers, such as independent, active monitors on the board. Once the tax reforms were put in place, the tax advantages of the commitment to pay out free cash through large intra-organizational debt disappeared. This may have shifted an optimal board from a passive one relying on debt obligations to discipline management to a board that actively scrutinized management. This implied that one of the key governance innovations of

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<sup>46</sup> Ribstein, *supra* discusses the relationship between tax law and governance choices, noting especially that organizations have incentives to avoid governance choices that increase their potential tax liabilities (see, e.g., Ribstein, *supra* at 125). The explanation here is related but distinct in that the income trust experience suggests that existing tax incentives may alter optimal governance terms for governance, not tax reasons.

<sup>47</sup> See, e.g., Alarie and Iacobucci, *supra*.

the income trust form, the passive corporate trustee, became less valuable post tax reform. Hence the coincidental announcement of tax reform and the decline in the adoption of the trust structure. Tax law and governance innovation in the trust were related.

Canadian experience with income trusts suggests that the governance innovation that the trust form permits may be valuable, but that such value is either insufficient on its own to justify conversions to the trust form, or that such value is contingent on a particular tax structure. Governance innovation *per se*, which adopting the trust form would allow, is not especially valuable. If this is so, it is not surprising that there has been little adoption of the business trust in North America despite the scope for innovation that it entails.

#### ii) Informational Deficiencies and Innovation

Another possible explanation for the dearth of business trusts is that there are informational deficiencies about the governance impact of choosing the trust structure. Imperfect information about the governance impact of novel organizational forms may deter the choice of such forms for a variety of reasons. For example, uncertainty would increase the risk of adopting the form, which for potentially undiversified investors like founders would be particularly costly. Uncertainty may also increase the costs of future governance disputes as parties may differ on their predictions of what the law requires in a given setting. Imperfect information is even more problematic if there is a concern on the part of investors that managers have better information than outside investors about the governance impact of the choice of a novel form. If managers are better able to anticipate the impact of new governance arrangements, perhaps because they are better aware of the kind of governance dispute that is likely to arise in the future, there will be a lemons problem: outside investors will rationally

discount securities associated with innovative governance in anticipation that managers find the novel regime appealing for self-interested, but not necessarily value-maximizing, reasons.

In this section I explore evidence from Canadian income trusts in an attempt to gain insight on whether imperfect information might impede the choice of the trust form. While some of the evidence is mixed, on balance it does not appear that imperfect information about governance implications is a hindrance to those who might otherwise prefer the trust form.

#### a) Patterns of Adoption

If imperfect information were a problem for Canadian businesses seeking to adopt the trust form, certain predictions about the patterns of businesses becoming income trusts would follow. It is plausible that as more businesses became income trusts, there would have been positive network externalities.<sup>48</sup> Other businesses contemplating the form would have better information about the governance impact of becoming a trust once other businesses had adopted the form. The prediction is, therefore, that adoption of the form would promote adoption of the form.

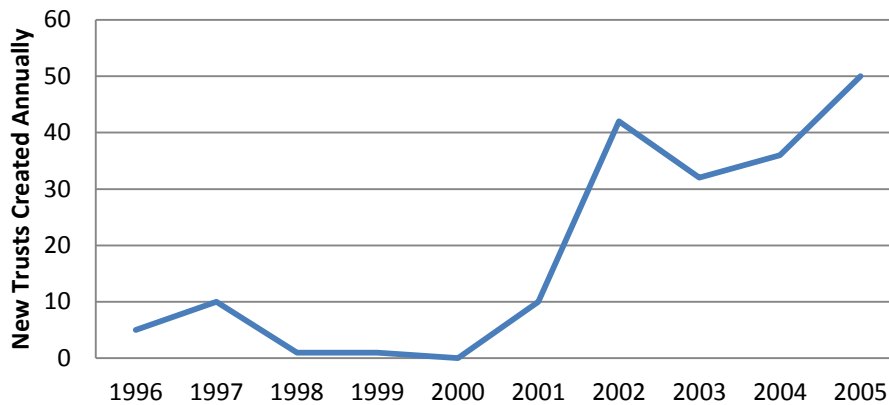
There is evidence consistent with the predicted adoption pattern. Figure 1 displays the pattern of adoption of the trust form for the income trusts in the Anand and Iacobucci sample of 187 trusts created in Canada in the 1996-2005 period.<sup>49</sup>

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<sup>48</sup> See, e.g., Kahan and Klausner, *supra*.

<sup>49</sup> Anand and Iacobucci, *supra*.

**Figure 1**



The pattern is consistent with imperfect information. There is a trickle of new trusts at first, which becomes an increasing rush in the early 2000s.

To be sure, the pattern could be related to imperfect information that has little to do with governance. Such a pattern of adoption would also emerge if the tax benefits of income trusts were better appreciated over time, and/or if the tax structures, because of learning, became more favourable over time. But the pattern does supply some evidence of imperfect information.

There is, however, empirical evidence that is inconsistent with the imperfect information theories, at least as they turn on the governance implications of the form. Most strikingly, if there was better information in, say, 2003 than 2000 for those contemplating the trust form, there was even better information in 2007. But only two businesses adopted the form following the 2006 announcement eliminating the tax benefits of income trusts. This evidence tends to undermine the story that once imperfect information about the impact of trust governance was lessened, the form would become more attractive. The Catch-22 that imperfect information might invite, that no business would want to be a trust until other businesses became trusts, had been overcome, yet the trust form disappeared precipitously once tax law changed. This is not consistent with

the importance of imperfect information about the value of governance innovation in explaining the hesitation generally of businesses to adopt the trust form.

There is a response to the disappearance of new trusts post-2006 tax reform that might keep alive the possibility that significant information problems impede adoption of the trust form. It could be that while imperfect information about trust governance had been resolved as more businesses adopted the form over time, it had been resolved in the context of a certain approach to taxation. As noted above, tax and governance might have been related, particularly with respect to cash flow distribution, so the change in tax law may have resurrected uncertainty about the governance impact of the trust form; observers could not anticipate the effects of trust governance once trusts lost the tax advantages from paying out their cash to unitholders.

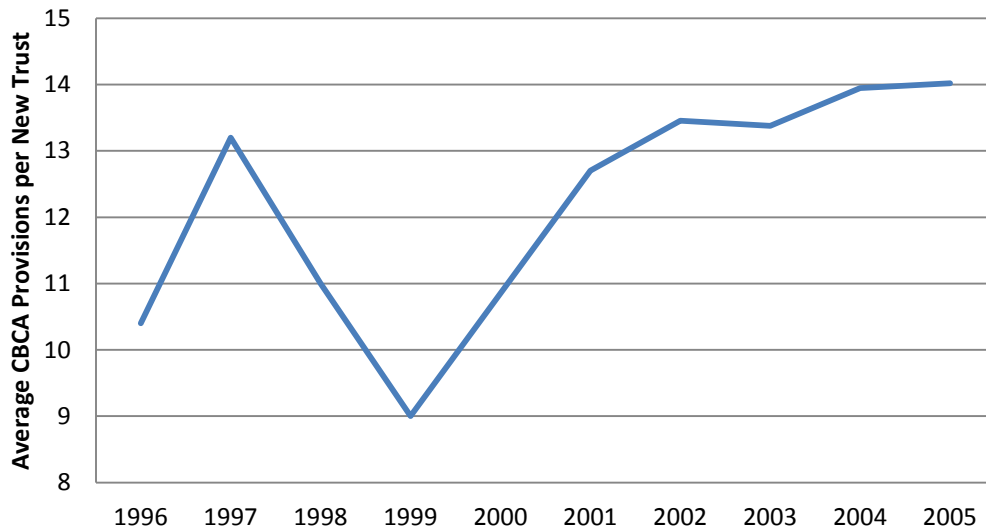
There is further evidence from the income trust experience, however, that suggests that information problems are unlikely to have played a significant role in deterring adoption of the trust. If it were the case that uncertainty deters innovation in governance, one would expect adoption of unconventional rules to follow a similar pattern to that of trusts themselves. Trusts may exercise their governance freedom to opt for conventional rules initially, but then as other businesses innovate, these innovations would resolve uncertainty and the novel approach would become more popular. Examining the actual governance choices of income trusts casts significant doubt on the impact of uncertainty: trusts were more likely, all things equal, to adopt innovative governance terms earlier in the period than later.

Consider Figure 3. It shows the average number of CBCA provisions, out of the 25 that were the focus of the Anand and Iacobucci study, that each newly created trust adopted per year.<sup>50</sup>

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<sup>50</sup> Anand and Iacobucci, *supra*.

**Figure 3**



It is apparent that the average resemblance to a CBCA corporation goes up, not down, over time, which is inconsistent with the idea that significant concern about imperfect information deters innovative governance structures. As reported in Anand and Iacobucci, the visual pattern is confirmed by regression analysis: as time passes there is a greater likelihood of resemblance to the CBCA, holding a variety of factors (industry, size, headquarters location, legal advisor, underwriter) constant.<sup>51</sup>

The pattern of adherence to the CBCA indicates that uncertainty did not deter innovation, but it is also worth investigating the pattern of market reactions to novelty. Perhaps managers were able to take advantage of investors by proposing new governance rules that they knew would be good for managers but bad for investors, while investors either did not have the same information about the potential negative impact of such governance and knew they did not have such information (in which case there would be a lemons problem and negative reactions to novelty), or investors did not have the same information and did not know initially that they did

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<sup>51</sup> *Supra.*

not have the same information (in which case there would not necessarily be a negative reaction to unconventional terms at first, but there would be one over time). Negative market reactions to innovation either throughout, or later in time, might raise the possibility that imperfect information problems were present, and that patterns of adoption of novel terms may have been driven by agency problems.

The evidence is again inconsistent with imperfect information about novelty. As noted above, adoption of innovative governance structures in conversions of public companies created statistically significant positive market reactions. The market did not fear novelty, but welcomed it. There are two reasons why the reaction to novelty might have been positive. First, the novel terms were understood by the market to be better for governance. Second, the fact that the managers actually chose the better terms was a positive signal of the managers' commitment to value-maximization.<sup>52</sup> The latter is likely to be an important factor: if managers always chose value-maximizing terms and the market knew this, there would be no observed reaction to the announced governance terms; such terms would be anticipated and already priced. If there is uncertainty about managers' willingness to adopt novel approaches, on the other hand, the announcement signals managers' commitment to value, as well as a better governance regime. The positive reactions to novelty are consistent with asymmetric information about managers' commitment to value-maximization, but are inconsistent with the idea that uncertainty deters governance innovation.

There is a different interpretation of the signal sent by opting for novelty. It could be that the choice of novel governance terms increases uncertainty, which, for reasons mentioned above, increases the expected costs of future litigation should such disputes arise. If potential litigation

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<sup>52</sup> For a discussion of how the choice of law may signal quality, see Edward M. Iacobucci, "Towards a Signaling Explanation of the Private Choice of Corporate Law". Third possibility: uncertainty bad, but only adopt if don't foresee gov problems.

is less likely to arise at firms that anticipate strong performance, and if managers are loyal to shareholders, then adopting novel governance terms and accepting uncertainty could be a positive signal: “good” firms have less to fear from uncertainty because of a lower probability of future disputes that could lead to litigation.<sup>53</sup> This explanation would also suggest that the existence of imperfect information is not necessarily an impediment to adoption of the trust form; even if there were imperfect information, it could be an advantage for some kinds of firms.

Finally, there is no evidence that the market was initially overoptimistic in rewarding novelty, which might again raise the prospect of information problems. As noted, adoption of conventional governance terms increased over time, but this did not reflect learning that the new terms were harmful to governance. Instead, the returns to unconventional terms did not change in a statistically significant way over the period of the conversion sample.<sup>54</sup> The market consistently regarded innovation as positive. This is not consistent with the idea that fear of the unknown deters adoption of the trust.

### iii) Other Theories

Two other theories about the reluctance of businesses to adopt the trust form are worth considering in light of Canadian evidence from income trusts. One was discussed above. It could be that advisors have avoided suggesting the trust form to their clients because of their own lack of human capital in the area. The Canadian experience with income trusts casts significant doubt on this hypothesis. By 2006, several advisors had become expert in income

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<sup>53</sup> See Iacobucci, *supra*.

<sup>54</sup> In unreported regression, I regress abnormal returns on months since the start of the period, resemblance to the CBCA, and an interaction between months and resemblance. No coefficient was significant, though the sign of the interacted term was negative indicating that conformity to the CBCA was viewed, if anything, *more* negatively over time.



trusts and would have been very happy to continue their practice in this area. Yet only two businesses adopted the form post-2006.

Another theory about the reluctance of businesses to adopt the trust form concerns the impact of the form on limited liability. Uncertainty about such liability may inhibit adoption of the form. There was some anecdotal evidence of concern about liability associated with the income trust boom. In 2004, one commentator observed that, “Many Canadian pension plans have not invested directly in income trusts because of concerns about potential legal liability.”<sup>55</sup> On balance, however, it is not plausible that concern over such liability has inhibited the trust in Canada in recent years.

First, it is not clear why concern over liability existed in the first place in the income trust context. If the trust owned the securities in an operating corporation, the liabilities of the business would be incurred by the corporation, which of course would have limited liability. Setting up the structure with the assets owned by a corporation gets the benefits of limited liability, but establishes that a trust, with whatever innovative governance structure it wants, will have ultimate control over these assets.

Second, even if there were such concern, this concern was largely eliminated before 2006 with the passage of a number of provincial statutes establishing that unitholders in an income trust would not be liable for the debts of the trust.<sup>56</sup> This explicit protection of unitholders has not affected the creation of trusts post-2006. Once the tax law changed, income trusts largely disappeared even though concerns about limited liability had effectively been eliminated. Uncertainty about limited liability is not a plausible explanation of the hesitation to adopt the trust form.

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<sup>55</sup> Jim MacDonald, *Trouble with Trusts*, May 2004, Benefits Canada, cited in Anand and Iacobucci, *supra* at 163.

<sup>56</sup> For example, Ontario, Alberta, Saskatchewan, British Columbia, Quebec and Manitoba, where almost all income trusts are domiciled, all have statutes that explicitly provide for unitholder limited liability.

#### IV. Conclusion

The income trust experience provides insight into the apparent reluctance of businesses to adopt the trust form. While innovation away from corporate law norms was rewarded by the market during the income trust boom, innovation *per se* does not appear to be particularly valuable given the virtual absence of new trusts following tax reform. Innovation in governance along with favourable tax treatment may have combined to create value, but the paucity of new trusts since 2006 and the low costs of conversion suggest that innovation on its own is not valuable.

The income trust experience also casts doubt on the role of imperfect information in impeding adoption of the trust form. Again, new trusts did not emerge post tax reform, even though information at that point about governance was more widespread than previously. There is a possibility that governance at trusts may have been understood only in light of pre-2006 tax law, and that uncertainty post-reform reemerged. But other evidence casts doubt on this hypothesis, especially the facts that innovative choices within the trust form were if anything more common early in the period than later, and were rewarded by the market throughout the period. The market did not appear reluctant to embrace novelty.

Other hypotheses, that agency costs or fear of unlimited liability deter adoption of the trust form, are also inconsistent with the evidence. Lawyers ceased to recommend the trust form post-2006 despite their interest in exploiting their human capital in this area, and legal reforms resolved any lingering doubts about unlimited liability yet trusts ceased in 2006.

In summary, the income trust experience provides support for the hypothesis that businesses have been reluctant to innovate to the trust form because doing so is not especially valuable. While governance and tax law seem to interact in a manner that created value in the

income trust context, deviation from corporate law norms *per se* did not appear to generate significant gains.



# Market Conditions and Contract Design: Variations in Debt Covenants and Collateral

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## Introduction

The phenomenon of rigidity in contract design has received considerable attention in legal scholarship. For example, the learning and network benefits of standardization can impede customization and innovation in contract terms.<sup>2</sup> Contracting parties are reluctant to take the risk of departing from provisions that have been interpreted and enforced by the courts.<sup>3</sup> Moreover, institutional features of the legal profession and of law firms in particular (such as hourly billing) encourage the repeated use of standard terms, or “boilerplate.”<sup>4</sup>

At the same time, many contract provisions—particularly, the non-boilerplate provisions—do vary significantly across parties and across time. While, for example, provisions in sovereign debt contracts might be rigid even in the face of undesirable judicial interpretation,<sup>5</sup> covenants in commercial debt contracts do vary considerably in their scope, intensity and tightness across borrowers of different characteristics. There is clearly a significant degree of customization and malleability in covenant patterns over time.<sup>6</sup>

Financial economists have advanced theories to explain customization and have tested them empirically against samples of private and public debt contracts. Borrowers and lenders tailor covenants to address information problems—adverse selection and moral hazard—that afflict their relationships. The severity of these problems and the cost of addressing them with covenants depend on the characteristics of borrower and lender in each contract. It is now well established in both finance and law scholarship that the parties do customize their covenants according to firm-specific characteristics.

A distinct issue is whether and how covenant patterns evolve over time in response to changes in macroeconomic and market conditions. Although these associations have received less attention, the studies to date suggest that GDP growth,

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<sup>1</sup> University of Virginia School of Law and Stanford Law School, respectively.

<sup>2</sup> See, e.g., Marcel Kahan and Michael Klausner, Standardization and Innovation in Corporate Contracting (Or “The Economics of Boilerplate”), 83 Va. L. Rev. 713 (1997).

<sup>3</sup> [cites]

<sup>4</sup> See, e.g., Mitu Gulati and Robert E. Scott, *The Three and a Half Minute Transaction: Boilerplate and the Limits of Contract Design* (2011)

<sup>5</sup> See Choi and Gulati; Gulati and Scott,

<sup>6</sup> What constitutes contract “innovation” in this respect is open to debate.

interest rates and market competitiveness affect the choice of covenants. In this paper, we analyze the effect of changes in the supply and demand of credit on covenants, including collateral provisions.

While market participants generally understand the role of moral hazard and adverse selection in the design of covenants, their explanations seem incomplete as to why debt contracts swing over time between “covenant-lite” versions that impose minimal restrictions on borrowers and versions that impose tighter, more expansive covenant restrictions. Practitioners label different formulations of covenants as “lender-friendly” or “borrower-friendly.” They explain the choice between these two poles in terms of the allocation of bargaining power or market power. The source of such power appears to be imbalances in market demand and supply. For example, a market is “lender-friendly” when demand for credit exceeds supply and thereby puts an upward pressure on interest rates. Practitioners suggest that this also yields “lender-friendly” covenants.

Covenant-lite deals became common through the first half of the past decade until the onset of the financial crisis in 2007, and market observers attributed this to the excess supply of credit.<sup>7</sup> The market for covenant-lite loans collapsed in the second half of that year and this was followed by a period of more extensive and tighter covenants during 2007-09. Reports suggested that covenant-lite deals then emerged again because of the excess supply of investment funds, at least for higher-grade borrowers.<sup>8</sup> The following recent explanation by a partner at law firm of Paul, Weiss is typical:

Covenant-lite (cov-lite) loans became widespread at the top of the last credit cycle before the 2007 credit crunch. During the credit crunch, however, new cov-lite loans largely disappeared from the market because lenders had *greater market power* to reject these types of borrower-

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<sup>7</sup> In a report by Standard & Poor’s on the eve of the financial crisis in mid-2007, the ratings agency observed that “Strong loan market liquidity and the continued pace of private equity sponsored LBOs are driving a record volume of leveraged loans in 2007. Such favorable market factors, combined with growing investor demand from structured finance vehicles and hedge funds, have allowed bank facilities with weakened ‘covenant-lite’ loan structures to emerge as the instruments of choice for many issuers. As the volume of leveraged loans reaches an all-time high, the proportion of covenant-lite facilities has increased tremendously... It remains to be seen whether leveraged loans will revert to more traditional structures when the credit cycle turns.... There has already been some pushback so far this year as market conditions begin to soften, with certain transactions unable to get through syndication without a robust covenant package.” Standard & Poor’s, *THE LEVERAGING OF AMERICA: COVENANT-LITE LOAN STRUCTURES DIMINISH RECOVERY PROSPECTS 2* (July 18, 2007).

<sup>8</sup> E.g., Kate Laughlin, *Covenant-lite loans are back but investors hope to limit mistakes*, Financial Times (November 24, 2010) (“today’s loan market is for the most part a seller’s environment where investors are flush with cash they need to put to work... [S]ome investors buying the covenant-lite deals are not solely loan investors, so in their hunt for high-yielding paper, covenant concerns are a low priority”); Michelle Sierra Laffitte, *IFR-Covenant-lite buyout loans return to US loan market*, (January 31, 2011) at <http://www.cnbc.com/id/41347717> (“As the market gets hotter, companies are expected to try to reduce spreads and slash covenants in deals that were completed recently”); Michael Aneiro, *Global Finance – Aleris Debt Sale: ‘Covenant-Lite’*, Wall St. J., C3 (February 7, 2011) (“[D]emand has pushed the average junk-bond yield down to 7.01%... and has allowed issuers to water down investor protections, or covenants, that govern new offerings”).

friendly deals....[S]tarting in 2010, cov-lite loans began reappearing in the syndicated loan market. Borrowers can obtain cov-lite loans because of market dynamics. At the top of the last credit cycle, there was an *oversupply of capital*, and *lenders competed* for deals from private equity sponsors and borrowers. Because there was a *greater supply* of capital than there was demand to borrow capital, borrowers had *more leverage* to negotiate looser and more favorable terms, including cov-lite structures.<sup>9</sup> [emphasis added]

Such accounts of the effect of bargaining or market power on covenants are oversimplified, but common.<sup>10</sup> They beg the question of why lenders would not exploit their power more profitably by increasing interest rates instead of covenant protection. The link between bargaining power and lender- or borrower-friendly covenants is more complicated. We show in this paper that there is often an intermediate step: market conditions change price which in turn causes a change in covenants or collateral provisions. The key to our analysis is that changes in price do not simply alter the division of the gains from trade. When adverse selection or moral hazard issues are present, changes in price affects the severity of these problems and thereby have a significant bearing on the optimal design of covenants.

Consider the effect a higher interest rate has on the problem of adverse selection. As Stiglitz and Weiss demonstrate, an increase in the interest rate attracts a riskier pool of borrowers, including perhaps some borrowers who wish to finance projects with negative net present value.<sup>11</sup> This reduces the expected surplus from the loan: the rise in price can reduce the size of the surplus. The lender may be inclined to mitigate this adverse effect by adjusting the non-price terms—specifically, by strengthening the collateral or covenant provisions—to better differentiate less risky borrowers from the riskier ones. The riskier the borrower, the less willing he is to promise a broad set of covenants or pledge a large amount of collateral, because he knows that he is more likely to violate the covenants or to turn over the collateral to the lender. As the interest rate rises, the adverse selection problem gets worse and attracts even riskier borrowers, motivating the lender to further strengthen the collateral and covenant provisions.

Changing interest rates can also affect the borrower's post-borrowing behavior; in other words, it can affect the severity of the moral hazard problem. As the interest rate rises, the borrower's claim on the residual cash-flow from projects decreases. When the lender cannot directly control borrower's behavior by contract, the decrease in the residual cash-flow increases the incentive of the borrower to invest in projects with higher private benefits but with potentially negative net present value. To combat this

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<sup>9</sup> Eric Goodman, *Covenant-Lite Loans: Traits and Trends*, Practical Law The Journal 36, 37 (September 2011)

<sup>10</sup> We have observed elsewhere similar explanations given to representations and warranties and closing conditions in corporate acquisition agreements. Some of the information analysis in this essay may be also helpful in clarifying the connection between bargaining power and non-price terms in that context. Albert Choi and George Triantis, *The Effect of Bargaining Power on Contract Design*, Va. L. Rev. (forthcoming).

<sup>11</sup> Joseph E. Stiglitz and Andrew Weiss, *Credit Rationing in Markets with Imperfect Information*, 71 Am. Econ. Rev. 393 (1981).

heightened moral hazard problem and corresponding reduction in contractual surplus, the lender must adjust the covenant and collateral provisions to re-align the borrower's incentive.<sup>12</sup> Conversely, when the interest rate falls, the borrower's claim on the cash-flow rises, making broad covenants or large collateral less valuable.

The paper is organized as follows. In section I, we review some of the theory and empirical results concerning customization of covenants and their adjustment to macroeconomic and market changes. In section II, we focus on the relationship between market conditions, interest rates and covenants, to offer a theoretical explanation for the empirical finding associating higher interest rates with more extensive and tighter covenants. We present numerical examples showing that a higher interest rate increases the severity of the adverse selection or moral hazard problems, leading to more extensive collateral requirements. A more sophisticated model, from which the numerical examples are derived, is relegated to the appendix. Section IV offers some implications of our analysis. We suggest how our theory can be empirically distinguished from the practitioner's bargaining power story. The last section concludes with thoughts for future research.

## I. Explaining Variations in Debt Covenants

### A. Firm-specific Determinants and Customization

Debt covenants are promises whose breach triggers default, acceleration of principal and matured interest, and the right of the lender to enforce its claim to the accelerated debt against the assets of the borrower. Two common forms of covenants are (1) promises to take or refrain from taking specified actions (insure assets, selling assets, making distributions, borrowing, etc.) and (2) thresholds whose violation triggers default (such as debt-to-equity or other financial ratios, the initiation of litigation or regulatory action against the borrower, etc.). Covenants serve both as ex ante deterrents (in the former group) and as trip wires (particularly in the latter group) that set the conditions under which the control over assets is transferred from the borrower to the lender.<sup>13</sup> The finance literature treats collateral as a type of covenant, since the borrower thereby promises to turn over the collateral assets in the event of default.<sup>14</sup> For reasons outlined below, covenants vary along several dimensions. They may be more or less extensive in

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<sup>12</sup> Boot, Thakor, Udell, *Secured Lending and Default Risk: Equilibrium Analysis, Policy Implications and Empirical Results*, 101 *Econ. J.* 458 (1991) (“allowing the increase in the risk-free real interest rate to translate into a higher collateral requirement rather a higher interest rate on the loan helps to reduce the agency costs of the transaction”)

<sup>13</sup> Philippe Aghion and Patrick Bolton, *An Incomplete contracts Approach to Financial Contracting*, 59 *Rev. Econ. Stud.* 473 (1992); Mathias Dewatripont and Jean Tirole, *A Theory of Debt and Equity: Diversity of Securities and Manager-Shareholder Congruence*, 109 *Qu. J. Econ.* 1027 (1994).

<sup>14</sup> We follow here the convention in finance scholarship of using “covenants” in broad terms to include collateral provisions. Of course, this does not capture the importance of collateral in giving a secured creditor priority over others. However, this feature will not be a factor in our numerical analysis later in the paper because there is only one creditor. Therefore, the inter-creditor priority ranking is not implicated, only the foreclosure right of the lender.



restricting greater or fewer types of borrower actions. Or, ratios may be set more or less tightly compared to the actual condition of the borrower at the time of contracting.<sup>15</sup>

Covenants yield benefits by addressing problems arising from the private information held by the borrower. First, restrictive covenants constrain various forms of post-borrowing moral hazard, particularly the inefficient risk-taking incentive of the borrower.<sup>16</sup> Second, a borrower may agree to covenants to credibly convey private information about its prospects and future opportunities.<sup>17</sup> Similarly, a lender may require covenants in some of its agreements to screen its borrowers.<sup>18</sup> Third, covenants specify the conditions for transferring control from shareholders (and their agents) to the lenders, when the lenders are likely to have superior (but not perfect) decision-making incentives.<sup>19</sup>

These benefits vary with the characteristics of borrowers in many respects. Stricter covenants are more likely (as is more collateral) when there is greater information asymmetry: for example, when the borrower does not have an extensive track record.<sup>20</sup> They are also more likely when there is a greater concern about moral hazard: for example, when the borrower has significant latitude in decision making and heightened risk-taking incentives indicated by high leverage<sup>21</sup> or low credit rating.<sup>22</sup> In addition, the value of covenants is greater when the lender is a skilled monitor.<sup>23</sup>

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<sup>15</sup> Some of the finance scholarship uses the measures of “intensity” (in relation to the restrictiveness of covenants) and “tightness” introduced by Michael Bradley and Michael R. Roberts, *The Structure and Pricing of Corporate Debt Covenants* (2004).

<sup>16</sup> Clifford Smith and Jerold Warner, *On Financial Contracting: An Analysis of Bond Covenants*, 7 J. Fin. Econ. 117 (1979)

<sup>17</sup> E.g., Nicholae Garleanu and Jeffrey H. Zwiebel, *Design and Renegotiation of Debt Covenants*, 22 Rev. Fin. Stud. 749 (2009) (restrictive covenants signal fewer risk-shifting opportunities); Cem Demiroglu and Christopher M. James, *The Information Content of Bank Loan Covenants*, 23 Rev. Fin. Stud. (2010) (larger stock price reaction to announcement of loans with tight covenants).

