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The Flight from Arbitration: An Empirical Study of *Ex Ante* Arbitration Clauses in Publicly-Held Companies' Contracts

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Abstract

We study a data set of 2,858 contracts contained as exhibits in Form 8-K filings by reporting corporations over a six month period in 2002 for twelve types of contracts and a seven month period in 2002 for merger contracts. Because 8-K filings are required only for material events, these contracts likely are carefully negotiated by sophisticated parties who are well-informed about the contract terms. These contracts, therefore, provide evidence of efficient *ex ante* solutions to contracting problems. The vast majority of contracts did not require arbitration. Only about 11 percent of the contracts included binding arbitration clauses. The rate of arbitration clauses varied substantially by type of contract. For example, pooling and servicing agreements and trust agreements had no arbitration clauses while employment and licensing contracts had the highest rate of arbitration clauses, 37 percent and 33 percent respectively. Arbitration clauses are strongly negatively associated with standardization of contract terms: the more standardized the contract, the less likely it will mandate arbitration of disputes. Contracts with California connections tended to have high rates of arbitration clauses while contracts with New York connections tended to have low rates of arbitration clauses. Arbitration clauses were significantly more likely to appear in contracts with international connections, but even in such contracts, the clauses were infrequent in absolute terms. Only 20 percent of international contracts contained arbitration clauses compared to ten percent of domestic contracts. Our results suggest, in contracts involving two sophisticated actors, that the parties perceive preserving access to litigation to be value-enhancing compared to *ex ante* binding arbitration. This contrasts with widespread beliefs about arbitration's efficiency and with imposition of mandatory arbitration clauses in some standardized consumer transactions such as credit card and cellular phone contracts.

I. Introduction

Informed parties bargaining for their mutual advantage will tend to