<sup>18</sup> Regarding collateral as signal of quality, see Alan Schwartz, *Security Interests and Bankruptcy Priorities*, 10 J. Legal Stud. 1, 14-21 (1981). Building on the Stiglitz and Weis theory of credit rationing, supra note --, Helmut Bester, *Screening vs. Rationing in Credit Markets with Imperfect Information*, 75 Am. Econ. Rev. 850 (1985) shows that rationing could disappear if banks could require different amounts of collateral as a screening device. David Besanko and Anjan V. Thakor, *Collateral and Rationing: Sorting Equilibria in Monopolistic and Competitive Credit Markets*, 28 Int. Econ. Rev. 671 (1987), on the other hand, shows whether banks will use collateral or rationing as a screening device depends on the market structure: monopolist will ration credit while collateral will be used in a perfectly competitive market. See also Hildegard C. Wette, *Collateral in Credit Rationing in Markets with Imperfect Information: Note*, 73 Am. Econ. Rev. 442 (1983).

<sup>19</sup> Philippe Aghion and Patrick Bolton, *An Incomplete Contracts Approach to Financial Contracting*, 59 Review of Economic Studies 473 (1992).

<sup>20</sup> E.g., Gabriel Jimenez, et al., *Determinants of collateral*, 81 J. Fin. Econ. 255 (2005) (in a sample of bank loans to Spanish firms from 1984-2002, negative association between collateral and borrower’s risk, where the borrower’s risk is private information).

<sup>21</sup> Richard Lowery and Malcolm Wardlaw, *Agency Costs, Information, and the Structure of Corporate Debt Covenants* (working paper oct. 11, 2011)

<sup>22</sup> Greg Nin, David C. Smith and Amir Sufi, *Creditor control rights and firm investment policy*, 92 J. Fin. Econ. 400 (2009) (capital expenditure restriction more likely as borrower’s credit quality deteriorates).

<sup>23</sup> Raghuram Rajan and Andrew Winton, *Covenants and Collateral as Incentives to Monitor*, 50 J. Fin. 1113 (1995) (covenants used to encourage monitoring).

While beneficial, covenants impose offsetting costs of three types. First, the restrictions of covenants may be over-inclusive and constrain the borrower's flexibility to take good, as well as bad actions. Second, the transfer of control may be costly because the lender has inefficient incentives, such as to liquidate the firm's assets prematurely and destroy their going-concern value. Third, although the parties may avoid this inefficiency by renegotiation, the renegotiation can be costly. Indeed, financial thresholds are commonly tripped, even in the absence of financial distress, so that the necessity of renegotiation is often quite likely.<sup>24</sup>

Like the benefits of covenants, the costs vary across contexts and also determine customization choices among covenants. All else equal, covenant is more desirable when the likelihood of violation and the cost of renegotiation is lower. When the borrower is a growth firm, for example, its contracts are less likely to restrict capital expenditures and may rely instead on financial ratio trip-wires.<sup>25</sup> Extensive and tight covenants are more common when the debt is private and is held by a small number of institutional investors rather than when it is public, because renegotiation is easier in the former case. They are also more common when the interests of the lender and borrower are likely to converge in the event of default, thereby avoiding the agency costs of lender control.<sup>26</sup>

## B. Market and Macroeconomic Determinants

Covenant patterns vary over time and in particular, empirical studies in finance show that covenant patterns and collateral vary with GDP growth, the risk-free rate of interest and the concentration of lending markets.<sup>27</sup> Protective covenants are, for example, more likely during recessions than in boom periods.<sup>28</sup>

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<sup>24</sup> Ilia D. Dichev and Douglas J. Skinner, *Large-Sample Evidence on the Debt Covenant Hypothesis*, 40 J. Accounting Res. 1091 (2002); Michael R. Roberts and Amir Sufi, *Control Rights and Capital Structure: An Empirical Investigation*, 44 J. Fin. 1657 (2009).

<sup>25</sup> Matthew T. Billett, et al., *Growth Opportunities and the Choice of Leverage, Debt Maturity and Covenants*, 62 J. Fin. 697 (2007).

<sup>26</sup> Matthew T. Billett, et al., *supra* note --; Demiroglu and James, *supra* note --; Sudheer Chava and Michael R. Roberts, *How Does Financing Impact Investment? The Role of Debt Covenants*, 63 J. Fin. 2085 (2008).

<sup>27</sup> On the effect of market concentration, see e.g., Besanko and Thakor, *Collateral and rationing: sorting equilibria in monopolistic and competitive credit markets*, 28 Int'l Econ. Rev 671 (1987); Besanko and Thakor, *Competitive equilibria in the credit market under asymmetric information*, 42 J. Econ. Theory 167 (1987); Jimenez et al, *supra* note --.

<sup>28</sup> Bradley and Roberts, *supra* note --. But see Greg Nini, Amir Sufi and David Smith, *Creditor Control Rights and Firm Investment Policy*, 92 J. Fin. Econ. 400 (2009)(controlling for firm performance and credit quality, incidence of capital expenditure restriction covenants do not vary significantly across the years of their sample (1996-2005)). On a closely related issue of why lending standards tend to relax when there is a boom, Giovanni Dell'Ariccia and Robert Marquez, *Lending Booms and Lending Standards*, 41 J. Fin. 2511 (2006) presents a theory where a sudden increase in demand for loans (from new borrowers) can lessen the concern each bank has about whether a loan application is from a new borrower or from a borrower that was rejected by another bank. As the likelihood that a loan application is from a new borrower rises, the banks, in perfect competition, are more likely to drop or lower the collateral requirement.

For our purposes, the more significant finding is that covenant patterns become more extensive and tighter as the rate of interest rises. This relationship is relatively well documented empirically.<sup>29</sup> A similar association is observed with amount of collateral pledged by the borrower.<sup>30</sup> As observed in the introduction, practitioners attribute changes in the breadth or tightness of covenants, as well as the collateral requirements, to swings in the relative bargaining power caused, in turn, by changes in the supply and demand conditions of credit markets. For instance, the tightening of credit or the expansion of demand for it, leads not only to higher interest rates but also more extensive covenants. Conversely, an increase of supply, or drop in demand, leads to looser covenants, known in the trade as “covenant-lite” agreements. Finance practitioners find this unremarkable: when more lenders are chasing fewer deals, they are compelled to accept lighter covenant protections.<sup>31</sup> The unanswered question, however, is why they would not prefer a contract with a lower interest rate and the same covenant protection. The opposite question may be posed in the context of a tighter credit market: why do lenders ask for stronger covenants rather than (even) higher interest rates or fees?

We refine the practitioner understanding by beginning with the standard financial economics explanation for covenants and collateral: they are second-best mechanisms for mitigating the problems of adverse selection and moral hazard.<sup>32</sup> The next section demonstrates how fluctuations in interest rate can exacerbate or reduce these problems and thereby change the optimal covenant or collateral patterns.

## II. Interest Rate Increases and Adverse Selection

We noted above that as credit markets become tighter (lender-friendly) and lenders demand higher payback amounts (either in principal or interest), the adverse selection problem worsens, forcing borrowers to offer more collateral or a broader set of covenants. When the lender wants to achieve a target rate of return, it is generally true that she will demand a larger payback amount from the riskier borrower than from the less risky one. But, when the bank raises the target interest rate, i.e., as the market becomes more lender friendly, the payback terms that the lender must impose on the riskier borrower rise faster than those for the less risky borrower. This in turn makes the terms intended for the less risky type more attractive for the riskier borrower, and to achieve separation and avoid being pooled with the risky borrower, the less risky borrower has to offer more collateral or covenant protection than before.

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<sup>29</sup> Nini, Smith and Sufi, *supra* note – (positive relationship between interest rate and covenant breadth); Zhipeng Zhang, *Recovery Rates and Macroeconomic Conditions: The Role of Loan Covenants* (2009)(same); Roberts (2004); Michael Bradley and Michael R. Roberts, *The Structure and Pricing of Corporate Debt Covenants* (2004); Matthew T. Billett, Tao-Hsien Dolly King, and David C. Mauer, *Growth Opportunities, Choice of Leverage, Debt Maturity, and Covenants*, 62 *Journal of Finance* 697 (2007)

<sup>30</sup> Boot, et al. (1991), *supra* note --. Jiminez et al., *supra* note --, find that the *likelihood* of collateral is lower during periods of tight monetary policy or higher interest rates than loose policy, but if granted, the amount of collateral pledged increases when interest rates are higher. *Id.*, at 274-5.

<sup>31</sup> *Supra* note – and accompanying text.

<sup>32</sup> See generally, Jean-Jacques Laffont and David Martimort, *THE THEORY OF INCENTIVES: THE PRINCIPAL-AGENT MODEL* (2002) and Patrick Bolton and Mathias Dewatripont, *CONTRACT THEORY* (2005).

To illustrate the point, suppose a borrower needs a loan of \$100 from the bank to implement a project. The bank's information is limited to the fact that the borrower might be of safe or risky type with equal probabilities. While both types can generate a verifiable *cash flow* of either \$200 or \$0, the safe borrower is more likely to generate the \$200 cash flow than the risky type. Let's assume that the safe borrower's probability of producing \$200 cash flow is 90% while that of the risky borrower is 80%.<sup>33</sup> In other words, the safe type has a 10% chance of defaulting on the loan while the risky type's defaulting probability is 20%. Suppose also that the credit market is competitive so that the bank is demanding an expected net return of 0% from the borrower. That is, the bank demands to receive, in expectation, \$100 for the \$100 loan. To make the example straightforward, let's assume that if the borrower produces \$0 cash flow, the bank cannot collect anything from her. This may be the case, for example, because state law enforcement remedies entail delays that enable debtors to abscond or squander their assets.

If the bank could identify the borrower's type, the bank would set the payback amount accordingly. From the safe type, the bank would demand the payment of (about) \$111 and from the risky type, \$125.<sup>34</sup> Since the safe type will generate the cash flow of \$200 with 90% probability, the bank would collect \$111 from her with 90% probability, producing an expected return of \$100 ( $\approx \$111 \times 0.9$ ). Similarly, the bank would receive \$125 from the risky borrower with 80% probability, again producing an expected return of \$100 ( $= \$125 \times 0.8$ ). Not surprisingly, the bank would demand a higher payback term from the risky type because it knows that there is a 20% chance, as opposed to 10% chance, that it will not be able to recoup anything from her.

What happens if the bank cannot identify the borrower's type? If the bank were to offer the foregoing menu of contracts, one consisting of \$111 principal and the other with \$125 for a loan of \$100, it is clear that both types of borrower will choose the one with \$111 principal. Since both types know that they won't have to pay the bank back anything when the cash flow is \$0, they would strictly prefer any loan with a lower payback amount. When both types choose the \$111 loan, the bank will no longer make the 0% net return in expectation. While the safe type will generate an expected 0% net return for the bank, the risky type will generate an expected net return of about -11.2% ( $= (0.8) \times (\$111) / (\$100) - 1$ ). When both types of borrower simply choose the loan with the lower payback amount, the bank will offer one contract with a payback amount of \$118 ( $= \$100 / (0.85)$ ) to receive its expected net return of 0%.<sup>35</sup>

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<sup>33</sup> The surplus from contract, therefore, is \$80 and \$60, respectively, when the lender's opportunity cost of capital is 0%. When the lender's opportunity cost of capital rises to 10%, the surplus reduces to \$70 and \$50, respectively.

<sup>34</sup> We can divide the payment term into two parts: principal and interest. Principal can be set at the face value of the original loan (\$100) while the rest will be considered interest. With respect to the safe type, the implicit interest rate is 11% while for the risky type, 25%. Throughout the example, we won't make this formal distinction and lump them together as "payback" amount.

<sup>35</sup> In this example, there is actually no efficiency loss from pooling. Separating equilibrium is the one with lower social welfare due to the deadweight loss imposed through the use of collateral. See Aghion and Hermalin (1990). This is partly due to the fact that the return from project is invariant to the amount of

If the bank wanted to discriminate based on borrower type, the bank could demand covenant protection or collateral from the borrower as a screening device. In this example, we consider collateral as a screening device, allowing the bank to adjust the amount of assets that are pledged. The example could be adapted to the use of covenants (restrictive or trip-wire), in which case the variable would be the number and probability of states of the world in which the lender could seize control of the borrower's assets. The key property of either screening mechanism is that they impose costs that are more severe on the lower-quality borrower. Indeed, in both cases, the screening produces inefficiency either in the suboptimal deployment of assets or in the cost of renegotiation. We use collateral as the mechanism here for convenience.

Suppose that the borrower can pledge some of its assets as collateral, which the bank can possess immediately if the borrower defaults: i.e., when the borrower produces a \$0 cash flow. Turning the collateral over to the bank is inefficient ex post because the borrower values the collateral more than the bank. In other words, there is a significant probability that the collateral assets are worth more as part of the borrower's going concern than sold to third parties. Specifically, we assume that for every \$1 in expected worth of collateral in the borrower's control, the bank values it at \$0.60. Despite the inefficiency, the safe borrower would be willing to post collateral to signal its type to the bank and, in return, receive a loan with lower payback terms. This is the well-known problem of excessive screening (or signaling).

How much collateral would the safe type borrower have to post in order to achieve separation? This depends on the incentive of the risky type borrower. That is, if the bank were to offer two types of loans, one with collateral and lower payback amount and the other with no collateral and higher payback amount, the risky type should prefer the latter over the former. In addition, the bank needs to be able to make its expected net return of 0% from both types. In equilibrium, the bank will offer two loan contracts: one with \$125 of payback and \$0 of collateral and the other with \$106 payback and \$77 of collateral. The risky type will choose the former while the safe type will choose the latter.<sup>36</sup>

	Payback Terms	Collateral
Safe Borrower	\$106	\$77
Risky Borrower	\$125	\$0

Table 1: Loan Offers by the Bank with 0% Net Expected Return

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investment. If we were to make the marginal rate of return depend on the size of the investment, pooling equilibrium will generate inefficiency. We assume away such complications to make the example simple and straightforward.

<sup>36</sup> It is fairly straightforward to see that these loan contracts satisfy the three conditions of (1) risky type preferring the one with no collateral; (2) safe type preferring the one with collateral; and (3) the bank making the 0% net expected return from both types. When the safe type chooses the loan with \$77 collateral, the bank makes, in expectation,  $(0.9) \times (\$106) + (0.1) \times (0.6) \times (\$77) - \$100 \approx \$0$ . For the risky type, if she were to choose the loan with no collateral, she will make  $(0.8) \times (\$200 - \$125) = \$60$ . If she were to choose the loan with \$77 collateral, instead, she expects to make  $(0.8) \times (\$200 - \$106) - (0.2) \times (\$77) = \$59.8$ . See the technical appendix for a more general model.

Compared to the case where the safe type were being pooled with the risky type and had to promise to payback \$118 for a \$100 loan, the safe type is better off when she could signal her attribute to the bank using collateral. Previously, under the loan with \$118 payback terms but no collateral, the safe borrower was expecting to earn \$73.8 ( $= (0.9) \times (\$200 - \$118)$ ). Now, by pledging \$77 of collateral but with \$106 payback terms, the safe borrower expects to earn \$76.9 ( $= (0.9) \times (\$200 - \$106) - (0.1) \times (\$77)$ ). Previously, when the bank could not identify borrower's type and had to demand payback based on the pooled recovery rate, the safe type was implicitly subsidizing the risky type's borrowing.<sup>37</sup> Now, although the safe borrower has to incur some cost by having to post collateral, the benefit of lower payback amount outweighs the cost. This inefficient separation outcome is well-known in the literature. We build on it here to explore the effect on the separation equilibrium of a change in the interest rate (caused by an exogenous change in market conditions).

Now suppose that the supply of credit tightens so that the bank demands a 10% net return from the borrower to meet its higher opportunity cost of capital. That is, the bank will demand, in expectation, \$110 from the borrower for a \$100 loan. As a benchmark, if the bank could identify the borrower type, the bank would charge different interest rates depending on the type, without having to resort to a collateral provision. From the risky type, the bank would impose the payback term of \$137.50 and for the safe type, the payback term would rise to about \$122.22. Regardless of the market conditions that affect the size of the surplus, the non-price terms stay constant to maximize the surplus, in this case no collateral, while only the price terms shift to reflect the changes in market conditions or market power.

If the bank cannot identify the borrower type, of course, the bank resorts to a collateral provision as a screening mechanism. For the risky type, the bank could simply raise the payback terms from \$125 to \$137.50 without demanding any collateral. For the safe type, however, merely raising the payback terms, without changing the collateral provision, is not sufficient. To see this, suppose the bank were to raise the payback terms for the safe type from \$106 to \$117. When the safe type chooses this loan, the bank makes, in expectation, a net return of 10% from the safe type.

However, it is no longer in the risky type's interest to stay with the loan with no collateral. If she were to choose the loan with \$137.50 payback and \$0 collateral, she would expect to earn \$50 ( $= (0.8) \times (\$200 - \$137.5)$ ). If she were to, instead, choose the loan with \$117 payback and \$77 collateral, her expected return would be \$51 ( $= (0.8) \times (\$200 - \$117) - (0.2) \times (\$77)$ ). If the bank were to distinguish between safe and risky type borrower, the bank would also raise the amount of collateral from \$77 to \$83. If the bank offers two loans, one with \$137.50 payback with \$0 collateral and the other with \$117 payback and \$83 collateral, it is no longer in the risky borrower's incentive to choose the latter.

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<sup>37</sup> When the bank was demanding a payback of \$118 with no collateral, the risky borrower was expecting to get  $(0.8) \times (\$200 - \$118) = \$65.6$ . Under separation, the risky type earns  $(0.8) \times (\$200 - \$125) = \$60$ .

	Payback Terms	Collateral
Safe Borrower	\$117	\$83
Risky Borrower	\$137.50	\$0

Table 2: Loan Offers by the Bank with 10% Net Expected Return

Why does the bank demand more collateral from the safe type when the market return rises? The reason lies in the manner in which the payback terms change with respect to each type of borrower. While the fact that the bank demands higher payback terms from both types—from \$106 to \$117 for the safe type and from \$125 to \$137.50 for the risky type—is not surprising, what is important is that as the bank’s demanded rate rises, the payback terms for the risky type rises faster (in absolute terms) than that for the safe type. Holding everything else constant (including the collateral), the loan offer with a lower payback amount now becomes even more attractive for the risky borrower than before. In other words, a tighter lending market exacerbates the problem of adverse selection.

Since the collateral (or covenants) is serving mainly as the screening (signaling) device, the bank demands more collateral (or more extensive covenants) to achieve separation when the adverse selection problem worsens. Conversely, as the credit condition relaxes or as the bank’s opportunity cost of capital falls, the amount of collateral (covenants) shrinks because the information problems are less severe and these terms themselves create ex post efficiency losses.

### III. Interest Rate Increases and Borrower Moral Hazard

The root of the moral hazard problem is the incentive of the borrower to take self-interested actions that jeopardize the lender’s prospect of repayment. Finance and legal scholarship refers to these actions in various terms, including risk-substitution and the extraction of private benefits. Moral hazard is a contracting challenge because the lender cannot perfectly monitor (and, therefore, cannot contractually stipulate) the borrower’s post-borrowing behavior. For instance, suppose after borrowing \$100, the borrower can choose among two different types of project: A or B. Project A produces a higher cash-flow and a higher combined return, but project B produces (more) private benefit for the borrower which cannot be shared with the lender. To make this concrete, suppose, as before, that both projects have two possible cash-flows: \$200 or \$0. Project A has a 60% chance of producing \$200 while project B’s chance is only 40%. On the other hand, project B confers a non-transferrable private benefit to the borrower in the cash-equivalent amount of \$20. Hence, the expected total returns are \$120 for project A (60% multiplied by \$200) and \$100 for project B (40% multiplied by \$200 plus \$20).

Although both the lender and the borrower may want the borrower to commit contractually to choose A over B, they cannot do so in a complete contract because the borrower’s choice is either not observable to the lender or not verifiable to the court. Unless the borrower can commit, the lender expects the borrower to choose B and will, therefore, decline to lend. To see this, suppose the bank demands to earn, in net, 0% and lends the borrower \$100 with a payback term of \$167. However, once the borrower takes

the \$100 loan, it is no longer in the borrower's interest to choose A. If she were to implement project A, her expected return is \$19.8  $(=(0.6) \times (\$200 - \$167))$ . If she were to choose B, instead, her expected return is \$33.2  $(=(0.4) \times (\$200 - \$167) + \$20)$ . The bank, knowing this, may demand the entire cash-flow of \$200 in case of success, but that is still insufficient for the 0% net expected return:  $(0.4) \times (\$200) - \$100 = -\$20$ . Once the bank knows that the borrower will choose project B, the bank will decline to lend and the parties fail to realize the potential surplus from trade.

Pledge of collateral (e.g., borrower's personal assets) can solve this commitment issue.<sup>38</sup> By promising to turn over her own assets in case the borrower defaults on the payment promise, the borrower can pre-commit not to undermine her ability to pay back the lender. Collateral can impose a serious penalty against the borrower for non-payment. So long as enough collateral has been pledged to neutralize the adverse incentive of the borrower, the lender receives the implicit promise from borrower not to embark on project B and can be assured of receiving the requisite payment to, at least, break even.

To see how this works in our numerical example, suppose the bank demands a payback term of \$148 with a collateral of (slightly above) \$48 in case the borrower defaults, i.e., in case the cash-flow is \$0. After taking out the \$100 loan, now it is in the borrower's interest to implement project A over B. If she were to do so, her expected return is \$12  $(=(0.6) \times (\$200 - \$148) - (0.4) \times (\$48))$ . If she were to choose B, instead, her expected return would be \$12  $(=(0.4) \times (\$200 - \$148) - (0.6) \times (\$48) + \$20)$ . Hence, when the collateral is slightly more than \$48, the \$20 of certain private benefit is not sufficient for the borrower to choose the inefficient project. The bank receives its expected return  $((0.6) \times (\$148) + (0.4) \times (0.6) \times (\$48) \approx \$100)$  and is willing to lend on these terms. As in the adverse selection example, this function of collateral (and covenants) is well-known in the literature, and we now turn to analyzing the effect of an increase in interest rate (caused by a market change in the balance of supply and demand for credit).

Suppose that supply tightens so that the cost of funds rises to 10%. It is fairly straightforward to see that merely raising the payback amount will not yield a sufficient return. Suppose that the bank were to demand a payback of \$165 (instead of \$148) with the same collateral of \$48 from the borrower. If the borrower to implement project A, the borrower's expected return is \$1.80  $(=(0.6) \times (\$200 - \$165) - (0.4) \times (\$48))$ . If she were to implement project B, instead, her expected return is \$5.20  $(=(0.4) \times (\$200 - \$165) - (0.6) \times (\$48) + \$20)$ . The borrower no longer has the incentive to choose the efficient project. To restore that incentive, the bank will have to raise both the payback amount and the collateral, payback amount from \$148 to \$160 and the collateral from \$48 to \$60.<sup>39</sup>

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<sup>38</sup> Covenants also attempt to control borrower's behavior indirectly by imposing restrictions on amount of borrowing, sales and purchases, and business lines. Although they may be closer, compared to collaterals, in regulating the borrower's behavior, they are still indirect and prone to create inefficiencies, for instance, by preventing the borrower from undertaking positive net present value projects.

<sup>39</sup> With this loan agreement, if the borrower to choose project A, she expects to earn \$0  $(=(0.6) \times (\$200 - \$160) - (0.4) \times (\$60))$ , whereas from project B, \$0  $(=(0.4) \times (\$200 - \$160) - (0.6) \times (\$60) + \$20)$ . The bank's expected net return is  $(0.6) \times (\$160) + (0.4) \times (0.6) \times (\$60) - \$100 = \$10.4$ .



When the market condition tightens and the lender demands a higher (expected) payment from the borrower, the use of collateral becomes more important in solving the moral hazard problem. The borrower continues to capture the full private benefit from project B. However, as the amount due to the lender increases, the borrower -- as the residual claimant—is entitled to a smaller share of the remaining project payoffs. To combat this heightened moral hazard problem, the lender requires that the borrower post more collateral (or more extensive covenants). Conversely, as the lending conditions become more relaxed, to the extent that collaterals impose a deadweight loss, the lenders demand less collateral to solve the moral hazard problem.

Bank's Net Return	Payback Terms	Collateral
0%	\$148	\$48
10%	\$160	\$60

Table 3: Loan Contracts to Address Moral Hazard Problem

Under both adverse selection and moral hazard theories, the amount of collateral (or the extensiveness of the covenants) that the lender requires from borrowers rises or falls as the underlying lending market tightens or loosens. The reason is not simply the redistribution of market or bargaining power, as indicated by practitioners. It stems from the effect of the consequent changes in price on the severity of the moral hazard or the adverse selection issue. In the former, tighter lending market decreases the borrower's residual return, thereby worsening the commitment problem. In the latter, riskier borrower is more tempted to pool with the less risky type because her payback amount is (and should be) more sensitive to the underlying market conditions.

In the appendix, we make our arguments more concrete by presenting simple, game theoretic models of adverse selection and moral hazard in the commercial lending market. Although the basic intuitions have been laid out already, the models reveal some subtle, deeper, implications, some of which we explore in the next section. The presentation of the intuition in the current section has also benefitted from looking at these models more closely.

#### IV. Implications

Our paper has, so far, been an attempt to describe and understand a stylized phenomenon in commercial loan and debt contracts. We establish how the effect on contract design is mediated through the information problems described above, rather than the more direct impact articulated by practitioners, where the terms shift due to changes in relative market power. Both stories predict that as the market conditions change both the price and the non-price terms will move in favor of the party that attains more leverage. Similarity notwithstanding, the theories diverge on at least a few predictive dimensions which make them empirically distinguishable and testable.

First, in our information story, although it is true that the average covenant terms move in favor of the party with more “leverage” as the market condition shifts, the

change in market condition also affects the *variance* with which the parties use covenants. In the credit market, the average amount of collateral or the breadth of the covenants rises as the supply becomes tighter. At the same time, because the collateral that the less risky borrowers must pledge increases while that for the risky borrower stays relatively constant, the variance or the spread on the pledged collateral (or the covenant breadth) should also rise. Similarly, as the market clearly interest rate rises, the collateral needed to combat the heightened moral hazard problem increases for the leveraged borrower (with a higher risk of misbehavior), but stays relatively constant for the borrower with greater equity stake. The simple bargaining power story does not predict the same increase in variance because the lender with greater market power will demand more collateral or more extensive set of covenants from all types of borrower.

Second, the presence of asymmetric information is crucial in the adverse selection analysis and the problem of incomplete contracting is necessary in the moral hazard story. If these problems are addressed through other market or governance mechanisms, covenants and collateral are less valuable and less susceptible to the influence of changes in market demand and supply (or “bargaining power”). The information story also implies that the companies that do not have any informational issues (due, for instance, to extensive analyst coverage or long history of default-free borrowing) will be much more immune to the changes in the market condition.<sup>40</sup> In contrast, the simple bargaining power story is unaffected by the presence or absence of these mechanisms because the lender—by hypothesis—uses the more onerous non-price terms as a surplus extraction mechanism.

Third, in the information story, the informational problems are either exacerbated or relaxed through the changes in the lender’s opportunity cost of capital. Without that change, the non-price terms (collateral or covenants) in lending agreements should remain constant. So, for instance, if the lending market, due to some exogenous change such as a sudden, unpredicted wave of intra-industry mergers, gets more concentrated without any corresponding change in the opportunity cost of capital, our story suggests that the non-price terms should remain relatively constant,<sup>41</sup> whereas the bargain power story predicts that the non-price terms will become more lender favorable.

## Conclusion

Debt covenants, in both public and private debt agreements, vary over time in their breadth and intensity. Practitioners attribute many of these changes to market shifts in demand and supply, which they often refer to as shifts in bargaining power. We present in this essay the theoretical mechanism by which these market changes might

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<sup>40</sup> Even under the bargain theory story, one may argue that the highest credit rating companies also have more bargaining power against the lending market. The distinction might, therefore, be more relevant for smaller companies with very good credit rating or extensive analyst review.

<sup>41</sup> This assumes that the amount of capital available for lending will not change after the mergers. If, for some reason, the mergers also decrease the capital availability, regardless of the increase in the lender’s market power, it can also increase their opportunity cost of capital. We also need to be careful in recognizing and controlling for the fact that intra-industry mergers are, sometimes caused by the external shocks, such as the general shift in market opportunity cost of capital.

lead to adjustments in patterns of covenants and collateral, because of their effect on interest rates. A broader implication, across many other types of contracts, is that price terms in contracts have efficiency as well as distributional consequences. They affect selection biases and incentives and are thereby important factors in the design of non-price terms. Finance scholarship has identified several drivers of contract innovation in capital markets—such as shocks from new regulation or the emergence of new risks in the economic environment. To these, we can add what might otherwise appear to be relatively innocuous shifts in demand and supply conditions. We believe that this introduces a fruitful area for future research in contract innovation.

### Technical Appendix A: An Adverse Selection Model of Collateral in Lending

Suppose there are two players, a borrower and a lender, who are both risk-neutral. The borrower borrows money from the lender to implement a project that has an uncertain outcome. The outcome of the project can be either success or failure. If the project succeeds, it produces a cash flow of  $R$ , whereas if it fails, it produces a cash flow of 0. The probability of producing a successful outcome depends on the borrower's "type." The borrower can be of two types: good or bad. Let's assume that the probability of producing a successful outcome, depending on the type, is given by  $1 > p > q > 0$ .

The project requires an initial investment of  $I$  and the lender demands a net rate of return of  $r$ , which means that the lender is demanding to receive, in expectation,  $(1 + r)I$ . We will treat the rise in the lender's demanded interest rate as a tighter lending market (or as the lender having more market power). Although the good type borrower has a higher chance of producing a successful outcome, we assume that both types have a positive net present value project:  $pR > qR > (1 + r)I$ .<sup>42</sup>

The timing of the game is as follows. In the first period ( $t = 1$ ), Nature determines the borrower's type: good type is chosen with probability  $\alpha$ , where  $1 > \alpha > 0$ . The realized type is observed by the borrower but not the lender. In the second period ( $t = 2$ ), the borrower and the lender sign a contract, which consists of the cash flow that the borrower promises to pay the lender in case the project is successful and the value of collateral (to the borrower) that the lender can take from the borrower in case the project fails:  $(R_i, C_i)$ .<sup>43</sup> After signing the contract, the lender lends the money and the borrower implements the project.

In the third period ( $t = 3$ ), the cash flow is realized. If the project is a success, the lender receives the contractually promised payment of  $R_i$  whereas if the project is a failure, the lender acquires the collateral that is worth  $C_i$  to the borrower. To reflect the concern that the collateral (working capital) often loses its going-concern value when transferred to the lender, we assume that the collateral is worth only  $\beta C_i$  to the lender, where  $1 > \beta > 0$ .

Suppose both players observe the realized borrower's type. In this case, both types of borrower can implement their projects without having to pledge any collateral. For each type, the lender will demand  $R_i$ , such that  $pR_g = (1 + r)I$ ,  $qR_b = (1 + r)I$  and  $C_i = 0$ , which implies  $R_b = \frac{(1+r)I}{q} > \frac{(1+r)I}{p} = R_g$ . The lender demands a higher cash flow from the bad type to reflect the higher chance of failure. This is also efficient, since

<sup>42</sup> The assumption that both projects have positive net present value is not important. If the bad project has a negative net present value, in a socially optimal equilibrium, the lender should lend only to the good-type while still requiring some collateral so as to prevent the bad-type from participating in the market.

<sup>43</sup> For convenience, we can assume that the borrower proposes the contract and the lender either accepts or rejects it. However, it does not matter who proposes the contract in this model, due to the assumption that the lender's expected return is tied down by the market conditions. Even if the lender were to make a take-it-or-leave-it offer to the borrower, the lender would still want to use collateral as a screening device.

the borrower's collateral does not lose its going-concern value. If we measure the social welfare by the net return from both projects, with both parties are informed of the borrower's type, the equilibrium social welfare is  $\alpha(pR - (1 + r)I) + (1 - \alpha)(qR - (1 + r)I)$ .

If the lender does not observe the borrower's type, the efficient solution cannot be achieved. This is because the bad type strictly prefers the contract for the good type since it demands a lower cash flow payment in case of success:  $R_b > R_g$ . One possible equilibrium, a pooling equilibrium, is for the lender to charge an average rate for both types. Given that the lender faces the good type borrower with probability  $\alpha$ , the lender can set the payment term  $\bar{R}$ , with  $C = 0$  where  $(\alpha p + (1 - \alpha)q)\bar{R} = (1 + r)I$ . Compared to the efficient equilibrium, the good type borrower pays more and the bad type pays less: the good type subsidizes the bad type.

Another possibility is for the good type to signal to the lending market by pledging collateral to separate itself from the bad type. Suppose the good type pledges  $C_g > 0$  as collateral, which the lender can possess in case the project produces zero cash flow. In a separating equilibrium, since the market will be able to distinguish between the types, the bad type will not have any incentive to pledge collateral, i.e.,  $C_b = 0$ . So, while the good type offers a contract  $(R_g, C_g > 0)$  to the market, the bad type offers  $(R_b, C_b = 0)$ .

To achieve separation in a competitive lending market, the contracts need to satisfy four conditions:

$$\begin{aligned} pR_g + (1 - p)\beta C_g &= (1 + r)I \\ qR_b &= (1 + r)I \\ p(R - R_g) - (1 - p)C_g &\geq p(R - R_b) \\ q(R - R_b) &\geq q(R - R_g) - (1 - q)C_g \end{aligned}$$

The first two equalities guarantee that the lender will break even with respect to both types (lender's participation condition). The two weak inequalities (borrower's incentive compatibility conditions) achieve separation: good type prefers the contract with collateral while the bad type prefers the contract with no collateral.

In models like this, it typically is the case that, in addition to the lender's participation condition(s), the bad type's incentive compatibility condition is the one that binds. In other words, we need to make sure that the bad type does not want to pretend to be a good type rather than the other way around. This produces three equalities: the first two break even conditions for the market and the bad type's incentive compatibility condition. Since there are three unknowns (with  $C_b = 0$ ), we can solve the system of equations. In equilibrium, we get

$$C_b = 0$$

$$R_b = \frac{(1+r)I}{q}$$

$$C_g = \frac{(p-q)(1+r)I}{p(1-q) - q(1-p)\beta}$$

$$R_g = \frac{(1+r)I}{p} - \frac{(1-p)\beta}{p} \cdot \frac{(p-q)(1+r)I}{p(1-q) - q(1-p)\beta}$$

Note that, in equilibrium, the good type offers a positive amount of collateral to the lender as a signal of high quality and, partly in return, receives a (substantially) lower interest rate:  $R_g < \frac{(1+r)I}{p} < \frac{(1+r)I}{q} = R_b$ . The equilibrium social welfare is given by  $\alpha(pR - (1-p)(1-\beta)C_g - (1+r)I) + (1-\alpha)(qR - (1+r)I)$ , which is lower when compared to the case with symmetric information due to good type's (potential) loss of going-concern value on its collateral.

What happens to the contract terms when the lending market tightens? From the equilibrium contract terms, we get

$$\frac{\partial C_b}{\partial r} = 0$$

$$\frac{\partial R_b}{\partial r} = \frac{I}{q} > 0$$

$$\frac{\partial C_g}{\partial r} = \frac{(p-q)I}{p(1-q) - q(1-p)\beta} > 0$$

$$\frac{\partial R_g}{\partial r} = \frac{I}{p} \left( \frac{p(1-q) - p(1-p)\beta}{p(1-q) - q(1-p)\beta} \right) > 0$$

Not surprisingly, the cash flow demanded in case of success, for both types, will rise as the lender's opportunity cost of capital rises:  $\frac{\partial R_i}{\partial r} > 0$ . What is interesting is that the good type borrower has to put up more collateral to credibly signal its type to the market:  $\frac{\partial C_g}{\partial r} > 0$ .

Why does the market demand more collateral from the good type borrower when the market tightens? The reason has to do with the fact that, not only does the bad type need to guarantee a higher cash flow in case of success compared to the good type ( $R_b > R_g$ ), when the lender's opportunity cost rises, the amount of cash flow the bad type needs to guarantee to the lender rises faster compared to the amount of cash flow the good type needs to guarantee ( $\frac{\partial R_b}{\partial r} > \frac{\partial R_g}{\partial r}$ ). In other words, the bad type's promised cash flow is more sensitive to the lender's opportunity cost of capital. As the difference between the respective cash flows rises, the contract for the good type becomes more attractive for the bad type, and in order to achieve separation, the good type needs to pledge an even more collateral to the market.

This can be more easily seen from the bad type's incentive compatibility condition. In equilibrium, we know that the bad type's incentive compatibility condition binds:  $q(R - R_b) = q(R - R_g) - (1 - q)C_g$ . We also know that because the lending market just breaks even,  $R_b = \frac{(1+r)I}{q}$ , a small increase in the lender's opportunity cost of capital, from  $r$  to  $r'$ , will imply that the bad type's interest rate will have to rise proportionally:  $R'_b \approx R_b + \frac{I}{q}$ . If the good type's interest rate is also rising proportional to its true risk characteristics,  $R'_g \approx R_g + \frac{I}{p}$ , then the bad type's incentive not to mimic the good type will be destroyed:  $q(R - R'_b) < q(R - R'_g) - (1 - q)C_g$ . To achieve separation, therefore, the good type has to rely more on costly collateral and less by adjusting its interest rate. In fact, from the equilibrium conditions, we see that

$$\frac{\partial R_g}{\partial r} = \frac{I}{p} \left( \frac{p(1 - q) - p(1 - p)\beta}{p(1 - q) - q(1 - p)\beta} \right) < \frac{I}{p}$$

That is, the good type's interest rate is less sensitive to the rise in the lender's opportunity cost of capital than its true characteristic dictates.

In sum, when the lending market tightens because the lender's opportunity cost of capital rises, there will be a higher dispersion of interest rates, i.e.,  $R_b - R_g$  rises, and at the same time, the lender will require more costly collateral from the good type borrower, i.e., the contract term becomes more inefficient.

## Technical Appendix B: A Moral Hazard Model of Collateral in Lending

In the current model, there still are only two risk-neutral players, a borrower and a lender, but the borrower has only one type. Instead, the borrower has a choice over projects: good or bad. The outcome of both projects can be either success or failure and, as before, if the project succeeds, it produces a cash-flow of  $R$ , whereas if it fails, it produces a cash-flow of 0. The good project has a higher chances of being successful than the bad project in that if we let  $p$  and  $q$  be the respective probabilities of success, we assume that  $1 > p > q > 0$ . The bad project, on the other had produces a certain private benefit of  $B > 0$  for the borrower.

Both projects require an initial investment of  $I$ , and the lender demands an expected rate of return of  $r$ , which means that for the loan of  $I$ , the lender must receive, in expectation,  $(1 + r)I$ . As before, we will treat the rise in the lender's demanded rate of return as a tighter lending market. Unlike the previous model, we assume that only the good project has a positive net cash-flow,  $pR > (1 + r)I > qR$ , and that despite the private benefit, the good project is more efficient:  $pR > qR + B$ .

The timing of the game is as follows. In the first period ( $t = 1$ ), the borrower and the lender signs a lending agreement, which consist of the cash-flow that the borrower promises to pay the lender in case the project is successful and the value of collateral (to the borrower) that the lender can take from the borrower in case the project is a failure:  $(R_s, C)$ . The agreement cannot condition payment on either the realization (or size) of the private benefit ( $B$ ) or the type of project the borrower has chosen: the contract is incomplete. After signing the contract, in the second period ( $t = 2$ ), the borrower chooses among the projects to implement.

In the third period ( $t = 3$ ), the verifiable cash-flow is realized. If the project is a success, the lender receives the contractually promised payment of  $R_s$  whereas if the project is a failure, the lender acquires the collateral that is worth  $C$  to the borrower. To reflect the concern that the collateral (working capital) often loses its going-concern value when transferred to the lender, we assume, as in the adverse selection model, that the collateral is worth only  $\beta C$  to the lender, where  $1 > \beta > 0$ .

If the parties can choose and enforce which project to implement, the contract will require the borrower to implement the good project with no collateral and  $R_s$  will be chosen so as to satisfy the lender's demanded expected return:  $pR_s^* = (1 + r)I$ . Suppose the parties use the same contract but without the choice of project clause. The borrower's returns, from choosing either the good or the bad projects, are  $p(R - R_s^*)$  and  $B + q(R - R_s^*)$ , respectively. To make the problem interesting, let us assume that  $B + q(R - R_s^*) > p(R - R_s^*)$ , so that the borrower will always prefer the bad project. Clearly, if the lender were to offer  $(R_s, C) = (R_s^*, 0)$  without the choice of project clause, the lender will not receive its expected return.

If the choice of project cannot be stipulated, one way of inducing the borrower to implement the good project is by requiring the borrower to post collateral. Because the



borrower suffers a loss when the project is a failure, this can neutralize the perverse incentive that was created through the positive private benefit from the bad project. In order for the borrower to choose the good project while the lender breaks even, we need

$$\begin{aligned} pR_s + (1-p)\beta C &= (1+r)I \\ p(R - R_s) - (1-p)C &\geq q(R - R_s) - (1-q)C + B \end{aligned}$$

The first condition is the lender's expected return condition. The second inequality (borrower's incentive compatibility condition) requires the borrower's private return from implementing the good project to be higher than that from the bad project.

In equilibrium, the lender will demand the just enough collateral for the borrower's incentive condition to be satisfied with equality.

$$\begin{aligned} pR_s + (1-p)\beta C &= (1+r)I \\ p(R - R_s) - (1-p)C &= q(R - R_s) - (1-q)C + B \end{aligned}$$

When we solve for the optimal contract, we get

$$\begin{aligned} R_s &= \frac{(1+r)I}{p} - \frac{(1-p)\beta}{(1-p)\beta + p} \left\{ \frac{B}{p-q} + \frac{(1+r)I}{p} - R \right\} \\ C &= \frac{p}{(1-p)\beta + p} \left\{ \frac{B}{p-q} + \frac{(1+r)I}{p} - R \right\} \end{aligned}$$

From the expressions, it is clear that  $\frac{\partial R_s}{\partial r} = \frac{\partial C}{\partial r} > 0$ . That is, as the demands a higher expected net return from the borrower, i.e., lending market tightens, both the payback and the collateral amounts demanded by the bank rise.

The higher expected return required by the lender is not being satisfied through higher payback amount alone. The reason can be seen directly from the borrower's incentive compatibility condition. From the optimal solution that satisfies

$$p(R - R_s) - (1-p)C = q(R - R_s) - (1-q)C + B$$

when the lender attempts to raise  $R_s$  to satisfy the higher expected return condition, because  $p > q$ , the left hand side of the condition falls at a faster rate than the right hand side, leading the borrower to choose the bad project. In other words, it becomes more difficult for the lender to provide the right incentive to the borrower: the moral hazard problem worsens. To restore the original incentive, the lender must also raise  $C$  because requiring more collateral has a smaller negative effect on the good project than the bad project.



**TACIT AGREEMENT, INVESTMENT, AND CONTRACT DESIGN****Clayton P. Gillette\*****I. Introduction: The Demise of Tacit Agreement**

One of the enduring puzzles of contract damages involves the extent to which an aggrieved party is entitled to recover consequential damages in the form of lost profits that result from a breach. A straightforward application of the standard expectation damage measure would appear to entail recovery, since failure to award lost profits would leave the aggrieved party in a position inferior to the one it would have occupied had there been performance. The customary invocation of *Hadley v. Baxendale*,<sup>1</sup> however, limits recoverable damages, including profits, to those that were foreseeable at the time the contract was executed. Notwithstanding uncertainties inherent in the scope and effects of the foreseeability doctrine,<sup>2</sup> as a doctrinal matter it appears relatively clear that foreseeability, howsoever defined, is gauged from the perspective of what the parties, at the time of contracting, had reason to know would flow from a subsequent breach. This standard interpretation derives from the language in *Hadley* that limits consequential damages to “such as may reasonably be supposed to have been in the contemplation of both parties, at the time they made the contract as the probable result of it.”<sup>3</sup> Contemporary

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<sup>1</sup> 156 Eng. Rep.

<sup>2</sup> See Richard A. Epstein, *Beyond Foreseeability: Consequential Damages in the Law of Contract*, 18 J. Legal Studies 105, 124 (1989) (“Foresight . . . utterly lacks the descriptive content that allows it to be the principled basis for decision.”); Oren Bar-Gill, *Quantifying Foreseeability*, 33 Fla. St. U. L. Rev. 619 (2006); George S. Geis, *Empirically Assessing Hadley v. Baxendale*, 32 Fla. St. U. L. Rev. 897 (2005)..

<sup>3</sup> 156 Eng. Rep. at 151.

compilations of contract law equate “contemplation” with an objective standard, and thus include within the realm of foreseeability that which a reasonable person would understand to be a “natural” consequence of the breach. The Restatement (2d) of Contracts denies recovery of a loss “that the party in breach did not have reason to foresee as a probable result of the breach when the contract was made,”<sup>4</sup> and defines as foreseeable a loss that follows from the breach “in the ordinary course of events,” or “as a result of special circumstances . . . that the party in breach had reason to know.”<sup>5</sup> The Uniform Commercial Code is to the same effect. It permits recovery of consequential damages for any loss resulting from unavoidable “general or particular requirements and needs of which the seller at the time of contracting had reason to know.”<sup>6</sup>

Contemporary law-and-economics discussions of consequential damages tend to accept the default rule of consequential damages as given, and focus on the information-forcing qualities of the foreseeability restriction.<sup>7</sup> This is puzzling, given that the same literature takes as its operating assumption the proposition that contractual default rules should reflect the

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<sup>4</sup> Restatement (2d) of Contracts § 351 provides :

(1) Damages are not recoverable for loss that the party in breach did not have reason to foresee as a probable result of the breach when the contract was made.

(2) Loss may be foreseeable as a probable result of a breach because it follows from the breach

(a) in the ordinary course of events, or

(b) as a result of special circumstances, beyond the ordinary course of events, that the party in breach had reason to know.

(3) A court may limit damages for foreseeable loss by excluding recovery for loss of profits, by allowing recovery only for loss incurred in reliance, or otherwise if it concludes that in the circumstances justice so requires in order to avoid disproportionate compensation.

Subsection (3) protects against unlimited liability for losses deemed foreseeable, but does so under a standard that depends on *ex post* evaluations by the court, and thus complicates efforts by parties to make *ex ante* calculations of expected damages.

<sup>5</sup> *Id.* at § 351(2).

<sup>6</sup> UCC § 2-715(2)(a) provides that consequential damages, recoverable under §§2-712 – 2-714, include “any loss resulting from general or particular requirements and needs of which the seller at the time of contracting had reason to know and which could not be prevented by cover or otherwise . . . .”

<sup>7</sup> See Barry E. Adler, *The Questionable Ascent of Hadley v. Baxendale*, 51 *Stan. L. Rev.* 1547 (1999); Ian Ayres and Robert Gertner, *Filling Gaps in Incomplete Contracts: An Economic Theory of Default Rules*, 99 *Yale L. J.* 87 (1989); Robert E. Scott, *A Relational Theory of Default Rules for Commercial Contracts*, 19 *J. Legal Stud.* 597, 609-11 (1990).

preferences that most commercial parties would share in similar circumstances.<sup>8</sup> Failure to draft contract rules that satisfy this objective will induce parties to expend resources in transacting around the defaults, without altering the substance of the ultimate bargain. Thus, at best, misjudging the majoritarian default wastes transactions costs. At worst, bargaining around the default could prove sufficiently problematic that parties will assign the contract a lower value than if the preferred term had been available for silent incorporation into the bargain. On this understanding, the default rules of the Restatement and the UCC that permit recovery of foreseeable consequential damages make sense if, but only if, they reflect the terms to which most parties would have agreed. But the underlying assumption of most contracts literature is that commercial parties systematically contract out of consequential damages entirely. Commentators suggest that “consequential damage exclusions are ubiquitous” among sophisticated commercial actors, notwithstanding that the foreseeability doctrine already limits the scope of liability.<sup>9</sup> Brief reflection indicates why this would be the case. Foreseeability, defined in terms of “reason to know,” is a notoriously indefinite doctrine, the content of which is further obfuscated where the task of establishing what was foreseeable at the time of contracting is necessarily assigned to a third party arbiter who must make the relevant determination from hindsight. To the extent that foreseeability relates only to type of damages rather than to amount, even a party aware that its breach will cause consequential damages of a particular type, such as lost profits, could be uncertain about the extent of its exposure and thus be unable to calculate

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<sup>8</sup> For the position that the reflection of majoritarian default rules is the primary objective of commercial law, see, e.g., Charles J. Goetz and Robert E. Scott, *The Limits of Expanded Choice: An Analysis of the Interactions Between Express and Implied Contract Terms*, 73 Cal. L. Rev. 261, 321 (1985); Alan Schwartz, *The Default Rule Paradigm and the Limits of Contract Law*, 3 S. Cal. Interdiscip. L.J. 389 (1993); Clayton P. Gillette and Robert E. Scott, *The Political Economy of International Sales Law*, 25 Int’l Rev. L. & Econ. 446 (2005).

<sup>9</sup> Alan Schwartz and Robert E. Scott, *Market Damages, Efficient Contracting, and the Economic Waste Fallacy*, 108 Colum. L. Rev. 1610, 1612 (2008). See Douglas G. Baird, *The Boilerplate Puzzle*, 104 Mich. L. Rev. 933, 940 (2006); Richard Danzig, *Hadley v. Baxendale: A Study in the Industrialization of the Law*, 4 J. Legal Stud. 249, 281 (1975); Donald J. Smythe, *Commercial Law in the Cracks of Judicial Federalism*, 56 Cath. U. L. Rev. 451, 491 (2007); Epstein, *supra* note \_\_\_, at 108.

optimal investments in precautions against breach or to charge the counterparty a premium that reflects the cost of those precautions.<sup>10</sup>

Moreover, the extent to which even foreseeable consequential damages will materialize typically lies within the control of the aggrieved party. That party controls the degree to which it will rely on the contract to make investments that might founder in the event of breach and has better information about the benefits it anticipates receiving from full performance of the contract. Full compensation for breach poses a moral hazard problem insofar as the aggrieved party will not consider the breacher's costs in deciding how much reliance is appropriate.<sup>11</sup> To the extent that an aggrieved party can pass costs to the breacher, liability for damages – both foreseeable and especially those unforeseeable to the breacher – encourages overinvestment that a weapon as blunt as the mitigation doctrine may not sufficiently constrain.<sup>12</sup> If the aggrieved party can protect against these losses more easily than the breaching party, then rational parties would presumably allocate the risk to the former in order to minimize total contracting costs.

But if the default rule that permits recovery of foreseeable consequential damages as defined in the Restatement and the UCC is inconsistent with the apparent preferences of most commercial parties – so much so that they are willing to incur the costs necessary to contract

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<sup>10</sup> Sun-Maid Raisin Growers v. Victor Packing Co., 146 Cal. App.3d 787, 194 Cal.Rptr. 612 (Cal. App. 1983). See Farnsworth for the proposition that foreseeability relates to type of damages, not to amount. This apparently is the law of England as well. See, e.g., Parsons v. Uttley Ingham & Co. Ltd. [1978] QB 791; Brown v. KMR Services Ltd., [1995] 4 All ER 598. While the *ex ante* foreseeability of an amount may be irrelevant, the plaintiff must *ex post* still prove with reasonable certainty the amount of consequential damages that it suffered. See Tractebel Energy Marketing, Inc. v. AEP Power Marketing, Inc., 487 F.3d 89, 111 (2d Cir. 2007).

<sup>11</sup> William P. Rogerson, Efficient Reliance and Damage Measures for Breach of Contract, 15 RAND J. Econ. 39 (1984); Steven Shavell, Damage Measure for Breach of Contract, 11 Bell J. Econ. 466 (1980). For efforts to address the overinvestment problem, see, e.g., Robert Cooter and Melvin A. Eisenberg, Damages for Breach of Contract, 73 Calif. L. Rev. 1432 (1985); Aaron S. Edlin, Cadillac Contracts and Up-Front Payments: Efficient Investment Under Expectation Damages, 12 J.L. Econ. & Org. 98 (1996).

<sup>12</sup> See Epstein, *supra* note \_\_, at 116-17; Robert E. Scott and George G. Triantis, Embedded Options and the Case Against Compensation in Contract Law, 104 Colum. L. Rev. 1428 (2004). Mitigation doctrine may require the nonbreaching party to limit post-breach investments, but does not affect pre-breach investments.

around it – then it is the general default of awarding consequential damages, rather than the foreseeability limitation that begs for explanation. In this Article, I suggest that the propriety of the consequential damage default can be examined by considering those few cases in which sophisticated commercial actors do not exclude them. That is, the claim of “ubiquitous” exclusion of consequential damages is a bit hyperbolic. Some commercial contracts between sophisticated actors fail to disclaim the default rule. These fall into two categories. First, there are contracts in which the parties are silent about consequential damages. Those contracts comprise the litigated disputes involving the foreseeability limitation. Silence may indicate intent to incorporate the defaults of the Restatement and the UCC. But some of these contracts may represent exceptions to ubiquitous exclusion only in a formal sense. Even where parties fail to bargain out of the default, it is unclear that they prefer the rule that applies. Defaults tend to be sticky either because parties are inattentive to them or because even sophisticated parties would find it inefficient to contract out.<sup>13</sup> Given the low probability of breach, even sophisticated parties may retain the default because a more highly tailored damage clause is not worth negotiating, especially in light of the limitation on foreseeability and the Restatement’s grant of discretion for judicial exclusion of lost profits.<sup>14</sup>

Other contracts within this category may reflect deliberate decisions to retain the default because they prefer the recovery of consequential damages. The likelihood of acceptance of those damages as a matter of contract design is amplified by a second category of exceptions to the observation of ubiquitous exclusion that is more difficult to explain. In these cases, the parties not only fail to opt out of consequential damages; they explicitly provide for their

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<sup>13</sup> See, e.g., Omri Ben-Shahar and John A. E. Pottow, *On the Stickiness of Default Rules*, 33 Fla. St. U.L. Rev. 651 (2006).

<sup>14</sup> See Restatement (2d) of Contracts § 351(3).

recovery, including lost profits. In effect, these parties not only restate the default, but arguably override its foreseeability limitation and any discretionary constraints by imposing liability for lost profits even when a court applying the “reason to know” test would limit their recovery. The open-ended exposure created by such clauses indicates that parties who agree to them are not treating the clause as a simple option. The clause, that is, is not the equivalent of a termination fee or liquidated damage clause that sets a strike price allowing the terminating party to decide when the transaction is no longer worth pursuing. Rather, because the breaching party’s liability is not finally determinable at the time of breach (given the ability of the aggrieved party to litigate the issue), an explicit consequential damages clause appears to invite both the kinds of overreliance and inefficient risk allocation that the exclusion of consequential damages purports to avoid. Nevertheless, the explicit nature of these clauses implies that some parties believe that the promise to pay lost profits in the event of breach maximizes the value of the contract. That possibility suggests that cases in which parties failed to opt out of the default may reflect a similar preference, though embodied in tacit, rather than explicit agreement. That is, the absence of exclusion may not exemplify the stickiness of the default or the inattention of contract drafters, but instead an affirmative desire to permit recovery of consequential damages in the event of breach.

In this article, I explore the circumstances under which sophisticated parties would commit to payment of lost profits in the event of breach. I claim that both the contracts that use those clauses and a discrete set of the cases that interpret the scope of what the parties “contemplated” with respect to recoverable damages reveal that a promise to pay lost profits can solve a holdup problem that might otherwise frustrate mutually beneficial exchange. I infer that parties and, perhaps more controversially, courts have perceived that a commitment to pay lost



profits can diminish the threat of holdups inherent in transactions that require one party to make a relationship-specific investment – an investment that, once made, cannot readily be utilized in an alternative transaction – before the other party is obligated to invest in the same transaction.<sup>15</sup> In transactions with those characteristics, the investing party risks exploitation by its counterparty after the initial investment is made. Exploitation may take the form of renegotiating the contractual surplus to permit a shift of contractual assets to the non-investing party up to the amount of the difference between the value of the investment in the original transaction and its next highest use by the investing party. I suggest that a pledge to pay lost profits in the event of breach reduces the threat of holdup, so that in a discrete set of circumstances the promise has value in excess of its cost, including the cost otherwise inherent in assigning consequential damages to the party least able to avoid them. While a pledge of lost profits in the event of breach is not the exclusive response to this holdup problem, it is a plausible, and perhaps superior means of avoiding it.

Moreover, if the presence of a relationship-specific investment is sufficiently salient, then it may be possible to fashion a default rule for consequential damages that is more consistent with majoritarian preferences. Even within the existing default rule, salience about what constituted those conditions would permit courts more accurately to distinguish between those situations in which the parties had reason to allocate the risk of consequential damages to a breaching party – who had tacitly agreed to payment of lost profits – and those situations in which there seems little commercial reason for parties to have adopted the default rule. Under the latter circumstances, courts attentive to the majority practice of opting out and to the negative

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<sup>15</sup> I adopt here Klein’s broad conception of holdup that does not require any deception or obfuscation, but only a change in market conditions not specified by the contract such that “reputational capital is insufficient to prevent one transactor from taking advantage of these circumstances to shift rents in its favor by appropriating some portion of the relationship-specific assets.” Benjamin Klein, *Asset Specificity and Holdups*, in Peter G. Klein and Michael, E. Sykuta (eds.), *The Elgar Companion to Transaction Cost Economics* 120, 124-25 (2010).

effects of the minority default might exercise greater discretion to exclude consequential damages under the nebulous standard of foreseeability or under the restriction on recovery of lost profits such as the need to demonstrate them with reasonable certainty. But recognition of the limited circumstances in which parties would allocate the risk of lost profits to the breaching party also suggests the possibility of a different default rule that limits recovery to those cases, and thus that better reflects majority commercial practice. Indeed, such a rule lurks in the history of consequential damages in the guise of the much-discarded tacit agreement test that allows recovery only of consequential damages for which the breaching party has accepted liability.

In the next part of this Article, I examine the development of current rules concerning lost profits and the move away from a tacit agreement test that would be more consistent with the claims I have made about the scope of damages intended by sophisticated commercial actors. In Part III, I discuss the relationship between optimal investment and holdup, and the literature concerning contractual mechanisms overcoming the latter. Part IV reviews contracts in which the parties do not rely on the default rule of awarding consequential damages under the “reason to know” standard. Rather, they signal their intent about damages by expressly assigning responsibility for lost profits to the breaching party. I admittedly find few contracts that contain such an explicit term. Nevertheless, I do find that those cases systematically allow recovery of lost profits by a party who is required to make relationship-specific investments in order to realize the benefit of the exchange.

In Part V, I return to the case law. Cases from New York, which – at least in non-sales cases – has stubbornly resisted the broad “reason to know” interpretation of consequential damages embodied in the Restatement and UCC provide an interesting test of the relationship between consequential damages and investment. New York law permits recovery of lost profits

only in the more restrictive situation in which the parties have expressly or tacitly agreed that the breaching party would be responsible for such damages. Thus, under New York law a breaching party would not be responsible for lost profits that it had reason to know could materialize, but for which it had not accepted liability. My review of the New York cases suggests that courts infer tacit agreement from contracts that are silent with respect to damages under the same conditions in which explicit contract clause assigns responsibility for lost profits to the breaching party, that is, where the non-breaching party is to make a relationship-specific investment.

As I have suggested, and as the literature makes clear, the broad “reason to know” test for consequential damages is sufficiently nebulous to permit courts substantial flexibility in its application and thus to satisfy multiple objectives, from full compensation to avoiding cross-subsidization.<sup>16</sup> It is plausible that courts in “reason to know” jurisdictions could similarly intuit to results that parties had “reason to know” of consequential damages only where investments were required. If that is the case, then the “reason to know” standard would not necessarily be less hospitable to relationship-specific investment than New York’s tacit agreement test. But if the nebulous nature of “reason to know” generates more uncertain results, or if parties are more likely to opt out of it because of the uncertainty that it generates, then the tacit agreement test might provide a superior standard in terms of generating judicial decisions that reflect the parties’ intent. I therefore examine cases from a “reason to know” jurisdiction to see whether there exists a pattern of awarding lost profits where, but only where, such investments are present.

## **II. The Demise of “Tacit Agreement”**

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<sup>16</sup> See, e.g., Gwyn D. Quillen, Note, Contract Damages and Cross-Subsidization, 61 S. Cal. L. Rev. 1125 (1988).

### **A. *Globe Refining* and Its Detractors**

I noted above that contemporary compilations of contract law permit recovery of consequential damages within the contemplation of the breaching party, measured either by virtue of what a reasonable person would have anticipated or by virtue of some special circumstances of which the breaching party had reason to know at the time the contract was executed. Those consequences that were unforeseen at the time of contracting are unrecoverable; but foreseeable consequences of breach are recoverable even if the breaching party neither explicitly nor impliedly intended to assume them.

It was not always thus. Some earlier interpretations of *Hadley's* obtuse “contemplation of both parties” test limited consequential damages, and lost profits in particular, to those that were deemed “foreseeable” by virtue of the breaching party having expressly or tacitly agreed to bear their risk rather than merely having “reason to know” of their materialization. In American law, the common source for that proposition has been Justice Holmes’s opinion in *Globe Refining Co. v. Landa Cotton Oil Co.*<sup>17</sup> In that case, the plaintiff had brought an action for breach of a contract to sell crude oil. The trial court had dismissed the claim on the grounds that it did not involve the requisite jurisdictional amount, thus upholding the defendant’s contention that damages had been inflated for jurisdictional purposes. The plaintiff alleged a variety of special damages that it had suffered as a consequence of the breach. If recoverable, these amounts – added to admittedly recoverable damages in the amount of the difference between market price at the time of the breach and contract price for crude oil – would presumably have satisfied the requisite jurisdictional amount. Finally, the plaintiff alleged that the likelihood that it would suffer the special damages in the event of breach “was known to defendant, and in

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<sup>17</sup> 190 U.S. 540 (1903).

contemplation of the contract”<sup>18</sup> – a claim that appears to have been intended to satisfy the broad “reason to know” interpretation of *Hadley*.

Perhaps Justice Holmes could have used the occasion to opine on the utility of using measures as speculative as “special damages” to satisfy procedural requirements, or to permit an initial inquiry into the veracity of the pleadings. Perhaps he could have rested his reluctance to permit the alleged damages on the grounds of double counting, or even the inability of the plaintiff to foresee the damages under the broad interpretation of “reason to know.”<sup>19</sup> Instead, he delivered a lecture on substantive contract law. The plaintiff had contended that it suffered losses related to (1) its commitment to a third party railroad to carry tank cars that would receive the oil, (2) transportation of tank cars that could otherwise have been used to obtain oil from other sources, (3) the loss of use of the tank cars for other purposes, (4) lost profits and loss of reputation from the inability to comply with downstream contracts, and (5) additional freight costs incurred to obtain oil from other sources. Justice Holmes disagreed that the plaintiff’s alleged losses, even if true, satisfied the “contemplation” requirement. Recoverable damages were limited to those “the defendant fairly may be supposed to have assumed consciously, or to have warranted the plaintiff reasonably to suppose that it assumed, when the contract was made.”<sup>20</sup> This followed from Holmes’s conception of contract as a means by which each party takes the risk “of an event which is wholly, or to an appreciable extent, beyond his control.”<sup>21</sup> The willingness to take a contractual risk was necessarily contingent on one’s exposure should

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<sup>18</sup> Id. at 543.

<sup>19</sup> Indeed, Holmes did indicate that certain elements of alleged damages constituted double counting and that the plaintiff would not have known the distance that the tank cars would have to travel. Id. at 545-46. The latter point seems the equivalent of the conclusion in *Hadley* that the defendant would not have reason to know that plaintiff’s mill would be shut during the time its shaft was sent for repair.

<sup>20</sup> Id. at 544.

<sup>21</sup> Id. at 543.

the risk materialize. Thus, when one decides to enter a contract, “the extent of liability . . . is likely to be within his contemplation,”<sup>22</sup> so that a reasoned decision about whether to take the related risk can be made. The question to be asked, therefore, was whether the plaintiff had demonstrated “that the consequences were in contemplation of the parties, in the sense of the vendor taking the risk?”<sup>23</sup> “Contemplation,” therefore, did not entail the objective or knowledge-based standard of what a reasonable person would foresee as the consequence of the breach. Rather, it meant what the breaching party explicitly agreed to bear as damages or, where the contract was silent, “terms which it fairly may be presumed he would have assented to if they had been presented to his mind.”<sup>24</sup> For Holmes, this was the correct interpretation of *Hadley* and other cases he invoked for the proposition that “a person can only be held to be responsible for such consequences as may be reasonably supposed to be in the contemplation of the parties at the time of making the contract.”<sup>25</sup> Allowing recovery for consequences known to the breaching party, but not assumed by that party, would permit the aggrieved party “to obtain an advantage which he has not paid for.”<sup>26</sup> Liability could extend only so far as the contract expressly provided for it or was made under such circumstances that each party understands it was assumed.<sup>27</sup> Implicit in the requirement that an aggrieved party must “pay for” a damage recovery is the understanding that parties will assume liability only to the extent that they can price into their contracts a premium that reasonably reflects the risk to which they are exposed. That

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<sup>22</sup> Id.

<sup>23</sup> Id. at 544.

<sup>24</sup> Id. at 543.

<sup>25</sup> Id. at 544, citing *Grebert-Borgnis v. Nugent*, L. R. 15 Q. B. Div. 85, 92; *Horne v. Midland R. Co.* L. R. 7 C. P. 583, 591; *Hadley v. Baxendale*, 9 Exch. 341, 354; *Western U. Teleg. Co. v. Hall*, 124 U. S. 444; *Howard v. Stillwell & B. Mfg. Co.* *Primrose v. Western U. Teleg. Co.*, 154 U. S. 1, 32.

<sup>26</sup> Id. at 545, quoting Mr. Justice Willes in *Mr. Justice Willes in British Columbia & V. I. Spar, Lumber, & Saw-Mill Co. v. Nettleship*, L. R. 3 C. P. 499, 500

<sup>27</sup> Id.

assumption may be tacit in the circumstances surrounding the contract, though Holmes was silent as to the kinds of circumstances from which tacit agreement might be inferred.

Subsequent developments have not been kind to Holmes's embrace of the "tacit agreement" test. His standard was consistent with earlier developments in English law.<sup>28</sup> But even before Holmes, cases had adopted a broader test for liability, reflected in the subsequent Restatement (2d) and UCC formulations. For instance, a widely cited 19<sup>th</sup> century New York case permitted recovery of lost profits for breach without any demonstration of a tacit agreement because "[m]ost contracts are entered into with the view to future profits, and such profits are in the contemplation of the parties."<sup>29</sup> Notwithstanding occasional support for Holmes's efforts to tie contract damages to the intent of the parties,<sup>30</sup> the "tacit agreement" test has fallen into disrepute. One recent commentator classifies the decision among the "worst Supreme Court decisions ever," citing as evidence its explicit repudiation by courts and commentators from Kessler to Farnsworth.<sup>31</sup> Farnsworth observed, with apparent approval, that the test "has been generally rejected as overly restrictive and doctrinally unsound."<sup>32</sup> The comment accompanying the Restatement's "reason to know" provision explicitly rejects any claim that the party in breach must make a tacit agreement to be liable for the loss.<sup>33</sup> The Official Comment to the relevant

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<sup>28</sup> See *British Columbia and Vancouver's Island Spar, Lumber, and Saw-Mill Co v. Nettleship*, (1868) LR 3 CP 499; *Horne v. Midland Railway*, (1872) LR 7 CP 583 (Court of Common Pleas).

<sup>29</sup> *Wakeman v. Wheeler & Wilson Mfg. Co.*, 4 N.E. 264, 266 (N.Y. 1886).

<sup>30</sup> See, e.g., Ralph S. Bauer, *Consequential Damages in Contract*, 80 U. Penn. L. Rev. 687 (1932); Epstein, *supra* note 1; Adam Kramer, *An Agreement-Centred Approach to Remoteness and Contract Damages*, in Nili Cohen and Ewan McKendrick (eds.), *Comparative Remedies for Breach of Contract* 249 (2005).

<sup>31</sup> See Larry T. Garvin, *Globe Refining Co. v. Landa Cotton Oil Co.* and the Dark Side of Reputation, available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1969001](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1969001).

<sup>32</sup> 3 Farnsworth on Contracts 258 (3d ed. 2003).

<sup>33</sup> *Id.* at § 351, Comment *a*. Nevertheless, the Restatement (2d) contains some ambiguity on the matter. Section 351(3) allows restrictions on foreseeable consequential damages when the results would be disproportionate or unjust, though it does not necessarily tie those concepts to other terms of the contract. One exception, however, is found in comment *f* which links disproportionality to contract price in order to determine whether "the parties assumed that one of them would not bear the risk of a particular loss." Insofar as contract price is assumed to reflect

UCC section provides tersely: “The ‘tacit agreement’ test for the recovery of consequential damages is rejected.”<sup>34</sup> Calamari and Perillo defend the general rejection as a corrective to the “dubious assumption” that damages for breach of contract are based on the contracting parties’ promise to pay damages in the event of breach.<sup>35</sup> Even Corbin and Williston are in agreement in their dismissal of Holmes’ view.<sup>36</sup> Some courts have expressly disapproved it in favor of the more liberal formulations of the Restatement or the UCC.<sup>37</sup> English courts that had early embraced the tacit agreement requirement subsequently abandoned it.<sup>38</sup> Demonstration of awareness that profits would be lost replaced the need to demonstrate that the breaching party had consented to bear the loss of those profits.

The near-universal repudiation of tacit agreement in courts and commentaries certainly places a heavy burden on anyone who would defend it. But before joining the rejection, it is useful to consider the consequences of what has replaced it. The accepted reading of *Hadley* entails a test similarly subjected to criticism. The inherent vagueness of the foreseeability test appears to be universally recognized, leaving courts substantial discretion to determine a breacher’s scope of liability after the fact.<sup>39</sup> Barry Adler and Jason Johnston suggest that even the information-forcing assumptions that have become a standard defense for *Hadley* may not

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an intent to accept or reject liability for consequential damages, that statement reflects the same approach as the tacit agreement test, notwithstanding its explicit rejection in comment *a*.

<sup>34</sup> *Id.* Official Comment 2.

<sup>35</sup> Joseph M. Perillo, Calamari and Perillo on Contracts 571 (5<sup>th</sup> ed. 2003).

<sup>36</sup> See 5 Corbin § 1010; 11 Williston §1357.

<sup>37</sup> See *Native American Reclamation and Pest Control, Inc. v. United Bank Alaska*, 685 P.2d 1211, 1219 (Alas. 1984); *R. I. Lampus Co. v. Neville Cement Products Corp.*, 378 A.2d 288, 292 (Pa. 1977).

<sup>38</sup> See, e.g., *Heron II (Kaufos v. C. Czarnikow, Ltd.)*, 3 All. E.R. 686, 691(H.L. 1967); *Victoria Laundry (Windsor), Ltd. v. Newman Indus., Ltd.*, 1 All. E.R. 997, 2 K.B. 528 (1949).

<sup>39</sup> See Farnsworth, *supra* note \_\_\_, at 795.



operate properly because they misconstrue the scope of “high-value” parties or fail to consider strategic incentives in bargaining.<sup>40</sup>

But the most interesting characteristic of the alternative to tacit agreement, the broad “reason to know” rule, is its near-universal rejection by those who are subject to it – commercial actors.<sup>41</sup> The rejection of *Globe Refining* is a repudiation of Holmes’ premise that damages are part of the risk calculation that commercial actors undertake when they enter into contracts. That rejection implies that commercial actors are either indifferent to or prefer a damages rule that exposes them to unqualified liability for a type of damages that they could foresee, even if they had not undertaken responsibility for those damages. In short, it suggests that commercial actors deviate from Holmes’ assumptions that parties decide to enter contracts only after evaluating the related risks and benefits, and that such evaluation requires assignment of an expected value to the consequences of breach. Thus, parties would design contracts that avoid liability for risks that cannot be readily evaluated, or places that those risks on the party better positioned to perform the requisite evaluation. The fact that most commercial actors opt out of “reason to know” default, that liquidated damage clauses are not uncommon, that termination fees and reverse termination fees for walking away from prospective deals are becoming increasingly common, and that commercial actors tend to structure contractual damage rules in a manner that reflects verifiability<sup>42</sup> all suggest that commercial actors behave in a manner consistent with the assumptions of Holmes rather than with the indifference assumed by the critics of tacit

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<sup>40</sup> Adler, *supra* note 7; Jason Scott Johnston, Strategic Bargaining and the Economic Theory of Contract Default Rules, 100 Yale L.J. 615 (1990).

<sup>41</sup> See text accompanying note 9; Farnsworth, *supra* note \_\_\_ at 799 (“In fact the question of foreseeability arises less frequently than might be supposed because sellers and other suppliers frequently provide that consequential damages are not recoverable, regardless of whether they would be recoverable under the rule of *Hadley v. Baxendale*).

<sup>42</sup> See Ronald J. Gilson, Charles F. Sabel, and Robert E. Scott, Braiding: The Interaction of Formal and Informal Contracting in Theory, Practice, and Doctrine, 110 Colum. L. Rev. 1377, 1389-92 (2010)

agreement. Perhaps, then, the rejection of tacit agreement needs to be predicated on more than on a headcount of approving and disapproving cases and commentaries. Perhaps one might ask which conception of “contemplation of the parties” better aligns with the objective of designing defaults that reflect what parties otherwise would have done for themselves.

These observations raise the question of when parties would be willing to incur the negotiation or judicial uncertainty costs necessary to allocate the risk of lost profits to potential breachers. After all, if recovery of consequential damages induces inefficient investment and if aggrieved parties are systematically in a superior position to control the extent of those damages, then we would anticipate that the parties would allocate the risk of their loss away from the breaching party. Absent an explanation for why parties might agree that a breacher should bear the risk of lost profits, we would expect to find few examples of their express allowance in the event of breach. Moreover, we would expect to find little reason for parties to agree tacitly to such recovery, so that courts should be wary of finding any such implicit agreement.

Parties, however, would presumably agree to impose lost profits damages to the breaching party if doing so helped to overcome obstacles to otherwise mutually beneficial transactions or increased the value of those transactions. Moreover, if the conditions under which an allocation of lost profits risk could increase the contractual surplus were readily observable and verifiable, then courts would have a more accurate basis for assuming, even in the absence of an express term, that parties tacitly intended to permit a lost profits recovery.

## **B. The New York Doctrine**

In stubborn resistance to the contemporary trend, a series of New York cases has threatened the near-unanimous rejection of tacit agreement.<sup>43</sup> In two cases arising out of a breached contract to construct a domed stadium in the 1980s, the New York Court of Appeals restricted the award of recoverable consequential damages of a breach to those that were “within the contemplation of the parties.” But “contemplation” meant something other than that the breaching party had reason to know the consequences a breach would engender. The first case, *Kenford Co. v. County of Erie*,<sup>44</sup> (*Kenford I*), arose after the County failed to satisfy its commitment to negotiate a lease with the developers for the operation of the stadium, and the project was abandoned. The intended operator of the stadium sued the County for the loss of prospective profits during the 20-year period of the anticipated management contract. The prospective profits at issue were presumably to be earned in transactions with third parties who would use the stadium, rather than any payments due from the County itself. At trial, the plaintiffs were awarded a multimillion dollar judgment. The judgment was modified on appeal on the ground that expert opinion used at trial to present statistical projections of future business operations did not provide a rational basis for the calculation of lost profits. That holding was consistent with longstanding law concerning the certainty with which recoverable lost profits had to be proved.<sup>45</sup> But the negative implication was that sufficiently certain damages could be recovered as long as the breacher had reason to know that they would result from the breach.

The Court of Appeals, however, employed a broader basis for denying consequential damages. It declared that lost profits were recoverable only on satisfaction of three tests. First,

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<sup>43</sup> Arkansas also continues to apply the tacit agreement test. See, e.g., *Reynolds Health Care Services, Inc. v. HMNH, Inc.*, 217 S.W.3d 797 (Ark. 2005).

<sup>44</sup> 493 N.E.2d 234 (N.Y. 1986)

<sup>45</sup> See, e.g., Robert M. Lloyd, *The Reasonable Certainty Requirement in Lost Profits Litigation: What It Really Means*, available at <http://ssrn.com/abstract=1584710>.

the damages had to have been caused by the breach. Second, the loss must be capable of proof with reasonable certainty. On those grounds, the court concluded that, notwithstanding the use of sophisticated economic models, the plaintiffs' efforts to quantify lost profits over the subsequent 20-year period ultimately relied on unsupportable and inadmissible speculation and conjecture.

The third factor embodied the "tacit agreement" test. In order to recover consequential damages, the Court of Appeals concluded, the plaintiff must demonstrate that the "particular damages were fairly within the contemplation of the parties to the contract at the time it was made." This did not mean simply that the breaching party contemplated the possibility that breach would deny profits to the aggrieved party. That inference presumably could be made in any commercial contract. Instead, the aggrieved party was obligated to demonstrate that "liability for loss of profits over the length of the contract" had been contractually allocated to the breacher.<sup>46</sup>

That factor was fatal to the plaintiffs' case. Nothing in the proof revealed that liability for lost profits, as opposed to the expectation of lost profits, was in the contemplation of the parties at the time the contract was executed.<sup>47</sup> What proof would have been sufficient? Certainly, an explicit clause awarding lost profits would have been sufficient. But the absence of such a clause did not foreclose a lost profits recovery. Rather, contractual silence on the issue required the court to apply a "commonsense" rule of considering the scope of liability that to

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<sup>46</sup> 493 N.E.2d at 236.

<sup>47</sup> In an apparent anomaly, the court noted that lost profits were not in the contemplation of the parties at the time of contract execution or "at the time of its breach." 493 N.E.2d at 236. It is unclear what change in result would have been appropriate had the parties contemplated liability for damages at the time of breach, but not at execution. Subsequent cases have ignored the relevance of what was contemplated at the time of breach. See, e.g., *Honeywell Intern. Inc. v. Air Products & Chemicals, Inc.*, 858 A.2d 392, 423 n.108 (Del.Ch. 2004), affirmed in part, reversed in part, and remanded, 872 A.2d 944 (Del. 2005) (applying New York law).

which the breaching party would have assented had the possibility of breach been presented to his mind. Thus, the court adopted both the doctrinal proposition that lost profits would be recoverable as consequential damages of a breach only if the parties had intended to impose such liability on the breaching party, and the institutional proposition that courts have the competence to discern the intent of the parties with respect to such an inquiry where the contract fails explicitly to allocate the loss. The general rule of expectation damages did not entail a default that foreseeable consequential damages were recoverable. In *Kenford I* itself, however, the court did not disclose the alchemy by which a court was to surmise the requisite intent. Instead, the court summarily concluded that the evidence “fails to demonstrate that liability for loss of profits over the length of the contract would have been in the contemplation of the parties at the relevant times.”

The court elaborated its position in a subsequent decision arising out of the same transaction. In *Kenford Co. v. County of Erie* (“*Kenford II*”),<sup>48</sup> the court rejected a claim for damages by the stadium developers for the loss of anticipated appreciation in the value of land that they had purchased on the periphery of the proposed stadium site. The contract stipulated that part of the compensation paid to the County would consist of increased real property taxes resulting from the enhanced value that the peripheral land would enjoy as a result of the stadium. That clause indicated that the County had reason to know that plaintiffs expected to profit from development of the land and that breach would deny the plaintiffs those anticipated profits. While that knowledge might have been sufficient to satisfy the broader interpretation of *Hadley*, the court denied recovery. It concluded that the plaintiff’s claim was not for “general damages,” which could be awarded for the “natural and probable consequence of the breach.” Rather, the

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<sup>48</sup> 537 N.E.2d 176 (N.Y. 1989).

claim fell into the category of “unusual or extraordinary damages.” Citing *Hadley*, the court concluded that these damages could only be recovered if they had been brought within the contemplation of the parties as the probable result of a breach at the time of contracting. The court then channeled Justice Holmes for the proposition that what was in the parties’ contemplation depended on “the nature, purpose and particular circumstances of the contract known by the parties should be considered ... as well as ‘what liability the defendant fairly may be supposed to have assumed consciously, or to have warranted the plaintiff reasonably to suppose that it assumed, when the contract was made.’ ”<sup>49</sup>

The anticipation of appreciated land values did not satisfy that criterion. Yes, the County knew that the plaintiff had acquired the land and intended to develop it to garner profits that would flow from proximity to the proposed stadium. But this knowledge did not mean that the parties contemplated that the County would assume liability for Kenford’s loss of anticipated appreciation in the event of the County’s breach. Nothing in the contract explicitly allocated that risk to the County. In apparent repudiation of the “reason to know” standard, the court invoked a series of cases decided between 1871 and 1930 for the proposition that “bare notice of special consequences which might result from a breach of contract, unless under such circumstances as to imply that it formed the basis of the agreement, would not be sufficient [to impose liability for special damages].” Thus, the fact that all parties recognized that the proposed stadium would increase the plaintiffs’ land values was insufficient to warrant recovery. Perhaps the court stopped its analysis with the pre-Depression cases because subsequent cases applying New York law appeared to endorse the broader interpretation.<sup>50</sup>

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<sup>49</sup> 537 N.E.2d at 179.

<sup>50</sup> See, e.g., *Spang Industries v. Aetna Cas. & Surety Co.*, 512 F.2d 365, 369 (2d Cir. 1976); *437 Madison Ave. Associates v. A.T. Kearney, Inc.*, 488 N.Y.S.2d 950 (N.Y. Sup. Ct. 1985).

Given the rule that the court articulated, nothing in the current situation suggested that the parties had contemplated a breaching party's liability for lost profits. Certainly the contract did not explicitly allocate that liability to the County. The adverse consequences of imposing liability in the case contravened any "commonsense" conclusion that the parties would have allocated the losses to the County had they considered the matter. In a comment reminiscent of the critique that full expectation damages skews investment incentives,<sup>51</sup> the court concluded that imposing the loss on the County would lead to the "irrational conclusion" and "illogical" result that the County had agreed to guarantee *Kenford's* investment if the stadium was not constructed, so that Kenford would realize all of its anticipated gains with or without the stadium.<sup>52</sup> The broader liability demanded by Kenford would contradict the principle of *Hadley* that restricted contract liability to risks that were volitionally assumed. Any greater liability would exacerbate the risk of business enterprise and presumably deter welfare-maximizing contracts.<sup>53</sup>

Any doubts that remained about the limited scope of lost profits in New York were eliminated in subsequent cases. Mere knowledge of a counterparty's plans and expected benefits from contractual performance did not constitute an agreement to "underwrite the hypothetical profits from these plans."<sup>54</sup> Lost profits, the Court of Appeals later contended, might be recoverable without jumping through the logistical hoops of *Kenford I* and *Kenford II* where the

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<sup>51</sup> See, e.g., Yeon-Koo Che and Tai-Yeong Chung, Contract Damages and Cooperative Investments, 30 RAND J. Econ. 84, 87 (1999).

<sup>52</sup> 537 N.E.2d at 180.

<sup>53</sup> Id.

<sup>54</sup> *Goodstein Construction Corp. v. City of New York*, 604 N.E.2d 1356, 1362 (1992). The fact that the defendants in both the *Kenford* cases and *Goodstein* were municipal corporations arguably could have provided the New York Court of Appeals with a narrower basis for decision, that is, that no one would anticipate that a municipal corporation, which is limited in its capacity to spend public moneys, would have intended to take the downside risk for the plaintiffs' alleged lost profits. But the court did not provide any hint that the identity of the defendant mattered.

alleged profits consisted of payments to be made by the defendant to the plaintiff under the contract. Under these circumstances, forgone payments constituted the “direct” or general damages flowing from a breach rather than the consequential losses that had to be filtered through the contemplation of the parties. Thus, in *American List Corp. v. U.S. News and World Report, Inc.*,<sup>55</sup> the court classified payments due under a breached contract for the rental of mailing lists as “general” damages recoverable as “the natural and probable consequence of the breach,” rather than extraordinary “special” damages that the plaintiff would receive from potential collateral exchanges with third parties that were contingent on the breacher’s performance.<sup>56</sup> It was the latter damages that were recoverable only when liability for them was explicitly or tacitly assigned to the breaching party at the time of contract. It is notable that the claims for lost profits in the *Kenford* cases arose from forgone transactions with third parties, i.e., loss of revenues from sales at the stadium and from the resale value of the land, rather than from payments between the contracting parties. For instance, had the county leased a stadium and failed to make its lease payments, recovery of those “profits” would not have been limited by a tacit agreement requirement.

The few federal cases that have applied New York law to the question of whether the parties contemplated an award of lost profits have expressly recognized that the *Kenford* cases require application of a different rule than is mandated by the Restatement or UCC standards.<sup>57</sup> In those cases, contractual silence about the scope of damages in the event of breach has not

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<sup>55</sup> 549 N.E.2d 1161 (N.Y. 1989).

<sup>56</sup> See *Tractebel Energy Marketing, Inc. v. AEP Power Marketing, Inc.*, 487 F.3d 89, 109 (2d Cir. 2007).

<sup>57</sup> See, e.g., *Travellers International, A.G. v. Trans World Airlines, Inc.*, 41 F.3d 1570 (2d Cir. 1994); *Trademark Research Corp. v. Maxwell Online, Inc.*, 995 F.2d 326 (2d Cir. 1993). Most federal cases that discuss *Kenford* deal only with the issue of whether lost profits have been proven with reasonable certainty. They do not discuss the scope of lost profits being within “the contemplation of the parties” as defined in *Kenford*. See, e.g., *Britestarr Homes, Inc. v. Piper Rudnick LLP*, 256 Fed. Appx. 413 (2d Cir. 2007); *Yusuf Ahmed Alghanim & Sons v. Toys R Us, Inc.*, 126 F.3d 15 (2d Cir. 1997).



necessarily entailed liability for damages of which the breaching party merely had reason to be aware. Instead, federal courts have required the claimant to demonstrate the parties' intent to impose liability and have revealed some reluctance to find the requisite agreement to liability. For instance, in one case, a prior contract that explicitly disclaimed liability for consequential damages was interpreted as evidence of a course of dealing between the parties that governed a subsequent informal agreement in which the disclaimer was absent.<sup>58</sup>

The *Kenford* cases have led to some schizophrenic results in sale of goods cases involving New York law. As noted above, the UCC explicitly adopts the broader "reason to know" standard. Some courts, focusing on the ostensibly broad standard for recovery of consequential damages in § 2-715(2)(a), have applied that test, without consideration of whether the parties explicitly or tacitly allocated the risk of lost profits.<sup>59</sup> Other cases applying New York law purport to have incorporated the *Kenford* standard into the UCC provision, but appear to have equated "contemplation" with reason to know, rather than with tacit agreement.<sup>60</sup> The result is that lost profits recovery in New York is subject to one test in goods cases and another test in non-goods cases. One Delaware case, applying New York law and subsequently reversed on other grounds, explicitly rejected the application of different standards for recovery of lost profits under UCC and common law cases, and applied the *Kenford* formulation to deny lost

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<sup>58</sup> Trademark Research Corp. v. Maxwell Online, Inc., 995 F.2d 326, 334 (2d Cir. 1993).

<sup>59</sup> See, e.g., Canusa Corp. v. A & R Lobosco, Inc., 986 F. Supp. 723 (E.D.N.Y. 1997).

<sup>60</sup> See, e.g., Larsen v. A.C. Carpenter, Inc., 620 F. Supp. 1084, 1132 (E.D. N.Y. 1985), aff'd without opinion, 800 F.2d 1128 (2d Cir. 1986) ("gains from the sale of potatoes were foreseeable, being 'reasonably within the contemplation of the parties' at contracting. . . . See also White & Summers at 396 ("The plaintiff can recover lost profits if the seller had reason to know at the time of contracting that if he breached ... the plaintiff would be deprived of those profits."); Kasem v. Phillip Morris, USA, 664 N.Y.S.2d 469 (N.Y. App. Div. 1997); RIJ Pharm. Corp. v. Ivax Pharmaceuticals., Inc., 322 F. Supp. 2d 406, 414-15 (S.D.N.Y. 2004).

profits where the aggrieved party could not show that the breaching party had agreed to pay those damages in the event of its nonperformance.<sup>61</sup>

Compounding the ambiguity, the New York cases offer little guidance about the evidence that courts should consider when making the “commonsense” decision about whether contractual silence signifies that agreement to liability would have been the result of an explicit bargain. As a result, presumptions and burdens of proof may do a great deal of the work in determining who bears the risk of lost profits. The default rules of the Restatement and the UCC imply that contractual silence on the issue should be interpreted as consent to liability. But given the empirical observation that most commercial parties opt out of the default, the failure to include such liability explicitly may be seen as strong evidence that the parties did contemplate the subject and decided *not* to impose liability. The *Kenford* cases certainly support such an interpretation, insofar as they impose on the aggrieved party the burden of demonstrating that the parties intended the breaching party to bear the risk.<sup>62</sup> More recent New York cases have followed that lead, notwithstanding the default that would otherwise apply.<sup>63</sup>

That, however, is not the necessary conclusion to be drawn from acceptance of tacit agreement as the proper test for an award of lost profits. Instead, the appeal to a “commonsense” view can imply an admonition for courts to consider the commercial needs of the parties in the particular transaction, and to inquire into whether or not the contractual relationship would have been advanced by the breaching party’s acceptance of liability for consequential damages. That

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<sup>61</sup> *Honeywell Intern. Inc. v. Air Products & Chemicals, Inc.*, 858 A.2d 392, 423 (Del.Ch. 2004), affirmed in part, reversed in part, and remanded, 872 A.2d 944 (Del. 2005) (affirming conclusion that parties did not contemplate lost profits).

<sup>62</sup> 67 N.Y.2d at 261.

<sup>63</sup> See, e.g., *Digital Broadcast Corp. v. Ladenburg, Thalmann & Co.*, 883 N.Y.S.2d 186, 187 (1<sup>st</sup> Dept. 2009) (plaintiff not entitled to lost profits because “it could not clear the initial hurdle of demonstrating “that the particular damages were fairly within the contemplation of the parties to the contract at the time it was made”).

admonition requires faith in the capacity of courts to reverse engineer contractual relationships and to discern why commercial parties have designed their contracts in particular ways. Nevertheless, my claim in the next parts of the paper is that parties allocate lost profits to the breaching party, notwithstanding overreliance and inefficiency risks, to increase the value of contracts that have a defined structure – they require relationship-specific investment and thus invite holdup. I then claim that the cases in which courts find tacit agreement to bear consequential damages are systematically characterized by the same contractual structure. I conclude that, by interpreting contracts in this manner, courts that apply the tacit agreement test are intuiting to results that are consistent with the preferences of commercial parties and that permit use of contracts optimally to design contractual relations.

### **III. Lost Profits and Optimal Investment**

#### **A. Contractual Solutions to Holdup Risks**

I have suggested that, notwithstanding near-universal disclaimer of consequential damages, sophisticated commercial parties would assign the risk of lost profits to the breaching party where doing so would increase the value of the transaction. Indeed, in some cases commercial parties make that assignment explicitly. In this section, I suggest that those explicit assignments are characterized by contractual structures that require relationship-specific investment.

A contractual commitment to invest relationship-specific assets poses a well-known risk of non-cooperative conduct. Relationship-specific investments cannot readily be utilized in an alternative transaction. The costs, once incurred, are essentially sunk. For that reason, returns on

the investment require that the relationship continue.<sup>64</sup> Williamson noted that such costs were typically incurred in advance of the contemplated exchange and, once invested, provided lower value in alternative uses.<sup>65</sup> Examples include an electric generating plant constructed nearby a mine-mouth that was to serve as the source of coal for the plant,<sup>66</sup> or investments in labor that would be needed for a particular transaction.<sup>67</sup> The inability to transfer the investment to an alternative transaction makes the investing party vulnerable to exploitation by the counterparty in either of two ways.<sup>68</sup> First, the counterparty may threaten to withhold performance unless the investing party agrees to renegotiate the original allocation of the transactional surplus. A threat to withhold performance may consist of any action between chiseling on the quality of a performance to more blatant breaches. Renegotiation of sophisticated contracts is typically undesirable, because renegotiation is inconsistent with the efforts of parties to write low-cost, state-contingent contracts that yield *ex post* efficient results. Nevertheless, as discussed below, credible commitments not to renegotiate may be difficult to achieve.

The second risk that the relationship-specific investment creates is that the non-investing party will engage in conduct that diminishes the value of the investment to the investing party. For instance, once it secures the commitment of the investing party, the non-investing party may

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<sup>64</sup> See Vincent P. Crawford, Relationship-Specific Investment, 105 Q.J. Econ. 561, 561 (1990).

<sup>65</sup> Oliver E. Williamson, Credible Commitments: Using Hostages to Support Exchange, 73 Am. Econ. Rev. 519, 522 (1983). See also Charles J. Goetz & Robert E. Scott, Principles of Relational Contracts, 67 Va. L. Rev. 1089, 1143-44 (1981); Oliver E. Williamson, Transaction-Cost Economics: The Governance of Contractual Relations, 22 J.L. & Econ. 233, 238-45 (1979); Paul L. Joskow, Contract Duration and Relationship-Specific Investments: Empirical Evidence from Coal Markets, 77 Am. Econ. Rev. 168 (1987); Benjamin Klein and Keith B. Leffler, The Role of Market Forces in Assuring Contractual Performance, 89 J. Pol. Econ. 615 (1981).

<sup>66</sup> See Joskow, *supra* note \_\_.

<sup>67</sup> See Williamson, *supra* note \_\_, at 522.

<sup>68</sup> See, e.g., Avery Katz, The Economics of Form and Substance in Contract Interpretation, 104 Colum. L. Rev. 496, 528-29 (2004); Benjamin Klein et al., Vertical Integration, Appropriable Rents, and the Competitive Contracting Process, 21 J.L. & Econ. 297, 298 (1978); Robert E. Scott and George G. Triantis, Embedded Options and the Case Against Compensation in Contract Law, 104 Colum. L. Rev. 1428, 1447-52 (2004); Yeon-Kee Che and Donald B. Hausch, Cooperative Investments and the Value of Contracting, 89 Am. Econ. Rev. 125 (1999).

simultaneously pursue alternative opportunities that compete with the investing party. The investing party cannot easily remove its investment to avoid the competition. Instead, it may continue to use that investment, but achieve lower than expected returns while the non-investing party attains higher profits by utilizing both the investing party's assets and those of its competitors.

In each case, the threat of the non-investing party is credible within a range bounded by its exposure for failure to cooperate, that is, by the loss it suffers from non-cooperative conduct, including the obligation to pay damages for any breach, less the gain it receives from that same behavior. For instance, assume that once the investment is made, the non-investing party can increase its net profits by reducing its performance on that contract and pursuing other opportunities. Even with lower profits from the first contract, the total profits for the non-investing party (combining profits from the first contract and the subsequent contracts) could be greater than if it only performed the first contract as anticipated by the investing party. Whether or not that is the case, however, may depend on whether the reduced level of performance constitutes only chiseling for which the non-investing party bears no liability, or a breach for which the non-investing party would have to pay damages that reduced its own net profits from all operations. Indeed, even if the reduced effort constitutes a breach of the first contract, the investing party may eschew cancellation of the contract, because that would require complete loss of its relationship-specific investment. Thus, it would continue with the contract, even though performance was less profitable to it than anticipated.

An example may clarify the dynamics that underlie the parties' motivations. Assume, for instance, that a telecommunications firm agrees to serve as the lead company in creating an international fiber optic submarine cable system to facilitate transmissions among

telecommunications firms that enter into contracts with the lead company. The lead company is contractually obligated to connect the cable to the domestic telecommunications system at landing stations in the countries where its counterparties are located. Once the lead company invests in locating a landing station at a specific site and connecting its cable to it, the company cannot readily redeploy those assets to an alternative location. Both the cost of switching to an alternative location and the legal obligation to maintain the selected location would make efforts to switch impractical. Thus, all parties would understand that each domestic company would be able to exploit the lead company after it made its initial investment, either by demanding a greater share of the profits than was originally agreed, or by competing with the system for telecommunications that could be handled either by it or by alternative telecommunications carriers that might be more profitable for the domestic company. For instance, assume that the lead company requested access to the landing station of a domestic company in order to upgrade capacity of the system as a whole. The domestic company, recognizing that the current cable system will operate more competitively if the capacity is upgraded, could withhold its grant of access unless it could renegotiate a larger share of profits from the system as a whole. Alternatively, assume that the domestic company had entered into agreements to carry communications traffic that did not require the system created by the lead company, and that the upgraded system would now compete with those alternatives. The domestic company might resist upgrades in the belief that its share of the expanded revenues from the system, which would have to be shared with other system participants, would not make up for its loss of revenues from its arrangements with other domestic companies, notwithstanding that the upgraded system would create total benefits for all participants in excess of the domestic participant's losses.

Sophisticated parties involved in transactions that require relationship-specific investments are likely to understand that they face these risks of non-cooperation. In my example above, this knowledge would deter the lead company from initially creating and investing in the system, notwithstanding that, if fully achieved, that system would maximize joint profits that could be allocated among all participants. Thus, fear of opportunism by counterparties may interfere with welfare-maximizing transactions. To be sure, reputational capital or bilateral monopoly within the contract or an absence of outside options may constrain opportunistic renegotiation after investment.<sup>69</sup> As a good deal of economics literature suggests, contractual clauses may reinforce these effects.<sup>70</sup> For instance, hard terms, such as fixed prices, may bind parties to their respective commitments, so that each party is willing to invest, safe in the knowledge that the counterparty will have little basis for exit or renegotiation should circumstances change.<sup>71</sup> Some of that literature, however, entails relatively complicated contractual mechanisms that would involve substantial negotiation and transactions costs. Much of that work focuses on damage provisions that promise to reduce the threat of holdup, though the findings vary substantially with respect to preferred damage rules, depending in part on the nature of the investment. Che and Chung contend that “cooperative investments,” those that generate a direct benefit to the investor’s counterparty rather than just to the investor, a rule of reliance damages performs better than expectation damages or liquidated damage clauses.

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<sup>69</sup> See, e.g.,

<sup>70</sup> See, e.g., Yeon-Koo Che and Tai-Yeong Chung, Contract Damages and Cooperative Investments, 30 *RAND J. Econ.* 84 (1999); W. Bentley MacLeod and M. Malcomson, Investments, Holdup, and the Form of Market Contracts, 83 *Am. Econ. Rev.* 811-37 (1993).

<sup>71</sup> See Ronald J. Gilson, Charles F. Sabel, and Robert E. Scott, Contracting for Innovation: Vertical Disintegration and Interfirm Collaboration, 109 *Colum. L. Rev.* 431, 453 (2009).

Where, however, investment is “selfish,” i.e., it will confer direct benefits only on the investor, studies indicate that incorporation of an expectation damages measure dominates alternatives.<sup>72</sup>

Damages terms provide credible commitments to perform as expected and not to exploit their counterparties who have made relationship-specific investments because they reduce the benefits of holdup. The non-investing party obviously could contractually agree not to engage in the exploitative behavior. But the credibility of that contractual commitment is limited by the remedy that the investing party will be able to recover should exploitation occur. If the potential breacher can obtain more from exploitation than it will be required to pay in damages, then its promise not to exploit is not credible. In effect, damages payable in the event of breach simply constitute the strike price for exercising an option to avoid performance.<sup>73</sup> A low strike price can induce exploitation that could be averted with a higher strike price. In addition, even a high strike price may be insufficiently effective against holdup as long as the possibility of renegotiation exists.<sup>74</sup>

Initially, one might conclude that parties could solve the renegotiation threat by simply forbidding any modification of their original deal. But parties may forgo explicit contractual prohibitions on renegotiation because such clauses are frequently deemed to be unenforceable.<sup>75</sup>

As a result, parties that seek to limit renegotiation, and thus to lock their counterparties into an

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<sup>72</sup> See Shavell, Rogerson.

<sup>73</sup> See Robert E. Scott and George G. Triantis, Embedded Options and the Case Against Compensation in Contract Law, 104 Colum. L. Rev. 1428, 1429 (2004); Eva I. Hoppe and Patrick W. Schmitz, Can Contracts Solve the Hold-Up Problem? Experimental Evidence, 73 Games and Econ. Behav. 186 (2011).

<sup>74</sup> See Yeon-Koo Che and Donald B. Hausch, Cooperative Investments and the Value of Contracting, 89 Am. Econ. Rev. 125 (1999).

<sup>75</sup> See, e.g., Kevin Davis, The Demand for Immutable Contracts: Another Look at the Law and Economics of Contract Modifications, 81 N.Y.U. L. Rev. 487, 518 (2006); Christine Jolls, Contracts as Bilateral Commitments: A New Perspective on Contract Modification, 26 J.L. Studies 203, 208-09 (1997); Eric Talley, Note, Contract Renegotiation, Mechanism Design, and the Liquidated Damages Rule, 46 Stan. L. Rev. 1195 (1994). There is some argument to the effect that enforcing clauses that prohibit renegotiation would create perverse incentives for agents to reduce their effort. See Patrick W. Schmitz, Should Contractual Clauses that Forbid Renegotiation Always be Enforced?, 21 J. L.E. & Org. 315 (2005).



agreed performance that would justify a relationship-specific investment, may insert a clause that has the effect of inhibiting renegotiation, even if the clause does not create an outright prohibition.<sup>76</sup> Some clauses could be seen as blatant attempts to circumvent an unenforceable prohibition on renegotiation, and thus themselves be unenforceable. For instance, one could imagine parties contractually imposing a penalty on any party who suggests renegotiation. Maskin and Tirole suggest just such a clause as a precommitment not to change initial contracts.<sup>77</sup> But it is plausible that a court that objects to prohibitions on renegotiation would pierce the form of that clause and invalidate it as an effort to do indirectly what could not be done directly.

Alternatively, parties might attempt to preclude holdup by explicitly contracting for specific performance as a remedy for breach. Indeed, at least one commentator has suggested that renegotiation of athletes' contracts should be prohibited, and the contract specifically enforced on this ground, notwithstanding the traditional admonition against employing specific performance in personal services contracts.<sup>78</sup> More generally, Edlin and Reichelstein suggest that, under a set of assumptions about bargaining power and sharing of the contractual surplus, an expectation of specific performance provides an investing party with an incentive to choose a first-best investment.<sup>79</sup> Nevertheless, parties may be reluctant to bargain for specific performance, in part because courts may also be reluctant to enforce that remedy, even where the parties have expressly contracted for it, because that remedy imposes obligations on the court

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<sup>76</sup> See, e.g., MacLeod and Malcomson, *supra* note .

<sup>77</sup> See Eric Maskin and Jean Tirole, Unforeseen Contingencies and Incomplete Contracts, 66 *Rev. Econ. Stud.* 83, 99 (1999).

<sup>78</sup> See Alex M. Johnson, Jr., The Argument for Self-Help Specific Performance: Opportunistic Renegotiation of Player Contracts, 22 *Conn. L. Rev.* 61 (1989).

<sup>79</sup> Aaron Edlin and Stefan Reichelstein, Holdups, Standard Breach Remedies, and Optimal Investment, 86 *Am. Econ. Rev.* 478, 482-86 (1996).

that it may prefer not to exercise. This is likely to be the case where deviations from contractual performance require judicial monitoring of quality as to which the court may lack expertise. Moreover, parties may eschew specific performance clauses, notwithstanding their implicit signal of fidelity to the transaction, because such clauses simultaneously constrain even efficient breaches of contract, that is, those breaches worth committing even after full damages are paid. A party that could otherwise efficiently exit a transaction can be precluded from doing so by a decree of specific performance, and thus can be exploited by a counterparty who demands supracompensatory damages in exchange for forgoing the specific performance option. As a result, use of the clause to induce optimal investment could simply displace one holdup problem by creating another.

Given that the non-investing party's willingness to exploit the other party's investment is bounded in part by its exposure for breach of contract, a clause that imposes high damages on a breaching party may have the desired inhibiting effect. In theory, the parties could signal their willingness to pay high damages, and thus to induce relationship-specific investments, by specifying the damages to be paid in the event of breach. But, as noted by other commentators who have sought to facilitate relationship-specific investments, courts may also be reluctant to enforce liquidated damages clauses.<sup>80</sup> If, at the time that damages are payable, a court classifies the liquidated damages clause as a penalty, it will refuse to enforce it.<sup>81</sup> One may object that courts that refuse to enforce liquidated damage clauses agreed to by sophisticated parties are acting in a paternalistic manner that is inconsistent with the lessons of contract design or the preferences of the parties. Indeed, many courts have recently displayed a greater willingness to

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<sup>80</sup> See Daniel Markovitz, *Making and Keeping Contracts*, 92 *Va. L. Rev.* 1325, 1344 (2006); Scott and Triantis, *supra* note , at 1452.

<sup>81</sup> *JMD Holding Corp. v. Congress Financial Corp.*, 828 N.E.2d 604 (N.Y. 2005).

enforce liquidated damage clauses.<sup>82</sup> But sophisticated parties likely prefer a clause that courts are highly likely to enforce over the right to win a lawsuit that involves a nominally equivalent clause of more dubious enforceability. Given the ambiguity that surrounds the test for a valid liquidated damages clause, parties may find it an insufficiently credible commitment to induce optimal investment.

Each of these contractual solutions to potential holdup is sufficiently imperfect that a clause permitting recovery of lost profits provides a potential alternative. The promise of a lost profits recovery dilutes the incentive of the non-investing party to exploit an investment, because any breach will subject the non-investing party to substantial damages. At the same time, the possibility of a lost profits recovery reduces the incentive of the investing party to renegotiate. In the event of breach, recovery of lost profits places the aggrieved party closer to the full expectation measure, so the investing party is under less compulsion to renegotiate in order to ensure realization of something close to the originally anticipated share of the contractual surplus. For the same reason, the potential recovery of lost profits limits the threat point of the potential breacher. Assuming solvency up to the point of full expectation damages, the obligation to pay lost profits increases the exposure of the non-investing party in the event its conduct is deemed to be a breach of its obligations, and thus reduces the net benefits it can anticipate from non-cooperative conduct. As a result, the contractual pledge to pay lost profits constitutes a credible commitment *not* to exploit the investing party. Armed with such a commitment from its counterparty, the investing party would presumably be more willing to make the optimal investment in the common enterprise. To continue the telecommunications

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<sup>82</sup> See *XCO International Inc. v. Pacific Scientific Co.*, 369 F.3d 998, 1002 (7<sup>th</sup> Cir. 2004) (“[t]he rule against penalty clauses, though it lingers, has come to seem rather an anachronism, especially in cases in which commercial enterprises are on both sides of the contract”).

example above, if the breaching domestic company were liable for the profits lost to other participants in the system as a consequence of its refusal to allow upgrades, it would have less incentive to deny access than if it were only liable for the costs of obtaining access.

This is not to say that a commitment to pay lost profits in the event of breach is an optimal inducement to investment. Lost profit recoveries are most closely associated with expectation damages. The economic literature that I cited above indicates that some forms of investment are optimized by a reliance damages rule rather than an expectation damages rule. That literature argues that the potential investor in a cooperative investment has minimal incentive to invest optimally under expectation damages, because, in the event of breach, it receives the same payoff regardless of realized gains from trade, and thus has no incentive to increase those gains through investment.<sup>83</sup> Even if that were the case, however, their preferred rule of reliance damages suffers from its own defects. One might conclude that the purpose of protecting relationship-specific investment is to defend against loss of reliance costs expended on implementation of the contract, and thus as long as reliance damages are verifiable, they are contractible and disincentives to invest would be overcome by a commitment to reimburse reliance costs in the event of breach. But reliance costs may not be readily verifiable, particularly if they are defined to include lost opportunity costs as well as out-of-pocket expenditures.<sup>84</sup> In that event, even if reliance costs are viewed as a superior mechanism for inducing optimal investment, an award of lost profits may make sense if lost profits serve as a rough, but sufficient proxy for reliance.

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<sup>83</sup> Che and Chung, *supra* note , at 87.

<sup>84</sup> See Lon L. Fuller and William R. Perdue, Jr., *The Reliance Interest in Contract Damages: 1*, 46 *Yale L.J.* 52, 60 (1936).

If a commitment to pay lost profits in the event of breach has this effect, it may solve the general difficulty that parties face in binding themselves against renegotiation or non-cooperative behavior, even where doing so would reduce the cost related to formation of sophisticated contracts.<sup>85</sup> Unlike non-renegotiation clauses, specific performance clauses, and liquidated damages clauses, which suffer from questionable enforceability, a promise to pay consequential damages including lost profits is not only enforceable; in most jurisdictions it embodies the default rule. Even if that default rule were altered to permit recovery of lost profits under more limited circumstances that aligned with majoritarian preferences, the promise to pay them would still be presumptively enforceable within the domain of those preferences.

### **B. Relationship-Specific Investment and the Certainty of Damages**

A traditional objection to the award of lost profits is that their measurement inherently involves speculation, since they require valuation of transactions that never materialized. The aggrieved party has incentives to contend that the breach frustrated exchanges with third parties that would have generated substantial returns. Conversely, the breaching party has incentives to contend that those transactions would never have occurred even in the absence of the breach.<sup>86</sup> Courts have responded to this conflict of counterfactuals by demanding that lost profits be proven by “reasonable certainty,” a vague, multi-factored test that provides little ex ante basis on which parties can calculate optimal precautions.<sup>87</sup> Courts have proven even more resistant to claims of lost profits proffered by a “new business” without a proven record of success. In those cases, courts demand a higher level of proof for recovery of profits, or deny recovery altogether

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<sup>85</sup> Alan Schwartz and Joel Watson, *The Law and Economics of Costly Contracting*, 20 *J. L. Econ. & Org.* 2, 26 (2004).

<sup>86</sup> Recall that standard doctrine requires only that the type of damage must be foreseeable, not the amount.

<sup>87</sup> See Robert M. Lloyd, *The Reasonable Certainty Requirement in Lost Profits Litigation: What it Really Means*,

where contracting parties had little basis for projecting the profitability of their proposed enterprise at the time of breach.<sup>88</sup> In short, courts retreat from the broad interpretation that a breacher has “reason to know” that lost profits will result from a breach where recovery imposes on the breaching party a scope of liability that it could not have anticipated and that it could not properly price because the financial information relevant to accurate prediction of a contract’s profitability was outside the breaching party’s knowledge and control.

But the very reasons that give rise to the relationship-specific investments that could induce an agreement to pay lost profits as a signal of fidelity to the transaction may simultaneously dilute concerns about the aggrieved party’s monopoly over the expected benefits of the contract. As my telecommunications system example illustrates, transactions that involve relationship-specific investments typically entail long-term mutual obligations that require significant cooperation and coordination between the parties. They are not normally discrete transactions in which one party agrees to provide standard goods or services to the other or simple long-term supply contracts in which one party commits to providing services that are fungible with goods or services that could be provided to another party. Rather, they take on features of a joint venture in which both parties assume significant responsibility to ensure the success of a distinct sub-part of each party’s business. These situations differ from, for instance, a simple long-term supply contract in which one party sells raw material to another, but retains no stake in the outcome of the buyer’s production. The fact that relationship-specific investments are required for the venture entails that the investing party will be reluctant to move forward without reliable assurances that the investment will generate positive returns. But the

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<sup>88</sup> See, e.g., *Coastal Aviation, Inc. v. Commander Aircraft*, 937 F. Supp. 1051, 1065 (S.D.N.Y. 1996); *Kidder, Peabody & Co. v. IAG N.V.*, 28 F. Supp. 2d 126, 131 (S.D.N.Y. 1998). The New York Court of Appeals, however, has indicated that there is no separate test for lost profits in the case of a new business. The issue is only whether a new business can satisfy the traditional test of proving lost profits with reasonable certainty. See *Ashland Management Inc. v. Janien*, 624 N.E.2d 1007, 1011 (N.Y. 1993).

fact that the success of the venture depends on the intertwined nature of the parties' businesses means that those assurances are likely to require sharing financial information that reflects the expected value of the contract to each party. Indeed, it may be largely because each party has some indication of the value of the contract to the counterparty that the holdup problem arises. But that same information sharing between the parties reduces the risk that a potential breacher will not have sufficient information to calculate the consequences of breach for the counterparty. In these situations, the expectation of each of the parties may be presumed to be known to the other without the explicit transfer of information that *Hadley* requires. As a result, the aggrieved party is not necessarily in a better position than the breacher to predict profits should the latter fail to perform. Thus, the standard assumption that consequential damages are likely to be disclaimed because the aggrieved party is in a superior position to avoid their materialization may be less justified where the parties are involved in the kind of relational contract that entails investment. As a result, imposing lost profits damages on a breaching party in a contract involving relationship-specific investment is less likely to constitute an inefficient risk allocation. Indeed, in some situations, one party may indicate that it occupies the better position take certain risks by agreeing to make a payment should that risk materialize. For example, a merger that is contingent on obtaining regulatory approval may be subject to a termination fee or reverse termination fee that places on the party best positioned to obtain that approval in the event that it is not obtained.<sup>89</sup>

This rationale, however, is subject to an important caveat. Gilson, Sabel, and Scott have recently examined contracting behavior in situations where parties agree to work jointly on a project with a highly uncertain outcome. Joint enterprises to create innovative technologies,

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<sup>89</sup> The proposed merger between AT&T and T-Mobile was subject to a breakup fee in which AT&T was obligated to pay a \$4 billion cancellation fee when regulatory approval for the deal could not be obtained.

such as to develop drugs or to make untested applications of existing technologies, may fall within this category. In these situations, the knowledge of each party about the benefits to be conferred by a counterparty and the anticipated range of profitability (or loss) of the enterprise may be less than in situations, such as exclusive distributorships, where the contract envisions an application of an existing business model or technology. As a result, the risks associated with default may be more uncertain, and the ability to make informed allocations based on expected values and identity of the party best positioned to avoid loss could be reduced. As a result, Gilson, Sabel, and Scott predict that parties in such situations will enter relatively incomplete contracts that permit the parties to adjust to new information as it develops.<sup>90</sup> Moreover, the novelty of the projects with which Gilson, Sabel, and Scott are concerned indicates that lost profits will be less verifiable to a court, and thus less worth contracting about *ex ante*. In these situations, parties will eschew explicit risk allocations to stimulate relationship-specific investments in favor of informal mechanisms that generate cooperation and avoid holdup.

Within the domain where lost profits are relatively estimable *ex ante* and verifiable *ex post*, however, limitation of consequential damages to those explicitly or tacitly agreed to may facilitate a strong signaling device of fidelity to the transaction because it both creates exposure sufficient to constitute a commitment not to engage in holdup and limits exposure for breach that makes the signal worth sending. Even a party that might otherwise prefer to signal of fidelity might be reluctant to do so if the signal were too costly. Parties who intend to be faithful to contracts might also believe that intervening circumstances may lead them to regret entering into a transaction and induce breach. The risk that one may breach complicates the willingness to use

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<sup>90</sup> See Ronald J. Gilson, Charles F. Sabel, and Robert E. Scott, Braiding: The Interaction of Formal and Informal Contracting in Theory, Practice, and Doctrine, 110 Colum. L. Rev. 1377 (2010); Gilson, Sabel, and Scott, *supra* note \_\_\_\_.



the promise to pay as a signaling device. If a court has the capacity *ex post* to award consequential damages substantially in excess of what was anticipated and priced into the contract, then excluding consequential damages and finding an alternative, if more costly, means of inducing investment might be a superior strategy. The availability of alternatives, however, does not foreclose the possibility that parties would prefer to signal fidelity through a limited exposure to pay consequential damages if that were the legal default rule.

#### **IV. Contracts and Lost Profits**

The claim that an agreement to pay lost profits in the event of breach can serve as a signal of fidelity to a relationship and thus reduce concerns about holdup generates some testable hypotheses about contract design and the contractual behavior of sophisticated commercial actors. Parties who want to send the relevant signal might, for instance, accept the default rule of consequential damages rather than follow the norm of excluding them. I have suggested, however, that the “reason to know” default of the Restatement (2d) and the UCC embodies a breadth of damages that parties may find onerous, notwithstanding their desire to send a signal of fidelity. Even parties that might want to send a signal of fidelity might eschew the nebulous liability that attends the default rule. Thus, parties concerned with holdup might adopt any of several strategies. First, they might follow the standard commercial procedure of excluding consequential damages and either risk vulnerability to holdup or search for some other means of avoiding it by employing a potentially invalid liquidated damages or non-modification clause. Second, they might take the risk that a court would, consistent with the default of a broad “reason to know” test, award lost profits but constrain exposure in the event of breach to an acceptable amount, such as by limiting consequential damages to “reasonably certain” lost profits. Third, they might leave the contract silent about lost profits, and expect that courts will

limit any award of lost profits to those that the parties impliedly agreed would be payable in order to solve the holdup problem – in effect expecting a court to apply something equivalent to the tacit agreement test notwithstanding the broader formulation in the Restatement and UCC. Indeed, this strategy would apply with particular force in contracts governed by New York, since, as discussed above, that jurisdiction retains the more restrictive test.

If my claim has any force, however, then one would expect that at least some sophisticated commercial actors would take a fourth alternative and explicitly incorporate a clause awarding lost profits into their contract. Moreover, one would expect those contracts that do include such a clause systematically to be utilized in contractual structures in which I have suggested they would be most useful as a signal of fidelity, i.e., where one party is required to make a relationship-specific investment that exposes it to the holdup problem and where information about potential lost profits is relatively available *ex ante* to the party expressly agreeing to pay lost profits as damages.

In order to determine whether these empirical predictions are accurate, I have examined a set of contracts involving sophisticated commercial actors. These contracts are found in the searchable database of the Contracting and Organizations Research Institute of the University of Missouri at Columbia (“CORI”).<sup>91</sup> Although the database contains over 690,000 contracts, most of them are taken from public disclosure filings or are filed with a regulatory agency, and are drawn from the EDGAR Database of the Securities and Exchange Commission. As a result, these contracts are likely to be skewed towards those involving large, publicly-owned companies. The database is divided into several categories and subcategories. For purposes of my search, I limited the relevant contracts to those involving joint ventures, business transactions

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<sup>91</sup> The database is available at <http://cori.missouri.edu/pages/ksearch.htm>.

(primarily involving leases, sales, licenses of intellectual property, and purchases of services), and utilities. A search of documents that contain the terms “lost” and “profits” produced a sample size of 297 discrete contracts.<sup>92</sup> Of those, and consistent with expectations from contract theory, 232 contain explicit language excluding either consequential damages, lost profits, or both. A plurality of these contained a provision that excluded consequential damages and lost profits for both parties with no other stipulations.<sup>93</sup> Approximately 60 of the contracts contained provisions that excluded consequential damages and lost profits but with a caveat. The caveat sometimes included a provision indemnifying the nonbreaching party against certain losses.<sup>94</sup> Other contracts voided the exclusion for certain breaching behavior, such as breaches that amounted to willful misconduct, gross negligence, or violation of a confidentiality agreement.<sup>95</sup> A final group of approximately 70 contracts contained exclusions of liability for lost profits and consequential damages for just one of the parties. Typically, in these situations, the party not liable for these damages was either granted all remedies at law or had its remedy restricted to the price already paid (typical in a sale of goods contract).<sup>96</sup> Of the remaining contracts, even though the contract contained the search terms “lost” and “profits,” the contract contained no clause that dealt with lost profits.

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<sup>92</sup> The search initially returned a list of 337 documents. Of those, however, 40 did not generate a document when clicked. Hence, the sample size of 297 documents.

<sup>93</sup> See, e.g., CORI Contract ID 2609, which provides: “Buyer and Seller agree that in no event shall either party be liable to the other for any indirect, special or consequential damages or lost profits as a result of a breach of any provision of this Agreement.”

<sup>94</sup> In one case, however, the indemnity excludes lost profits. See CORI Contract ID 81767.

<sup>95</sup> See, e.g., CORI Contract ID 11699, which provides: “Under no circumstances will either party or third party supplier be liable for any indirect, incidental, special or consequential damages or lost profits with respect to the subject matter of this agreement, regardless of whether such damages could have been foreseen or prevented, except to the extent due to the gross negligence or willful misconduct of such party.”

<sup>96</sup> See, e.g., CORI Contract ID 27912 “In no event shall Consultant be liable for consequential .... damages (including ... lost profits).”

That leaves a handful of contracts that explicitly impose liability for lost profits on the breacher. The small number means that results can only be suggestive. Nevertheless, consistent with the predictions from theory, those contracts do systematically tend to involve investments that could be classified as relationship-specific. A contract designated as a “Beverage Marketing Agreement” between Mrs. Fields Original Cookies, Inc. (MFOC) and Coca-Cola Fountain (CCF) is illustrative.<sup>97</sup> That contract provides for a series or credits and return of equipment and “unearned prepaid funding” in the event of a breach bulk sale by MFOC. The contract then recites that these provisions do not restrict the remedies or damages that may result from a breach by either party. But the contract then states that “Nothing herein shall be construed as a waiver of any right of CCF to prove consequential damages as a result of a breach by MFOC including, but not limited to lost profits, and other damages allowable.”

What would explain this provision that explicitly permits one party, but not the other, to recover lost profits in the event of a breach? Review of the entire contract reveals that CCF is obligated under the contract not only to purchase a set amount of syrups – products that might otherwise be used for other users of CCF products. In addition, CCF provides to MFOC beverage dispensing equipment that, once used by MFOC cannot be utilized by other potential CCF customers, who presumably would demand “new,” rather than “used” equipment. The value of this investment is revealed by a clause in the contract that requires MFOC to pay to CCF at expiration or termination of the contract the “unamortized portion of the cost of installation and the entire cost of remanufacturing and removal of all equipment owned by CCF.” In addition, CCF undertakes to provide advance funding to MFOC for the explicit purpose of expanding the consumption of beverages at stores within the MFOC system. CCF further

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<sup>97</sup> CORI Contract ID 11288.

commits to providing marketing funds based on the purchase of CCF products. Presumably, CCF would want to protect against MFOC's diversion of these funds for purposes that did not generate any benefit to CCF, and a representation by MFOC to that effect would be insufficient without the *in terrorem* benefit of a lost profits clause. MFOC, on the other hand, makes no investment-specific investment. Its obligation is primarily to purchase CCF products and to make the payments due under the contract. In short, the desire to protect relationship-specific investments appears fully to explain the deviation from the standard procedure of disclaiming consequential damages.

Alternatively, consider a "License Option and Collaboration Agreement" between ACADIA Pharmaceuticals Inc. and Sepracor Inc. to identify and develop certain compounds for clinical development and commercialization by Sepracor.<sup>98</sup> ACADIA had apparently developed expertise and acquired proprietary rights related to some of the substances that would be the subject of Sepracor's efforts. ACADIA was willing to grant Sepracor an option to obtain an exclusive license with respect to certain compounds. Retaining the confidentiality of ACADIA's expertise would presumably be crucial to any market advantage that ACADIA possessed. Moreover, Sepracor itself would presumably want to retain preclude ACADIA from sharing information with other parties once Sepracor began investing in clinical development of compounds. Thus, the parties could be expected to draft contractual clauses that bound them to the "collaborative relationship" that their contract described. Indeed, the contract reveals several binding mechanisms. In the first instance, the parties agreed to enter into a stock purchase agreement pursuant to which Sepracor would purchase and commit to purchase shares of ACADIA common stock. In addition, however, damages provide a bonding mechanism. The

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<sup>98</sup> CORI Contract ID 42087.

agreement contains a standard clause disclaiming liability for consequential damages.<sup>99</sup> That limitation on liability, however, contains an exception for “BREACH OF ARTICLE 11,” and that article contains the obligation of each party to keep confidential certain proprietary information provided to it by the other party. In short, given that proprietary information would lose much of its value for the owner if it were disseminated to third parties, bargaining explicitly for consequential damages, presumably including lost profits, appears to protect each party’s investment of proprietary information to the joint enterprise. Consistent with the theory I have suggested above, the agreement to allow recovery of lost profits appears in a situation (as evidenced by both the collaborative nature of the relationship and the stock purchase agreement) in which the parties appear to have exchanged sufficient financial and product information to have some sense of their liability exposure, notwithstanding the “new business” nature of their relationship that typically complicates the effort to award lost profits.

Finally, consider a contract between M.J. Quinlan Associates, an Australian business engaged in research and development for the production of “3-dimensional hollow fried snack food products . . . , including without limitation a kangaroo-shaped product,” and Poore Brothers, a Delaware corporation engaged in the manufacture and marketing of food products, that granted an exclusive license in the United States for Poore Brothers to use Quinlan’s intellectual property relating to manufacturing 3-dimensional hollow fried snack food products.<sup>100</sup> Poore Brothers committed to making “reasonable commercial effort” to promote the sale of such products within its exclusive territory and to pay Quinlan specified fees and royalties on such sales. Poore Brothers was also obligated to incorporate Quinlan’s kangaroo design on the packaging of any kangaroo-shaped product it manufactured. In the event of Quinlan’s continuing breach after

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<sup>99</sup> See *id.* § 10.6.

<sup>100</sup> CORI Contract ID 8588.

notice, Poore Brothers is entitled to withhold royalties until Quinlan remedied the breach. At that point, Poore Brothers is obligated to pay the withheld royalties, but “less any damages or lost profits suffered by Poore Brothers as a result of Quinlan’s breach.”<sup>101</sup>

The explicit reservation of the right to lost profits makes sense in light of the desire to induce relationship-specific investment. While the agreement recites that Poore Brothers has the technology to manufacture 2-dimensional snack food products,<sup>102</sup> it apparently did not have the technology to manufacture hollow 3-dimensional products. Once it obtained the intellectual property about that technology, however, it would presumably have to obtain equipment that would permit utilization of Quinlan’s intellectual property in order to manufacture 3-dimensional products. It is plausible that such equipment would not be useful for other aspects of Poore Brothers’ business. Thus, the purchase of such equipment fits within the model of relationship-specific investment that could subject Poore Brothers to holdup. The ability to retain any lost profits even after Quinlan remedies a breach dilutes the incentive for the latter to engage in any holdup activity. The obligation to pay lost profits in this contract is more remarkable in light of the fact that other contracts involving Poore Brothers that are within the CORI database contain the more standard exclusion of liability for lost profits.<sup>103</sup> One is tempted to conclude that the licensor in those other contracts – Warner Bros. – had more bargaining power than did Quinlan. Perhaps. But the dictates of contract design suggest an alternative explanation. The obligation of Poore Brothers in the latter contracts involves solely the distribution of licensed products provided by Warner Bros., without any requirement to make any additional investment specific to the transaction. Thus, one plausible distinction between the contracts that makes bargaining

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<sup>101</sup> Id. at Article 9(3).

<sup>102</sup> Id. at Whereas Clause D.

<sup>103</sup> See CORI Contracts 8586 and 8587 between Poore Brothers and Warner Bros.

power less of an issue is the fact that the Quinlan contract involves a relationship-specific investment while the Warner Bros. contracts do not. This incidence of the same party using different clauses in different contracts indicates that inclusion of lost profits damages is a well-considered and deliberate effort to accomplish some contractual goal, and the protection of non-transportable investments appears to qualify as a reasonable objective that can be served by this contractual design.

It is noteworthy, moreover, that the explicit invocation of lost profits in the Poore Brothers is one-sided. Breach by Poore Brothers does not trigger an explicit claim for lost profits. This seems peculiar given the express provision in the event of a breach by Quinlan, especially in light of my claim above that the grant of an exclusive license fits the model of relationship-specific investment. There are, however, potential explanations for the omission. First, since the primary obligation of Poore Brothers under the contract is to pay royalties, the parties may have considered that damages from the breach of that obligation would be recoverable as direct damages, so that no mention of lost profits as recoverable consequential damages was necessary. Second, different exclusive dealing arrangements may involve different switching costs. If Quinlan's grant of an exclusive United States license to Poore Brothers entails only the transmission of intellectual property – as opposed, for instance, to the delivery of manufactured equipment under the Coca-Cola contract mentioned above – then perhaps Quinlan had less concern about being taken hostage by Poore Brothers because, in the event of a breach by Poore Brothers, Quinlan's intellectual property would not necessarily have reduced value to a third party.<sup>104</sup>

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<sup>104</sup> This assumes that, post-breach, Quinlan could be precluded from using or transferring the intellectual property.



The number of contracts that contain explicit clauses imposing liability for lost profits is too small to offer strong empirical support for the proposition that willingness to pay lost profits in the event of a breach overcomes the holdout problem and thus induces relationship-specific investments. But the contracts I have discussed above and the few others like them that I have located within the CORI Database provide at least weak support for the claim I have made. These contracts do appear systematically to involve relationship-specific investments that render a party vulnerable to holdup.

## **V. Case Law and Lost Profits**

To this point, I have argued that an agreement to pay lost profits in the event of breach reduces the incentive of the investing party to withhold performance for fear of holdup, and thus provides the assurances necessary to induce optimal investment. Outside of this area, however, an agreement to pay lost profits in the event of breach would arguably be undesirable because it would allocate liability inefficiently and would induce overinvestment in avoiding breach. Contract theory would predict therefore, that parties to transactions that require relationship-specific investments may select lost profits damages among other tools for avoiding holdup, but that it would not be selected by parties to transactions that do not involve such investments.

My examination of contracts in the previous part provides at least weak evidence of the accuracy of this prediction. But perhaps a stronger claim could also be made. If the default rule of contract damages reflected the same conditions under which parties would expressly agree to pay lost profits in the event that they breach, then parties could signal their fidelity to a transaction by failing to exclude liability for damages. In those circumstances, the court would be correct in inferring that lost profits were in the contemplation of the parties in the sense that they had agreed that the non-investing party would bear the risk of the investing party's lost

profits. Or, to be clear, the parties would have tacitly agreed to payment of those damages. In that case, the tacit agreement test would actually be doing the work that Holmes carved out for it: imposing only that scope of liability that “the defendant fairly may be supposed to have assumed consciously, or to have warranted the plaintiff reasonably to suppose that it assumed, when the contract was made.”<sup>105</sup> Liability, however, would not necessarily extend to all those damages that the aggrieved party suffered and of which the breaching party has “reason to know,” as that liability might be more than necessary to induce optimal investment. The tacit agreement test takes on a more significant role of advancing the contractual intent of the parties, therefore, if courts apply it to award lost profits only in situations that parallel those in which parties explicitly opt into such damages, i.e., where it would be useful to induce optimal investment by a party otherwise vulnerable to holdup.

That conclusion, however, requires not only a deeper investigation of the cases that apply a tacit agreement test; it also requires some explanation as to why parties who preferred lost profits recovery would do so only tacitly rather than explicitly. I turn to that issue next, and then to an investigation of the New York cases to determine whether those cases in which courts conclude that a plaintiff satisfied the tacit agreement test involve transactional structures characterized by investment of relationship-specific assets.

### **A. Why Don’t Investing Parties Always Require Lost Profits Clauses?**

If, as indicated in the contracts that I have examined above, parties who prefer to permit recovery of lost profits can indicate their agreement explicitly, why would they ever do so only tacitly? After all, an explicit clause would seem to transmit a stronger and clearer signal of fidelity to the transaction than contractual silence that requires *ex post* judicial construction of

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<sup>105</sup> 190 U.S. at 544.

what the parties intended. Thus, one might conclude that failure to provide expressly for lost profit recoveries is sufficient evidence that the parties intended to omit them from any award for damages.

Nevertheless, there appears to be substantial explanation for a conclusion that parties that anticipate recovery of lost profits in the event of breach fail to provide for them expressly. Indeed, the very recognition of a tacit agreement test (even if, as in the UCC Official Comments, it is recognized only to reject its application) assumes that there are parties who would tacitly rather than expressly agree to such a recovery. Outside of New York, that conclusion may follow from the default rule that applies in the event of breach. In those jurisdictions that adopt the broader interpretation of “reason to know,” lost profits will generally be recoverable as a doctrinal matter, as long as they can be determined with reasonable certainty, unless they are disclaimed. Thus, parties who preferred lost profit recoveries and who had knowledge of the default rule for damages in the (non-New York) jurisdiction whose law governed the contract would not have to provide expressly for lost profits recovery. The default will have done the work for them.

The caveat that parties are attentive to the default rule provides another explanation for the omission of an explicit specification of lost profits in the contract. Even those parties who select New York law to govern their contract may prefer an award of lost profits to signal fidelity, but be unaware of New York’s exceptional default rule. This may be especially true with respect to transactions in which the parties choose New York law or a New York forum in order to obtain perceived advantages of a neutral forum with presumed commercial

sophistication and a desirable interpretive style for commercial contracts.<sup>106</sup> That selection does not necessarily imply full knowledge of substantive New York contract law, so that parties who choose that state's law to govern their contract might be unaware of the narrower damages rule. They may, instead, believe that the broader "reason to know" test applies to their contract. But those parties, by virtue of their unexpressed but real preference for lost profits recoveries, presumably have "tacitly" agreed that a breach involves liability for lost profits.

Finally, even parties who are aware that default rules may not provide the recovery they prefer could fail to bargain for an alternative clause, such as an express lost profits clause. Transaction costs alone provide part of the explanation. If the probability of breach is considered to be low, then acceptance of the default may be justified to save negotiation costs, even if there exists an alternative clause that would be superior in the absence of those costs. Transactions costs explanations may be especially forceful in the context of the long-term relationships that characterize transactions that involve relationship-specific investments. Those relationships typically involve repeat-play between the parties that can itself reduce the likelihood of breach. As a result, explicit contractual safeguards that require additional negotiation may be deemed less necessary. Moreover, the benefits of a lost profits clause must be balanced against the potentially ambiguous signal that it transmits. On the one hand, such a clause does signal fidelity to the transaction in order to avoid substantial damages. On the other hand, payment of damages will always be second-best, insofar as damages are generally seen as undercompensatory, and are likely collectible only after significant litigation. Sophisticated parties are presumably contracting for performance, not for an opportunity to recover in the event of breach, and thus

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<sup>106</sup> See, N.Y. G.O.L. §§ 5-1401-1402. On the desirability of New York styles of contract interpretation, see Alan Schwartz and Robert E. Scott, Yale L.J. ; Theodore Eisenberg & Geoffrey P. Miller, *The Flight to New York: An Empirical Study of Choice of Law and Choice of Forum Clauses in Publicly-Held Companies' Contracts*, 30 *Card. L. Rev.* 1475 (2009).

may wish to eschew indications that they are contemplating the possibility of breach. An explicit clause in a relational contract may indicate acceptance of a deterrent to breach, but it may also raise the prospect of non-cooperative conduct that parties who are preparing to enter a long-term relationship do not want to entertain. One might analogize these situations to the quandary presented by pre-nuptial agreements preceding a marriage. The parties may recognize the risk of subsequent marital discord. Nevertheless, they may wish to signal their intended fidelity by avoiding an *ex ante* allocation of assets that both would agree is fair in the event that the risk materializes.

### **B. The New York Cases and Relationship-Specific Investments**

If my predictions about the use of lost profits by parties, and the capacity of courts to implement parties intent is correct, then cases in which courts find the tacit agreement test to be satisfied should systematically involve relationship-specific investments. Cases in which courts find the test not satisfied should not involve those investments. In this Part, I return to the few New York cases that apply the “tacit agreement” test and explore whether they do, in fact, adhere to this logic. I conclude that the resolution of those cases is consistent with the predictions.

My claim here, however, is not that New York courts have expressly adopted the test that I have suggested comports with the lessons of contract design. Rather, my claim is that the New York courts appear to be intuiting towards results that are consistent with those lessons. Indeed, to the extent that courts are capable of distinguishing between cases that do and do not involve relationship-specific investments, a test that expressly incorporates that characteristic could lead to more consistent, predictable results that also comport better with the intent of the parties than the current Restatement (2d) and UCC tests. In effect, if courts are able to apply a tacit

agreement test in a reliable fashion, it may be better reflect the intent of the parties that presumably drives contract interpretation than the prevailing defaults.

Take first the cases in which courts applying New York law have concluded that liability for lost profits in the event of breach was implicitly within the contemplation of the parties, that is, where the New York tests of tacit agreement under *Kenford I* and *Kenford II* were satisfied. In *Alesayi Beverage Corp. v. Canada Dry Corp.*,<sup>107</sup> Alesayi had obtained an exclusive license to use Canada Dry trademarks in large portions of Saudi Arabia. The court found that Alesayi breached the agreement by distributing the products of a competitor in ways that disfavored Canada Dry and underutilized the assets that Canada Dry had assigned exclusively to Alesayi. The court then turned to the issue of damages and the efforts of Canada Dry to recover lost profits. The court concluded that the parties contemplated liability for lost profits as required by the *Kenford* cases, in large part because, in the event of breach, the contract explicitly permitted the aggrieved party to “pursu[e] any . . . legal remedies [other than termination] which it may have for such breach or which may have otherwise accrued under the agreement.” That clause, however, only authorized recovery of damages under applicable legal rules; it does not necessarily define the scope of recoverable damages. If the applicable legal rules did not permit recovery of lost profits, the contractual clause would not make them available.

Perhaps a more compelling explanation for the willingness to award lost profits lies in the court’s recitation of what it considered to be the salient features of Alesayi’s relationship with Canada Dry. The court believed that any doubts about the causal relationship between Alesayi’s breach and Canada Dry’s loss were dispelled by the fact that Alesayi’s exclusive distributorship

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<sup>107</sup> 947 F.Supp. 658 (S.D.N.Y. 1996).

tied Canada Dry's market share to Alesayi's efforts.<sup>108</sup> Of course, Alesayi's undertaking not to dilute his efforts on behalf of Canada Dry was itself a contractual device to avoid holdup after Canada Dry's investment. But the court's analysis of damages implied that lost profits recovery played a similar role. The court concluded, "lost profits comprise a form of damages likely to flow from breach of an agreement that concerned trademark privileges, a licensed bottling facility, and extract sales."<sup>109</sup> Outside of any context, those characteristics might simply be construed as evincing the broad concept of foreseeability that the *Kenford* cases reject. Those same characteristics, however, support the award even in the event of a narrow construction when they are viewed as indicative of a relationship between the parties that supports investment against the threat of exploitation. Once Canada Dry had granted the exclusive distributorship to Alesayi, replete with trademark privileges, a licensed bottling facility, and extract sales, Canada Dry could not otherwise employ those valuable assets in the territory subject to the exclusive arrangement. Armed with the exclusive distributorship, Alesayi, on the other hand, could do exactly what he allegedly did do: dilute the value of those assets by selling competing products in a manner that maximized his personal profits rather than his joint profits with Canada Dry.<sup>110</sup>

Presumably, Canada Dry would not have made the investment in Alesayi without some assurance that he would not exploit his monopoly either by subordinating its interests to his own, or by demanding renegotiation of the initial allocation of the contractual surplus. Canada Dry certainly understood this possibility, because the contract between the parties included an explicit prohibition on any undertaking that would "dilute or tend to dilute" the promotion of

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<sup>108</sup> 947 F. Supp. at 671.

<sup>109</sup> 947 F. Supp. at 672.

<sup>110</sup> For development of the assumption that exclusive distributorships imply a commitment to maximize joint profits, see Charles J. Goetz and Robert E. Scott, *Principles of Relational Contracts*, 67 Va. L. Rev. 1089, 1119-26 (1981).

Canada Dry products. But the efficacy of that clause would depend on the damages available for its violation. Perhaps the best way to understand the court's conclusion that "the parties clearly contemplated this form of liability [lost profits recovery] at the time of contracting,"<sup>111</sup> therefore, is in the terms of the "commonsense" test stated by the court in *Kenford I*: "consider what the parties would have concluded had they considered the subject." Given that both parties would have wanted to overcome the potential holdup problem in order to induce the Canada Dry's investment, and given the capacity of lost profits to solve the problem, it is more than plausible that, had the parties explicitly contracted about lost profits, they would have allocated the risk to Alesayi.

*Travellers International, A.G. v. Trans World Airlines, Inc.*,<sup>112</sup> similarly involved an exclusive arrangement, this time a joint venture agreement under which Travellers was to provide the land arrangements for certain tours to Europe, Egypt and Israel on a exclusive basis. Travellers was to plan and operate the tour programs, design the tour brochures, and provide advice on marketing strategy at an annual planning meeting held in March preceding the tour season for the following year. TWA was responsible for promoting Travellers' tours. The parties agreed to an annual target of 100,000 customers, suggesting that Travellers' investment in planning, operating, and marketing for subsequent tours would be significant. After TWA ended the relationship, Travellers brought a successful action for wrongful termination. The court concluded that there was sufficient evidence to uphold the district court's finding that TWA had breached its implied duty of good faith and fair dealing by failing to take steps reasonably calculated to achieve the agreed upon minimum number of Getaway passengers, by failing to ascertain the number of brochures appropriate to generate those passengers, and by failing to

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<sup>111</sup> 947 F. Supp. at 672.

<sup>112</sup> 41 F.3d 1570 (2d Cir. 1994).



ensure an adequate supply of brochures. On the issue of damages, the court found that the parties reasonably contemplated a lost profits award for breach within the meaning of the *Kenford* cases. Where they had a 20-year relationship and where the aggrieved party had yielded to the breacher control over a variety of factors that would determine demand for the former's service. Under these circumstances, the court concluded,

Giving full consideration to the fact that Travellers was in the position of making land arrangements for an anticipated flow of tourists, and that the flow did not materialize because TWA (exercising near exclusive control over the demand for the Getaway program) curbed its promotional expenditures without regard to the effect on the flow of Getaway passengers, we conclude that the district court properly applied the test of *Kenford II*. . . . We believe that it was reasonably foreseeable at the time that Travellers and TWA renewed their joint venture agreement that Travellers would suffer lost profits – and claim lost profits as damages – if Travellers devoted substantially all its efforts over a period of years to accommodating a flow of Getaway tourists that is curtailed by TWA's failure to promote the tours. Under these circumstances, TWA “fairly may be supposed to have assumed consciously” that lost profits damages would be an appropriate remedy or “to have warranted [Travellers] reasonably to suppose” that TWA assumed such liability.<sup>113</sup>

Again, the relationship-specific investment in the breacher's business had exposed the aggrieved party to the risk of exploitation. Travellers, the court concluded, had invested virtually all its resources in its relationship with TWA. Exploitation that relationship was the very risk that the parties would have wanted to avoid when the parties entered their agreement; otherwise, Travellers would have been reluctant to invest in the venture. Thus, the parties were deemed to have agreed to lost profits as an assurance that the initial investment would not be exploited.<sup>114</sup>

In a final case, the court found that the parties had contemplated liability for lost profits by virtue of their negotiation over future earnings of the product at issue. In *Ashland*

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<sup>113</sup> 41 F.3d at 1578.

<sup>114</sup> Disgorgement of the breacher's gain might be an even greater disincentive against exploitation, but it would be more difficult for the aggrieved party to prove the breacher's gain than to prove its own loss.

*Management, Inc. v. Janien*,<sup>115</sup> an employee negotiated to sell his employer a mathematical model that he had developed for selecting investments. The trial court found that the parties had concluded a contract for use of the model and that the firm had breached it. That contract involved the transfer of the employee's proprietary information to the employer, and limited the ability of the parties to disclose information to third parties. Thus, the employee was unable to use his model for any other purpose once he granted rights to the employer.

In applying the requirements of the *Kenford* cases, the Court of Appeals concluded that the parties' negotiations and contractual terms made "manifest" that lost profits would be recoverable in the event of breach. The contract provided that if the employee was to leave the firm "for any reason," he would be entitled to 15% of the firm's gross revenues. The contract also predicted the amount of business that the mathematical model would generate. Thus, the court inferred that the parties had "fully debated and analyzed" future earnings, and agreed to post-employment compensation predicated on anticipated revenues.<sup>116</sup> The prediction of revenues, the court concluded in a bit of a *non sequitur*, implied that the firm "must have foreseen that if it breached the contract defendant would be entitled to lost profits."<sup>117</sup> The contractual provision, however, did not explicitly speak of recovery of lost profits. Essentially, the court appeared to be interpreting the post-employment provision as a liquidated damages clause without necessarily tying the amount of the recovery to the damages that the employee would realize in the event of breach. The logic of the court's reasoning aside, its decision was consistent with the prediction that lost profits recoveries will be more likely where the aggrieved

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<sup>115</sup>, 624 N.E.2d 1007 (N.Y. 1993).

<sup>116</sup> In its discussion of the parties' intent concerning lost profits, the court characterized the post-employment compensation as "damages." *Id.* at 1011. But the compensation clause applied if Janien left Ashland "for any reason." Presumably that would include departures unrelated to a breach by Ashland, and thus was not necessarily a contractual damages clause.

<sup>117</sup> *Id.* at 1011.

party has made a relationship-specific investment. The employee's agreement to transfer proprietary information for the exclusive use of the firm would have been facilitated by the latter's commitment not to exploit him once that investment was made. The inference of a lost profits recovery in the event of breach plays that role. What makes the case somewhat more complicated for the theory is that, at the time of the breach, the employee had not yet fully developed the program and, arguably, could have taken it to another firm if he decided to proceed. Thus, one might contend that he had not made a relationship-specific investment at the time of breach. But once the court found that a contract had been created, the employee was obligated to create the model and was prohibited from revealing the information that he had developed to that point to other firms. Thus, it is plausible that the court believed that entry into the contract sufficiently locked the employee into the relationship to trigger the assumption of a commitment against exploitation.

Conversely, courts applying New York law have been more reluctant to award lost profits where the breach did not involve a relationship-specific investment. It is in these cases that the deviation between New York doctrine and the broader constructions of "reason to know" have their most significant bite, since they lead to denial of damages even though they satisfy the latter test. The *Kenford* cases themselves fall into this category. *Kenford I* dealt with efforts to recover prospective profits of a proposed management contract. The plaintiffs, however, did not point to any relationship-specific investment in the contract; indeed their complaint was that no contract was ever executed, and thus they had not sunk into the management enterprise any costs that could not be transferred to alternative transactions. Presumably, for instance, they could have employed their human capital in other endeavors. In *Kenford II*, plaintiffs had purchased parcels of land that they anticipated would be used for a stadium and for enterprises around the

stadium. The “raw acreage” that they purchased could presumably be resold or redeployed to other uses that, while possibly less profitable than they anticipated, would have prevented plaintiffs from suffering the kind of total loss that is indicative of relationship-specific investments.

Post-*Kenford* cases fall into the same pattern. In *Awards.com, LLC v. Kinko’s, Inc.*,<sup>118</sup> Kinko’s agreed to license the use of its store space for the sale of plaintiff’s products within mutually selected Kinko’s locations. The plaintiff brought an action against Kinko’s for breach of contract and \$276 million in lost profits for allegedly terminating the agreement improperly. In the absence of anything in the agreement revealing contemplation of lost profits, the appellate court applied the “commonsense” approach dictated by *Kenford*. The court concluded that the start-up nature of the plaintiff’s enterprise made it unreasonable to infer that Kinko’s would have assumed lost profits liability for breach. Common sense, however, is perhaps equally informed by the nature of the transaction. Nothing in the opinion suggests that the plaintiff had invested any resources that could not be transferred to another trading partner in the event of Kinko’s breach. The plaintiff’s products consisted of “personalized corporate awards and promotional items” that, if not sold at Kinko’s, could have been readily removed and made available for sale at other locations. Thus, Kinko’s breach, if any, did not implicate the susceptibility to opportunistic behavior that would result if the plaintiff had made investments that could not be used in replacement transactions.

Similarly, in *Trademark Research Corp. v. Maxwell Online, Inc.*,<sup>119</sup> a Second Circuit case that applied New York law, the purchaser of a trademark database and search system to be

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<sup>118</sup> 834 N.Y.S.2d 147 (N.Y. App. Div. 2007), aff’d 925 N.E.2d 926 (N.Y. 2010).

<sup>119</sup> 995 F.2d 326 (2d Cir. 1993).

custom-designed by the defendant sued for lost profits when the designer could not deliver a system that would operate as promised. The plaintiff had not invested any relationship-specific investments in the project, however. If anyone made relationship-specific investments, it was the defendant, which had invested resources in the design and construction of the failed system. The court reversed a trial court's award of lost profits. The court concluded both that the plaintiff had failed to establish lost profits with the requisite degree of certainty, and had failed to establish that liability for lost profits was within the contemplation of the parties, even though it was clear that the plaintiff desired the system to increase its market share of products sold to third parties. The latter knowledge would seem to satisfy the broader "reason to know" test of the Restatement. But the court counted the defendant's knowledge that its proposed system was essential to plaintiff's corporate survival as militating against the *Kenford* requirements.<sup>120</sup> A prior formal contract between the parties had excluded consequential damages, and the subject had not been raised in the informal contract under litigation. Rather than apply the Restatement default, the court interpreted the parties' prior history as more consistent with a failure by defendant to accept lost profits liability.

In *Schonfeld v. Hilliard*,<sup>121</sup> the court denied plaintiff's claim of lost profits in the amount of \$269 million for a breached contract concerning a failed cable television channel. The plaintiff had agreed to provide "time and effort" in negotiating contracts, but the opinion indicates no contribution of any non-redeployable asset by the plaintiff, including any specific investment of time and effort in actual negotiations. Indeed, it was the plaintiff who sought recovery for the failure of the defendants to comply with their promise to make relationship-specific investments.

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<sup>120</sup> Id. at 334.

<sup>121</sup> 218 F.3d 164 (2d Cir. 2000).

The cases do not line up precisely along the lines of relationship-specific investment. A recent Appellate Division decision that was affirmed by the Court of Appeals permitted recovery of lost profits where a testing company breached a contract to test plaintiff's products for compliance with a draft industry standard and to permit use of the defendant's trademark on those products.<sup>122</sup> The court, citing the *Kenford* cases, noted that lost profits were available only when they were within the contemplation of the parties, and then, in a single conclusory sentence, determined that the standard had been satisfied. The Court of Appeals' affirmance addressed only the amount of lost profits, not their contemplation, which apparently had not been the basis of the appeal.

Two recent invocations of the *Kenford* cases by the New York Court of Appeals are somewhat problematic. In the more reasoned case, *Bi-Economy Market v. Harleystown Ins. Co. of N.Y.*,<sup>123</sup> an insured brought an action against its insurer for consequential damages under a business interruption policy. The insured contended that the insurer had violated the terms of the policy and sought recovery for consequential damages as well as losses suffered under the policy. The claimed consequentials included losses related to the demise of the insured, allegedly as a result of the insurer's failure to make payments under the policy. The policy explicitly excluded coverage for "consequential loss," and the insurer contended that this exclusion demonstrated that, in accordance with the test of *Kenford I*, the parties did not intend that the insurer bear the loss of consequential damages. Nothing in the opinion, however, suggests that the plaintiff had made any investment that was specific to the transaction.

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<sup>122</sup> *Heary Bros. Lighting Protection Co. v. Intertek Testing Services, N.A.*, 780 N.Y.S.2d 691 (App. Div. 2004), *aff'd* 830 N.E.2d 298 (N.Y. 2005).

<sup>123</sup> 886 N.E.2d 127 (N.Y. 2008).

In an opinion that blurred the distinctiveness of the *Kenford* cases by citing both Restatement (2d) § 351 and Justice Holmes in *Globe Refining*, the court held that damages related to the demise of the insured by virtue of the insurer’s breach were sufficiently foreseeable to be compensable.<sup>124</sup> Payment of claims to avoid these losses, after all, was the very function of the insurance policy. The nature and the purpose of the contract, therefore, revealed the parties’ intent to avoid the business collapse that the insurer’s breach caused. The contractual exclusion of “consequential losses” referred only to losses engendered by delays caused by the acts of third party actors and thus did not entail “consequential damages” caused by the insurer itself. The court’s rationale, therefore, fits as easily within a “reason to know” conception of consequential damages as an “intention of the parties” conception. Nevertheless, the court’s reliance on the insurer’s breach of the covenant of good faith and fair dealing, implied in all insurance contracts, may serve to distinguish the case and permit a broader scope of damages.<sup>125</sup> A dissenting judge reverted to the more traditional application of the *Kenford* tests and determined that, had they considered the matter, the parties would not have agreed to the payments awarded by the majority. That might be the correct result if tacit agreements are properly discerned only in situations where the objective is to induce a relationship-specific investment that allows implementation of a joint enterprise. The payment of insurance premiums does not easily fit into that pattern. Nevertheless, the emphasis in the opinions on the contracts at issue as contracts of insurance, rather than transactional cases in which the allocation of risks between the parties may

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<sup>124</sup> The opinion in the second case, *Panasia Estates, Inc. v. Hudson Insurance Co.*, 886 N.E.2d 135 (N.Y. 2008), was quite cursory and relied on *Bi-Market* for the proposition that consequential damages were recoverable by the insured if they were the foreseeable result of the insurer’s breach. Since the record below had not been developed on that issue, the court did not address whether the test had been satisfied.

<sup>125</sup> Indeed, that is how some courts have read the decision. See, e.g., *Silverman v. State Farm Fire & Casualty Co.*, 867 N.Y.S.2d 881 (Sup. Ct. 2008); *Haym Solomon Home for Aged, LLC v. HSB Group, Inc.*, 2010 WL 301991 (E.D.N.Y.) at \*5.

be more ambiguous, suggests that the court may have been more willing to carve out an insurance exception to its prior rule.

### **B. Judicial Application of the “Reason to Know” Test**

The New York cases arguably are consistent with the intent of sophisticated commercial parties insofar as they permit the award of lost profits if, but only if, there was at least tacit agreement that a breaching party would incur such liability.<sup>126</sup> Moreover, those cases arguably are also consistent with the conduct of the majority of commercial actors, who exclude consequential damages in the absence of such investment, notwithstanding a legal default rule to the contrary. But the default, “reason to know” test is sufficiently nebulous that it plausibly could be interpreted in the same manner as the tacit agreement test, notwithstanding its broader verbal formulation. That is, courts might intuit to the results dictated by the tacit agreement test and apply “reason to know” or “foreseeability” to encompass only those risks within the contractual structures that the narrower test recognizes. The possibility of convergence is increased by the Restatement rule that permits courts to deny lost profits even with respect to foreseeable damages where awarding them would cause disproportionate damages or would be unjust,<sup>127</sup> or the common law principle that permits denial of lost profits that are not “reasonably certain.”<sup>128</sup> If courts actually interpret and apply the “reason to know” test in a manner consistent with parties’ intent, then there would be little practical difference between it and tacit agreement, and the widespread practice of excluding damages would arguably be based on parties’ misconception of their exposure under the default rule as judicially applied. If, on the other

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<sup>126</sup> See Adam Kramer, An Agreement-Centred Approach to Remoteness and Contract Damages, in Nili Cohen and Ewan McKendrick (eds.), *Comparative Remedies for Breach of Contract* 249 (2005).

<sup>127</sup> Restatement (2d) of Contracts § 351(c).

<sup>128</sup> See Lloyd, *supra* note .



hand, courts interpret the “reason to know” test in a manner that complicates parties’ efforts to determine their exposure *ex ante* or that imposes on them a degree of liability that they are unwilling to pay to bear or cannot price, the practice of exclusion is more comprehensible. Thus, before drawing any inferences about the superiority of the tacit agreement test, it would be useful to know whether courts apply the “reason to know” test in a predictable manner that demonstrates sensitivity to the lessons of contract design.

In order to examine whether courts in “reason to know” jurisdictions consider the existence of relationship-specific investments, I examined cases in California, a jurisdiction that has a reputation for coherent contract law and that embraces, at least as a formal matter, the “reason to know” test for consequential damages.<sup>129</sup> In its most recent foray into the consequential damages morass, the California Supreme Court concluded that lost profits allegedly suffered by a contractor after a school district’s breach of contract caused the contractor’s bonding company to reduce its coverage and consequently precluded the contractor from bidding on profitable contracts.<sup>130</sup> The California Supreme Court reversed an award for lost profits as general damages on the grounds that lost profits on collateral contracts with third parties in unidentified contracts were not given in construction contracts, although they might be available in contracts involving a sale of goods in which it was clear that the non-breaching party would be entering downstream transactions. General damages involved only those occurrences that were sufficiently predictable at the time of the conclusion of the contract that the parties could be said to have contemplated their materialization, and a reduction of bonding capacity and consequent loss of bidding capacity did not qualify. The lost profits might qualify as special

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<sup>129</sup> See Geoffrey P. Miller, *Bargains Bicoastal: New Light on Contract Theory*, 31 *Cardozo L. Rev.* 1475 (2010).

<sup>130</sup> *Lewis Jorge Construction Management, Inc. v. Pomona Unified School Dist.*, 102 P.3d 257 (Cal. 2005).

damages under the court's interpretation of *Hadley*. But the contractor did not satisfy the requisite "foreseeability" test because it had not established that at the time the contract was concluded the District "could have reasonably contemplated that its breach of the contract would probably lead to a reduction of [the contractor's] bonding capacity by its surety, which in turn would adversely affect [the contractor's] ability to obtain future contracts."<sup>131</sup> To have contemplated those consequences, the court concluded, the district would have had to have known "what [the contractor's] balance sheet showed or what criteria [the contractor's] surety ordinarily used to evaluate a contractor's bonding limits."<sup>132</sup> In short, the court adopted a straightforward foreseeability test and, given the specificity with which it defined that conditions that had to be foreseen as reasonably probable to result from the breach, that test was not satisfied.

At one point, the court appeared to be interested in the inquiry that underlies tacit agreement. It noted that damages are intended to give the aggrieved party the benefit of its bargain, and thus required a threshold inquiry into the nature of the bargain.<sup>133</sup> The court then found that the terms of the bargain excluded liability for profits that the contractor might earn on "collateral contracts" with third parties. The only profit protected by the contract terms was the profit that it would recover from the district's payment of the contract price. "[T]he benefit of its contractual bargain for profits was capped by whatever net profit it had assumed in setting its bid price."<sup>134</sup>

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<sup>131</sup> 102 P.3d at 267.

<sup>132</sup> *Id.*

<sup>133</sup> *Id.* at 263.

<sup>134</sup> *Id.* at 265.

That analysis sounds as though the California court’s assessment of appropriate did not deviate substantially from the “tacit agreement” test. But the court used its “bargain of the parties” analysis in order to determine whether the contractor’s lost profits from forgone other contracts qualified as general damages that constituted “the direct and immediate fruits of the contract”<sup>135</sup> or that naturally flow from a breach.<sup>136</sup> When the court turned to the question of whether lost profits qualified as special or consequential damages, the nature of the bargain was irrelevant. Lost profits in such cases, the court concluded, could not be recovered if they were speculative or uncertain. Here, they were uncertain, since certainty was purely a function of the what was foreseeable, and the district’s lack of knowledge of the contractor’s financial status removed lost profits in this case from that category.<sup>137</sup>

The specificity of knowledge that the court required to allow recovery of lost profits – intimate knowledge of the aggrieved party’s business – suggests a narrow construction of “reason to know” liability that may be more consistent with the results under tacit agreement. Thus, the California interpretation of “reason to know” does not necessarily generate fear of unlimited liability or overinvestment. It is not even necessarily inconsistent with the *Kenford* line of cases. That would occur if the court allowed recovery of lost profits by a party that clearly had not made a relationship-specific investment was still awarded lost profits for foreseeable damages. If the contractor could have taken on another construction project after the breach, then it is more difficult to find a specific investment in its contract with the district. If, however, the contractor’s bonding capacity was nontransferable as a consequence of the breach, then a threat of breach could be viewed as part of a holdup effort by the district, and it might be

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<sup>135</sup> Id. at 263.

<sup>136</sup> Id. at 265.

<sup>137</sup> Id. at 267.

appropriate to infer a pledge to pay lost profits as a credible commitment against breach. But the ambiguity about the scope of potential holdup also means that the case is not one from which we could conclude that the court is intuiting to results consistent with tacit agreement. What does seem clear is that the court's formal analysis is unrelated to the structure of the contractual relationship. Regardless of whether the California court's approach leads to insufficient or excess liability, its focus on knowledge as the measure of foreseeability still entails decisions about lost profits that are disembodied from contractual risk allocations.

## **V. Conclusion**

So maybe Holmes was correct after all. The default rule for consequential damages is peculiar in that most parties bargain out of it. Nevertheless, an obligation to pay consequential damages in the event of breach can play a useful role in some transactions, and sophisticated commercial actors presumably wish to deploy it when doing so offsets the costs generated by the misallocations inherent in the broad "reason to know" default. Commercial parties would presumably accept liability in order to receive some corresponding advantage, such as inducing relationship-specific investments that increase the value of the bargain. The tacit agreement test arguably facilitates that tradeoff and thus reflects the behavior and preferences of sophisticated actors. By restricting recovery to liabilities assumed by non-investing parties, the test arguably reduces the risk of overinvestment. By constraining recovery to that which was assumed and could be priced, the test discourages exclusion of consequential damages in cases where promise to pay them permits a credible signal of fidelity to the transaction without exposing the promisor to liability that is open-ended or uncompensable. And by allowing the dictates of contract design to determine the scope of liability, it arguably provides courts with a better metric for discerning

the intent of parties than inquiries into foreseeability that are at least formally disembodied from the parties' *ex ante* risk allocations.

My broader objective here, however, is not necessarily to advocate re-adoption of the tacit agreement test. Rather, it is to investigate what that test tells us about the extent to which sophisticated commercial actors implement the lessons of contract design, and the judicial response to that use. First, do parties actually design their relationship in a manner consistent with the predictions of contract theory? That is, do we find in contracts clauses that are of the type that contract theory predicts could solve transacting problems in particular situations? Second, can courts validate parties' efforts to implement contract theory? That is, can courts identify *ex post* the situations in which parties have applied the lessons of contract theory to induce surplus-maximizing conduct, and interpret contractual provisions accordingly? There is some literature that suggests that the answer to the first question is "yes," and the answer to the second is "no." Commentators often chastise courts for failing to recognize the significance that parties attach to the use of particular contractual clauses, and thus "misinterpreting" contracts in a manner inconsistent with the parties' intent.<sup>138</sup>

The tacit agreement test allows some test of these propositions. The Restatement and UCC tests for consequential damages are largely indifferent to parties' intent; they ask only what parties had reason to know could materialize as a consequence of breach. To some extent, these provisions appear to treat contract remedies as doctrines that are imposed on contracting parties after a breach, rather than as terms that are part of the contractual bargain and that have implications for overall pricing of the transaction. The tacit agreement test, on the other hand, explicitly requires courts to interpret contractual silence on the award of lost profits by reference

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<sup>138</sup> Examples of case specific analysis of judicial misconceptions of the parties' intent include Victor Goldberg, *Framing Contract Law* (2006); Robert E. Scott, (article on *Hoffman v. Red Owl*).

to the parties' intent. If there are conditions under which rational sophisticated parties would agree to assume liability for lost profits, and if courts can both identify those situations and detect the requisite intent when, but only when, such conditions are present, then we might have more faith in judicial capacity to enforce the risk allocation designed by parties, at least in this area. If, on the other hand, courts seem either oblivious to the parties' contractual efforts to induce surplus-maximizing behavior, or incompetent to enforce those, then the divide between theory and practice may reduce the effectiveness of contract design.

## APPENDIX A

## CORI CONTRACTS MENTIONING “LOSS” AND “PROFITS”

ID	Title	Filing Company	Notes
87	Multi-Vendor Program Agreement	MAYFAIR MINING & MINERALS INC	excludes C's and LP's
205	DISTRIBUTION AGREEMENT	R B RUBBER PRODUCTS INC	excludes C's and LP's
214	Software License and Distribution Agreement	PILGRIMS PRIDE CORP	excludes C's and LP's
219	COMMISSION JUNCTION AGREEMENT	COMISO CHARLES T	excludes C's and LP's
1322	License Agreement	MINN DAK FARMERS COOPERATIVE	entitled to equitable relief and any other remedies at law; governed by California law
1993	POOLING AND SERVICING AGREEMENT	SEQUOIA RESIDENTIAL FUNDING INC	excludes C's and LP's
2004	Lease	BRICKMAN GROUP LTD	no mention
2005	Lease with Brickman Leasing-Long Grove	BRICKMAN GROUP LTD	no mention
2006	Lease with Brickman Leasing-St. Louis	BRICKMAN GROUP LTD	no mention
2129	SERVICING AGREEMENT	WACHOVIA ASSET SECURITIZATION INC 2002 HE2 TRUST	no mention
2467	SALE CONTRACT	CAPITAL BUILDERS DEVELOPMENT PROPERTIES II	buyer not entitled to lost profits; sellers damages limited to purchase price
2608	COKE SUPPLY AGREEMENT	BLUE STEEL CAPITAL CORP	excludes C's and LP's
2609	PELLET SUPPLY AGREEMENT	BLUE STEEL CAPITAL CORP	excludes C's and LP's
2610	ROUNDS SUPPLY AGREEMENT	BLUE STEEL CAPITAL CORP	excludes C's and LP's
3002	FLOOD INSURANCE VENDOR AGREEMENT	INSURANCE MANAGEMENT SOLUTIONS GROUP INC	indemnity provision excludes Cs and LPs unless induced by wilful misconduct, etc.
3102	Office Building Lease	ONYX SOFTWARE CORP/WA	landlord not responsible for any Cs; landlord can recover lost rent
3546	RESEARCH COLLABORATION AGREEMENT	DIVERSA CORP	excludes C's and LP's in indemnification provision
3655	Service Agreement	UMDN INC	excludes C's and LP's
4084	TRANSACTION AGREEMENT	DIVERSA CORP	excludes C's and LP's in indemnification provision
4088	RESEARCH COLLABORATION AGREEMENT	DIVERSA CORP	excludes C's and LP's in indemnification provision
4091	INTELLECTUAL PROPERTY RIGHTS LICENSE	DIVERSA CORP	excludes C's and LP's in indemnification provision

4519	EPCO SERVICES AGREEMENT	ENTERPRISE PRODUCTS OPERATING L P	one party (EPCO) excludes C's and LP's
5208	License and Development Agreement	DUSA PHARMACEUTICALS INC	includes lost profits (13.5.1)
5343	LICENSED DEVELOPER AGREEMENT	IVP TECHNOLOGY CORP	SCEA has no liability for C's and LPs; Developer has no liability for C's and LPs unless it breaches certain provisions (confidentiality, trademarks, title)
5490	DISTRIBUTION AGREEMENT	COGNIZANT TECHNOLOGY SOLUTIONS CORP	excludes C's and LP's
5635	License Agreement with Addendum No. 1	ACE CASH EXPRESS INC/TX	ace not liable for Cs and Lps; this provision was added in an addendum
5762	CONSULTING AGREEMENT WITH ROBERT ATWELL	QUIET TIGER INC	consultant not liable to finey for any C's and LP's
5894	Master Services Agreement	PHOTRONICS INC	excludes C's and LP's
6361	AGREEMENT	IVP TECHNOLOGY CORP	excludes LP's
6454	NETWORK SERVICE AGREEMENT	AMACORE GROUP, INC.	excludes C's and LP's
7270	PURCHASE AND SALE AGREEMENT	APACHE CORP	excludes C's of any kind
7625	EQUIPMENT LEASE AGREEMENT	UNION DRILLING INC	lesse no claims against lesser; lessor no claims for lessee
7652	US Internet Colocation Services Agreement	AMEN PROPERTIES INC	excludes C's and LP's
8365	AMENDED AND RESTATED LEASE AGREEMENT	READING INTERNATIONAL INC	landlord has no liability for C's;
8586	LICENSE AGREEMENT WITH WARNER BROS.	POORE BROTHERS INC	licensee not entitled to LP's
8587	LICENSE AGREEMENT WITH WARNER BROS.	POORE BROTHERS INC	licensee not entitled to LP's
8588	LICENSE AGREEMENT WITH M.J. QUINLAN & ASSOC.	POORE BROTHERS INC	licensee entitled to LP's
8751	FORM OF AGENCY AGREEMENT	MACQUARIE SECURITISATION LTD	agent not responsible for any C's or LP's;
9338	PURCHASE AGREEMENT	MAXTOR CORP	excludes C's and LP's unless seller willfully breaches confidentiality
9472	LICENSE AGREEMENT	SENETEK PLC /ENG/	excludes C's and LP's for both parties but then lists various, specific exceptions where they could be allowed
9473	LICENSE AND SUPPLY AGREEMENT	SENETEK PLC /ENG/	excludes C's and LP's for both parties but then lists various, specific exceptions where they could be allowed



9474	LICENSE AGREEMENT DATED	SENETEK PLC /ENG/	excludes C's and LP's for both parties but then lists various, specific exceptions where they could be allowed
9643	SALE AGREEMENT	MPOWER HOLDING CORP	lost profits are difficult to calculate, provides for termination fee
9927	OFFICE LEASE	EXACT SCIENCES CORP	excludes C's and LP's unless Tenant doesn't leave on time
10233	DEFINITIVE DEVELOPMENT & COMMERCIALIZATION AGMNT	QLT INC/BC	excludes C's and LP's
10686	SERVICES AGREEMENT	INSMED INC	excludes C's and LP's for both parties but then lists various, specific exceptions where they could be allowed
11141	OPERATION & MAINTENANCE AGREEMENT	EAST COAST POWER LLC	excludes C's and LP's
11142	ELECTRICITY SUPPLY AGREEMENT	EAST COAST POWER LLC	excludes C's and LP's
11288	BEVERAGE MARKETING AGREEMENT	MRS FIELDS ORIGINAL COOKIES INC	allows C's and LP's
11524	AMENDED AND RESTATED LEASE AGREEMENT	HANDSPRING INC	tenant must procure business interruption insurance
11699	TRANSACTION SYSTEM AGREEMENT	INSTINET GROUP INC	excludes C's and LP's unless gross neg or willful misconduct
11826	SERVICES AGREEMENT	DELCO REMY INTERNATIONAL INC	excludes C's and LP's
11872	AGREEMENT FOR PRODUCTS AND SVCS	INVISION TECHNOLOGIES INC	excludes C's and LP's
11873	MAINTENANCE AGREEMENT	INVISION TECHNOLOGIES INC	excludes C's and LP's
11968	TECHNOLOGY CROSS-LICENSE AGREEMENT	QUINTON CARDIOLOGY SYSTEMS INC	excludes C's and LP's unless violation of trade secrets/know how or indemnification
11969	ABPM PRIVATE LABEL DISTRIBUTION AGREEMENT	QUINTON CARDIOLOGY SYSTEMS INC	excludes C's and LP's unless gross neg, willful misconduct, indemnity
12019	LICENSE AGREEMENT	PARACELSIAN INC /DE/	excludes C's and LP's
12021	LICENSE AGREEMENT	PARACELSIAN INC /DE/	excludes C's and LP's except for indemnity
13887	LICENSE AGREEMENT	GTC BIOTHERAPEUTICS INC	excludes C's and LP's except for indemnity
14445	MORTGAGE, LEASE, AND SECURITY AGREEMENT	ACADIA REALTY TRUST	must indemnify against C's
14596	LEASE AGREEMENT	KROLL INC	both parties waived right to damages
15082	LEASE AGREEMENT	EMERITUS CORP/WA/	award for lost profits
15590	Development Agreement	GRANITE CITY FOOD & BREWERY LTD	excludes C's and LP's unless included in liquidated damages clause

15737	MASTER SERVICES AGREEMENT	SWITCHBOARD INC	excludes C's and LP's except for confidentiality
15745	AMENDED AND RESTATED LLC OPERATING AGREEMENT	CE GENERATION LLC	no mention
15904	DISTRIBUTION AGREEMENT	ASPENBIO INC	excludes C's unless indemnity or liquidated
16155	Amended Master Services Agreement	UNIVERSAL ACCESS GLOBAL HOLDINGS INC	excludes C's and LP's except for indemnity and confidentiality
16516	SERVICE AGREEMENT	IPAYMENT INC	excludes C's and LP's unless gross neg, willful misconduct, confidentiality
16518	PROCESSING SERVICES AGREEMENT	IPAYMENT INC	excludes C's and LP's
16521	AGREEMENT FOR TELECOMMUNICATIONS SERVICES	AMERICA ONLINE LATIN AMERICA INC	excludes C's and LP's in indemnification provision
16727	SUPPLY AGREEMENT	GLYCOGENESYS INC	excludes C's and LP's except for indemnity and confidentiality
16746	Lease Agreement	TEMECULA VALLEY BANCORP INC	no mention
16749	Lease Agreement	TEMECULA VALLEY BANCORP INC	no mention
17048	SERVICE AGREEMENT	YP CORP	excludes C's and LP's
17092	outsourcing agreement	DJ ORTHOPEDICS INC	excludes C's and LP's
17471	MANUFACTURING AGREEMENT	OMEGA PROTEIN CORP	excludes C's and LP's except for indemnity
17550	Software License Agreement	WATLEY A B GROUP INC	excludes C's and LP's
18079	DISTRIBUTOR AGREEMENT	NETGEAR INC	excludes C's and LP's
18080	DISTRIBUTOR AGREEMENT	NETGEAR INC	excludes C's and LP's
18082	DISTRIBUTOR AGREEMENT	NETGEAR INC	excludes C's and LP's
18084	MASTER PURCHASE AGREEMENT	NETGEAR INC	excludes C's and LP's
18085	VENDOR AGREEMENT	NETGEAR INC	excludes C's and LP's unless gross neg, willful misconduct, confidentiality, indemnity
18098	RETAILER AGREEMENT	NETGEAR INC	excludes C's and LP's
18100	DISTRIBUTION AGREEMENT	NETGEAR INC	excludes C's and LP's except for indemnity and confidentiality
18101	DISTRIBUTION AGREEMENT	NETGEAR INC	excludes C's and LP's except for indemnity and confidentiality
18102	VENDOR AGREEMENT	NETGEAR INC	excludes C's unless vendor indemnity
18103	MASTER PURCHASE AGREEMENT	NETGEAR INC	excludes C's and LP's
18135	LICENSE/DISTRIBUTION AGREEMENT	STAR E MEDIA CORP	excludes C's and LP's

18136	LICENSE/DISTRIBUTION AGREEMENT	STAR E MEDIA CORP	excludes C's and LP's
18153	AMENDED & RESTATED COLLABORATION AGREE.	XOMA LTD /DE/	excludes C's and LP's
18213	POOLING & SERVICING AGREEMENT	RENAISSANCE MORT	no mention
18631	Sublease Agreement	UNITED INDUSTRIES CORP	landlord has no C liability except with respect to hazardous substances
19117	Product Distribution Agreement	VITAL IMAGES INC	excludes C's and LP's except for indemnity and confidentiality
19262	Lease	FAIR ISAAC CORP	excludes C's and LP's unless Tenant doesn't leave on time or other stipulations
19441	Lease Agreement	PEMSTAR INC	landlord has no C liability for defects in land; tenant not liable for any C
19708	LEASE	PERFORMANCE CAPITAL MANAGEMENT LLC	limited liability for trustee
19799	TRANSITION SERVICES AGREEMENT	MPOWER HOLDING CORP	excludes C's and LP's
19829	Exchange Agent	SCHOLASTIC CORP	excludes C's and LP's unless gross neg or willful misconduct
19892	PURCHASE AGREEMENT	SURGE TECHNOLOGIES CORP	excludes C's and LP's unless confidentiality, indemnity, negligent damage of persons or property, breach of environmental law
19899	FULFILLMENT SERVICES AGREEMENT	GENERAL MEDIA INC	excludes C's and LP's
19995	ISSUING AND PAYING AGENCY AGREEMENT	ANTHEM INC	JP Morgain not liable for any C's or LP's
20209	Operation Agreement for Qualifying Facilities	GREEN POWER ENERGY HOLDINGS CORP	excludes C's and LP's
20273	LEASE	SIGMA DESIGNS INC	Landlord has no liability for C's or LP's; tenant must indemnify landlord
20330	Patent Assignment Agreement	NEORX CORP	excludes C's and LP's except for indemnity
20332	Patent License Agreement	NEORX CORP	excludes C's and LP's except for indemnity
20343	LEASE	GUITAR CENTER INC	lessor not liable for C's and LP's unless the result of neg or willful misconduct; lessee must indemnify lessor for C's
20593	Operations Transfer Agreement	EMERITUS CORP/WA/	all remedies at law allowed; indemnity provision is lopsided; governed by Pennsylvania law
20597	Operations Transfer Agreement	EMERITUS CORP/WA/	all remedies at law allowed; indemnity provision is lopsided; governed by Pennsylvania law
20598	Operations Transfer Agreement	EMERITUS CORP/WA/	all remedies at law allowed; indemnity provision is lopsided; governed by Pennsylvania law

20600	Operations Transfer Agreement	EMERITUS CORP/WA/	all remedies at law allowed; indemnity provision is lopsided; governed by Pennsylvania law
20601	Operations Transfer Agreement	EMERITUS CORP/WA/	all remedies at law allowed; indemnity provision is lopsided; governed by Pennsylvania law
20603	Operations Transfer Agreement	EMERITUS CORP/WA/	all remedies at law allowed; indemnity provision is lopsided; governed by Pennsylvania law
20954	MANUFACTURING SERVICES & SUPPLY AGREEMENT	POWERWAVE TECHNOLOGIES INC	excludes C's and LP's
21034	Development And License Agreement	IMMUNOGEN INC	excludes C's and LP's
21131	MANAGEMENT AGREEMENT	APPLE HOSPITALITY FIVE INC	damages allowed including lost revenue
21211	Reseller Agreement	ALTERNET SYSTEMS INC	excludes C's and LP's except for breaching license and distribution clause
21444	LOCAL MARKETING AGREEMENT, DATED APRIL 5, 2002	KRCA LICENSE CORP	excludes C's and LP's
21452	LOCAL MARKETING AGREEMENT, DATED MARCH 15, 2001	KRCA LICENSE CORP	excludes C's and LP's
21455	TIME BROKERAGE AGREEMENT FOR KJOJ (AM)	KRCA LICENSE CORP	excludes C's and LP's
21459	LOCAL MARKETING AGREEMENT	KRCA LICENSE CORP	excludes C's and LP's
21476	LEASE AGREEMENT	ALIGN TECHNOLOGY INC	lessor not responsible for LP's
21901	Management Agreement - RedInn Hotel	APPLE HOSPITALITY TWO INC	allows for remedies at law; governed by laws of state site is located
21944	FIMEP SA: Paying Agency Agreement	FIMEP SA	agent not responsible for any C's or LP's unless there is fraud
22409	LICENSE AGREEMENT--Vascular Genetics Inc.	CORAUTUS GENETICS INC	remedies are not limited; governed by laws of Delaware
22560	Dev. Mark. AND Distr. AGREEMENT--LSI Logic Corp.	SYNPLICITY INC	exclude C's and LP's unless breach of intellectual property or confidentiality
22662	Agreement Regarding Lease	IOMEGA CORP	Landlord shall have any remedies provided by California law
22820	LICENSE AGREEMENT - AFFYMETRIX INC	AFFYMETRIX INC	excludes LP's unless confidentiality. Warranty, or indemnity
22821	INSTRUMENT AND CHIP SUPPLY AGREEMENT - AFFYMETRIX INC	AFFYMETRIX INC	excludes LP's unless confidentiality. Warranty, or indemnity
22822	R & D COLLABORATION AGREEMENT	AFFYMETRIX INC	excludes LP's

22823	DIAGNOSTIC PRODUCT AND INSTRUMENT AGENCY AGREEMENT	AFFYMETRIX INC	excludes LP's unless confidentiality. Warranty, or indemnity
22824	INSTRUMENT AGENCY AGREEMENT	AFFYMETRIX INC	excludes LP's unless confidentiality. Warranty, or indemnity
23043	LEAS AGREEMENT - FIRST MARINER BANCORP	FIRST MARINER BANCORP	landlord not responsible for lost profits in specific situations
23044	LEASE AGREEMENT - FIRST MARINER BANCORP	FIRST MARINER BANCORP	landlord not responsible for lost profits in specific situations
23503	Services Purchase Agreement	PATH 1 NETWORK TECHNOLOGIES INC	excludes C's and LP's
23814	SOFTWARE LICENSE AGREEMENT-- I-LINK INCORPORATED	ACCERIS COMMUNICATIONS INC	excludes C's and LP's
23912	PURCHASE, SALE & LICENSE AGREEMENT	PLANET POLYMER TECHNOLOGIES INC	no mention
24052	MASTER EQUIPMENT LEASE	VITALSTREAM HOLDINGS INC	lessee waives right to consequential damages
25441	Software License Agreement, I-Link Inc. And Buyers United, Inc.	ACCERIS COMMUNICATIONS INC	excludes C's and LP's
25754	Deed Of Lease	ALLIANCE BANKSHARES CORP	unless gross neg or will misconduct, bars landlord from C's caused by faulty pipes
25791	Google Services Agreement	ASK JEEVES INC	excludes C's and LP's except for indemnity, intellectual property rights, and other provisions (kept secret)
26251	Amended Advertising And Promotion Agreement : Yahoo	US SEARCH CORP COM	yahoo shall have no liability for C's or LP's
26772	Pooling And Servicing Agreement- Credit Suisse	CSFB MORTGAGE BACKED PASS THROUGH CERTS SERIES 200	no servicer, trustee, or trust administrator shall be liable for C's or LP's
26773	License Agreement- Biochemie GMBH, July 31, 2002	CUBIST PHARMACEUTICALS INC	excludes C's and LP's
26962	Standard Industrual Lease- WB Murphy Ranch LLC	PHOENIX TECHNOLOGIES LTD	document not found
27206	Pooling And Servicing Agreement- Credit Suisse	CSFB MORTGAGE BACKED PASS THR CERTS SER 2003-AR26	document not found
27442	Second Addendum To Lease	INTEGRAL SYSTEMS INC /MD/	document not found
27912	Consulting Agreement	AMERIVISION COMMUNICATIONS INC	Consultant not liable for any C's or LP's; consultant entitled to any right or remedy
27934	Master Service Agreement	AMERIVISION COMMUNICATIONS INC	excludes C's and LP's

28187	Master Servicing And Trust Agreement	GSR Mortgage Loan Trust 2004-14	document not found
28233	Application And Hosting Services Agreement	SOURCE ATLANTIC, INC.	document not found
31067	Exchange Agent Agreement	TELEFONICA OF ARGENTINA INC	exchange agent not liable for any Cs or LPs
31072	Exchange Agent Agreement	TELEFONICA OF ARGENTINA INC	exchange agent not liable for any Cs or LPs
31088	Exchange Agent Agreement	TELEFONICA OF ARGENTINA INC	exchange agent not liable for any Cs or LPs
31098	Exchange Agent Agreement	TELEFONICA OF ARGENTINA INC	exchange agent not liable for any Cs or LPs
31541	Services Agreement	MAGELLAN MIDSTREAM PARTNERS LP	excludes C's and LP's
31547	Services Agreement	MAGELLAN MIDSTREAM PARTNERS LP	bars arbitrator from awarding C's or LP's
31593	Services Agreement	MAGELLAN MIDSTREAM PARTNERS LP	excludes C's and LP's
31594	Services Agreement	MAGELLAN MIDSTREAM PARTNERS LP	bars arbitrator from awarding C's or LP's
31751	Aircraft Purchase Agreement	WILLIAMS SONOMA INC	seller not liable for C's or LP's
32906	Services Agreement	CHUKCHANSI ECONOMIC DEVELOPMENT AUTHORITY	Firm not liable for C's or LP's
34043	Second Amended And Restated License And Services Agreement	VIEWPOINT CORP	excludes C's and LP's except for indemnity
34523	Pooling And Servicing Agreement- Credit Suisse	CSFB MORTGAGE	document not found
34617	Placement Agency Agreement	OXIGENE INC	document not found
34834	Letter Agreement - Development Agreement	IKONA GEAR INTERNATIONAL INC	document not found
35283	Exchange Agent Agreement	WH CAPITAL CORP	excludes C's and LP's
35697	Lease Agreement	OMNIVISION TECHNOLOGIES INC	tenant waives right to C's and LP's
35734	Insurance Agreement	CAPITAL ONE AUTO FINANCE TRUST 2004-A	document not found
37110	Management Services Agreement	ONE PRICE CLOTHING STORES INC	manager not liable for C's and LP's
37204	Services Agreement	FIRST ADVANTAGE CORP	excludes C's and LP's
37205	3rd Amendment To Lease	3D SYSTEMS CORP	tenant waives right to C's and LP's
37841	Asset Purchase Agreement	RCN CORP /DE/	excludes C's
37941	Collaborative Research, Development And License Agreement	CURIS INC	excludes C's and LP's except for indemnity and confidentiality

39113	Pooling And Servicing Agreement	HOME EQUITY LOAN ASSET-BACKED CERTIFICATES SERIES	custodian not liable for C's
39295	User Agreement	XSINVENTORY	document not found
40279	Confidential/Limited Disclosure Agreement	PATH 1 NETWORK TECHNOLOGIES INC	excludes C's and LP's
41543	Agency Agreement	APOLLO GOLD CORP	if the indemnifiatoin provision is void, then the parties will help each other out (except with respect to C's and LP's)
42064	Amendment To Manufacturing Agreement	MARTEK BIOSCIENCES CORP	document not found
42087	License Option And Collaboration Agreement	ACADIA PHARMACEUTICALS INC	excludes C's and LP's except for indemnity and confidentiality
42634	Pooling And Servicing Agreement	RENAISSANCE HOME EQUITY LOAN TRUST 2004-4	no mention
43023	Exclusive Channel Partner License Agreement	BRAINTECH INC	Braintech not liable for C's or LP's
43314	Insertion Order/Advertising Agreement	TRAVELZOO INC	excludes C's and LP's
43652	Form Of Exchange Agent Agreement	Triton Coal Company, L.L.C.	exchange agent not liable for any Cs or LPs
44230	Restricted Account Agreement	COACH INDUSTRIES GROUP INC	bank not liable for C's or LP's
44342	Lease	ECOST COM INC	landlord has no liability for C's or LP's
45860	Software Purchase Agreement	Teknik Digital Arts Inc.	all remedies allowed; indemnity includes C and LP claims against eachother
45952	Escrow Agreement	ARQULE INC	escrow agent not liable for C's and LP's
46410	Amended And Restated Supply Agreement	ALPHARMA INC	excludes C's and LP's
46411	Selective Waiver Agreement	ALPHARMA INC	excludes C's and LP's; but Teva explicitly agrees to be responsible for C's and LP's if there is a willful breach
46961	Exclusive License Agreement - MDMI Technologies, Inc - 10/29/04	MED-TECH SOLUTIONS, INC.	excludes C's and LP's
47525	Business Charge Card & Marketing Agreement	Wright Express CORP	document not found
47685	Placement Agreement	COLUMBIA BANCORP	document not found
47815	License And Distribution Agreement	KENTEX PETROLEUM INC	excludes C's and LP's
49471	Sale And Servicing Agreement	Accredited Mortgage Loan Trust 2004-4	document not found

49478	Transfer And Servicing Agreement	Fieldstone Mortgage Investment Trust, Series 2004-	document not found
49695	Amended And Restated Master Lease Agreement	IMPRESO INC	document not found
50137	Office Lease Agreement	MCDATA CORP	document not found
51061	Pooling And Servicing Agreement	Bayview Financial Securities Company, LLC Mortgage	document not found
52884	Lease	SunGard Availability Inc.	document not found
53591	Pooling And Servicing Agreement	NovaStar Mortgage Funding Trust, Series 2004-4	document not found
54428	Manufacturing And Development Agreement	BOVIE MEDICAL CORP	document not found
55159	Pooling And Servicing Agreement	Asset Backed Pass-Through Certificates, Series 200	document not found
56142	Exclusive License Agreement	CYTRX CORP	no mention
56143	Exclusive License Agreement	CYTRX CORP	no mention
56144	Exclusive License Agreement	CYTRX CORP	no mention
56145	Exclusive License Agreement	CYTRX CORP	no mention
56146	Exclusive License Agreement	CYTRX CORP	no mention
56147	Exclusive License Agreement	CYTRX CORP	no mention
56494	Agreement	RAMP CORP	excludes C's and LP's
56708	Reseller Agreement	AT ROAD INC	excludes C's and LP's except for indemnity
56782	Transfer And Servicing Agreement	STRUCTURED ASSET SECURITIES CORP	document not found
56787	Sale-Leaseback Commitment Agreement	UNITED RENTALS INC /DE	
57681	Pooling And Servicing Agreement	RENAISSANCE HOME EQUITY LOAN TRUST 2003-4	document not found
58290	Supply Agreement	MINRAD INTERNATIONAL, INC.	Minrad not liable for C's or LP's; MG assumes full responsibility for damages
58440	Sale And Servicing Agreement	STRUCTURED ASSET SEC CORP THORNBURG MORT SEC TRUST	document not found
59435	Commercial Supply Agreement	AMYLIN PHARMACEUTICALS INC	excludes C's and LP's
59437	Commercial Supply Agreement	AMYLIN PHARMACEUTICALS INC	excludes C's and LP's



60148	Lease	THERMOVIEV INDUSTRIES INC	
60155	Lease	Aames Mortgage Investment Trust 2005-1	Master servicer no liable for C's and LP's
60795	Lease	LEADIS TECHNOLOGY INC	no mention except for indemnity clause
60822	AGREEMENT FOR THE PROVISION OF HARDWARE	SENETEK PLC /ENG/	excludes C's and LP's except for indemnity
61182	Amended Indemnification And Insurance Matters Agreement	NORTHLAND CRANBERRIES INC /WI/	supplier not liable for C's or LP's; purchaser agrees to indemnify supplier against C's and LP's
61437	Master Technology Ownership & License Agreement	INFORTE CORP	seller not liable for C's or LP's
61547	Master Patent Ownership And License Agreement	U S GOLD CORP	no mention
61632	Business Services Agreement Dated	Lehman ABS Corp. Home Equity Loan Trust 2005-1	Master servicer no liable for C's and LP's
61713	Distribution Agreement	COLUMBIA BANCORP	custodian not liable for C's and LP's
61774	Canadian Distribution Agreement	HyperSpace Communications, Inc.	excludes C's and LP's
61810	Japanese Distribution Agreement	CSFB ADJUSTABLE RATE MORTGAGE TRUST 2005-2	excludes C's and LP's
61954	Distribution Support Services Agreement	CALPROP CORP	buyer released seller of C's and LP's only for environmental damages
62655	Agreement For Purchase And Sale Of Property	AMERICAN SCIENCE & ENGINEERING INC	no mention except for indemnity clause
62999	Publisher License Agreement Dated	PC CONNECTION INC	landlord has no liability for C's or LP's
63015	Servicing Agreement	BITSTREAM INC	landlord has no liability for C's or LP's; tenant has liability for C's if they do not vacate
63212	Standard Terms To Master Servicing And Trust Agreement	SYCAMORE NETWORKS INC	supplier not liable for C's or LP's
63290	Pooling And Servicing Agreement	PALMONE INC	excludes C's and LP's except for indemnity
63308	ColumbiaGasTransCorp	PALMONE INC	excludes C's and LP's
63317	Sale And Servicing Agreement	PALMONE INC	excludes C's and LP's except for breaching license
63322	Remote Knowledge Authorized Master Distributor Agreement	PALMONE INC	excludes C's and LP's except for indemnity
63783	Service Agreement	MICRO THERAPEUTICS INC	excludes C's and LP's
63786	Office Building Lease	MICRO THERAPEUTICS INC	excludes C's and LP's
63788	Distributorship Agreement	MICRO THERAPEUTICS INC	excludes C's and LP's

63790	Reseller Agreement	MICRO THERAPEUTICS INC	excludes C's and LP's except for indemnity
64009	Sale And Servicing Agreement	CHELSEA PROPERTY GROUP INC	buyer not liable for LP's
64173	It Services Agreement	MIDWAY GAMES INC	excludes C's and LP's
64223	Software Hosting And Licensing Agreement	ENCORE CAPITAL GROUP INC	no mention
64260	National Account Agreement	GS MORTGAGE SECURITIES CORP GSR MORT LOAN TR 2003-	trustee not liable for C's or LP's
64396	Services Agreement	CSFB MORTGAGE-BACKED PASS THROUGH CERTS SER 2003 2	document not found
65207	Exclusive Field Of Use License Agreement	FERC	document not found
65649	Placement Agent Agreement	HOUSEHOLD MORTGAGE LOAN TRUST 2003-HC2	no mention
65692	Distribution Agreement	REMOTE KNOWLEDGE INC	excludes C's and LP's
66143	Equipment Lease Agreement	ON COMMAND CORP	excludes C's and LP's except for indemnity
66533	License Agreement	KINTERA INC	C's and LP's waived with respect to repairs, premise access and common areas
66741	Insurance Agreement	PSS WORLD MEDICAL INC	abbot has no liability for C's and LP's except for duty to indemnify
67330	Sublease	NETWORK INSTALLATION CORP	motorola no liability for C's and LP's
67377	Amended And Restated Lease Agreement	ACCREDITED MORTGAGE LOAN TRUST 2003-2	no mention
67413	Lease Agreement	STORAGE ALLIANCE INC	service provider not liable for LP's
67416	Software Hosting And Licensing Agreement	STORAGE ALLIANCE INC	excludes C's and LP's
67809	National Account Agreement	PC CONNECTION INC	
67832	Services Agreement	IMCOR PHARMACEUTICAL CO	excludes C's and LP's
68004	Exclusive Field Of Use License Agreement	GLOBAL ENTERTAINMENT CORP	liscensor shall not be liable for C's or LP's
68633	Placement Agent Agreement	KOSAN BIOSCIENCES INC	escrow agent not liable for C's and LP's
68793	Distribution Agreement	VENDINGDATA CORP	VDC is not liable for C's or LP's
68988	Equipment Lease Agreement	APPLIED EXTRUSION TECHNOLOGIES INC /DE	lessor not liable for C's amd LP's
69039	License Agreement	INDEVUS PHARMACEUTICALS INC	excludes C's and LP's
69268	Insurance Agreement	CAPITAL ONE AUTO RECEIVABLES LLC	excludes C's and LP's
69446	Sublease	CANEUM INC	excludes C's and LP's

69462	Amended And Restated Lease Agreement	PEP BOYS MANNY MOE & JACK	all remedies allowed; governed by NY (in most cases)
69904	Lease Agreement	MGP INGREDIENTS INC	excludes C's and LP's
76263	License Agreement	Coley Pharmaceutical Group, Inc.	excludes C's and LP's except for indemnity
76389	Services Agreement	ELECTRIC NETWORK COM INC	document not found
76991	Exchange Agent Agreement	UBIQUITEL OPERATING CO	document not found
79475	Development Agreement	ACADIA PHARMACEUTICALS INC	document not found
80568	Mastering Servicing And Trust Agreement	GS MORTGAGE SECURITIES CORP GSAMP TRUST 2004-SEA1	document not found
80616	Primary Supply And Consignment Agreement	FACTORY CARD OUTLET CORP	excludes C's and LP's unless willful misconduct
80670	Count Control Agreement	MILLENNIUM CELL INC	document not found
80704	Sale And Servicing Agreement	UPFC Auto Receivables Trust 2005-A	document not found
80710	Lease	BLUE COAT SYSTEMS INC	document not found
81433	Supply Agreement	MOD PAC CORP	document not found
81767	License Agreement	PRESTWICK PHARMACEUTICALS INC	restricts indemnity clause from allowing lost profits
81841	Pooling And Servicing Agreement	BEAR STEARNS TRUST MORTGAGE PASS-THROUGH CERTS SER	document not found
82239	License Agreement	INTARCIA THERAPEUTICS, INC	document not found
82400	Joint Venture Agreement	GERON CORPORATION	two separate companies joining together both are not liable for C's or LP's to the new company
82402	Contribution And License Agreement	GERON CORPORATION	excludes C's and LP's
82488	Revised Development Agreement	MANDALAY RESORT GROUP	limits remedies but doesn't mention C's or LP's
82506	Software License Agreement	MPHASE TECHNOLOGIES INC	excludes C's and LP's except for breaching license and confidentiality
82790	Transfer And Servicing Agreement	HomeBanc Mortgage Trust 2005-2	Master servicer not liable for C's and LP's
82798	Customer Interaction Service Agreement	STARMED GROUP INC	CD, LLC not liable for any C's or LP's
82862	License Agreement	BLISS ESSENTIALS CORP	excludes C's and LP's
82887	Lease Agreement	PortalPlayer, Inc.	landlord has no liability for C's or LP's; tenant must indemnify for C's
83389	Purchase And Sale Agreement	PETROQUEST ENERGY INC	excludes C's and LP's
83390	Purchase And Sale Agreement	PETROQUEST ENERGY INC	excludes C's and LP's

83758	Insurance Agreement	Capital One Auto Finance Trust 2005-A	indemnificatoin provision excludes C's and LP's
83762	Office Lease	Deja Foods Inc	landlord has no liability for C's or LP's, tenant must indemnify for C's
83868	Co-Marketing Agreement	ADVANCED MEDICAL OPTICS INC	excludes C's and LP's unless willful misconduct or gross negligence
83887	Restricted Account Agreement	PIPELINE DATA INC	bank not liable for C's or LP's
83997	2nd Restated Collaboration Agreement	CURAGEN CORP	excludes C's and LP's except for indemnity
84036	License Contract For The Exploration And Exploitation Of Hydrocarbons	HARKEN ENERGY CORP	no mention
85034	Purchase Agreement	INTERNATIONAL PAPER CO /NEW/	mention in indemnity clauses
85588	Services Agreement	NEW RIVER PHARMACEUTICALS INC	third security shall have no liability for C's or LP's
85589	Lease Agreement	NEW RIVER PHARMACEUTICALS INC	excludes LP's
85593	License Agreement	NEW RIVER PHARMACEUTICALS INC	excludes C's and LP's
85835	Amended And Renewed Management Services Agreement	HEARST ARGYLE TELEVISION INC	The Company is not liable for any C's or LP's
86118	Web Services Agreement	BLUEBOOK INTERNATIONAL HOLDING CO	Licensor not liable for any C's or LP's
86745	Lease Agreement	INTEGRATED PERFORMANCE SYSTEMS INC	document not found
87400	Transfer And Servicing Agreement	MERRILL LYNCH MORT INV FIELDSTONE MORT INV TR SER	document not found
87560	DIstribution Agreement	ALTIGEN COMMUNICATIONS INC	document not found
87745	Lease	DAILY JOURNAL CORP	landlord has no liability for C's or LP's, tenant must indemnify for C's
87756	Lease	NOTIFY TECHNOLOGY CORP	excludes C's
87919	Purchase And Sale Agreement	AIRSPAN NETWORKS INC	excludes C's and LP's
88022	Purchase And Sale Agreement	BEDFORD PROPERTY INVESTORS INC/MD	seller not liable for C's
88027	Purchase Agreement And Escrow Instructions	BEDFORD PROPERTY INVESTORS INC/MD	mentioned in environmental damages provision
88189	Lease Agreement	SONIC FOUNDRY INC	landlord has no liability for C's or LP's
88307	Pooling And Servicing Agreement	CSFB MORTGAGE	excludes C's and LP's

88308	Pooling And Servicing Agreement	CSFB MORTGAGE	excludes C's and LP's
88309	Pooling And Servicing Agreement	CSFB MORTGAGE	excludes C's and LP's
88362	Services Agreement	AMERICAN PORTFOLIOS	Bear Stearns not liable for C's or LP's
88363	Clearing Agreement	AMERICAN PORTFOLIOS	Pershing not liable for C's
88484	Service And Consulting Agreement	AVITAR INC /DE/	excludes C's and LP's
88571	5th Amendment To Purchase And Sale Agreement	UNIFIED WESTERN GROCERS INC	allows for all remedies at law
88892	License And Distribution Agreement	AUTOCORP EQUITIES INC	excludes C's and LP's
89075	Sales & Servicing Agreement	ACCREDITED MORTGAGE	no mention
89244	Extension 2 To Remote Merchant Integration	PROVIDE COMMERCE INC	excludes C's and LP's
89297	Lease & License Agreement	UCI MEDICAL AFFILIATES INC	the corporation is not liable for C's or LP's
89642	1st Extension To Remote Merchant Integration Agreement	PROVIDE COMMERCE INC	excludes C's and LP's
89643	2nd Extension To Remote Merchant Integration (RMI) Agreement	PROVIDE COMMERCE INC	excludes C's and LP's
90049	License Agreement	WESCORP ENERGY INC	document not found
90124	Transition Services Agreement	TAPESTRY PHARMACEUTICALS, INC	document not found
90154	Pooling And Servicing Agreement	CSFB MORTGAGE	excludes C's and LP's
90984	Development And Supply Agreement	XCYTE THERAPIES INC	excludes C's except for indemnity
92215	Management Agreement	U S TIMBERLANDS KLAMATH FALLS LLC	no mention
92981	Deck-Checker Distribution Agreement	VENDINGDATA CORP	VDC is not liable for C's or LP's
118952	Lease	PERICOM SEMICONDUCTOR CORP	landlord has no liability for C's or LP's
164940	Depot Repair Services Agreement	EXABYTE CORP /DE/	excludes C's and LP's
164955	Non Exclusive Patent License Agreement	REGENERON PHARMACEUTICALS INC	Merck not liable for C's or LP's
165049	Coke Purchase And Sale Agreement	KOPPERS INC	excludes C's and LP's
165061	Mortgage And Security Agreement	FRONTIER AIRLINES INC /CO/	no mention
165191	License Agreement	VIOPHARMA INC	excludes C's and LP's
333980	Deck Checker Distribution Agreement	VENDINGDATA CORP	VDC not liable for C's or LP's

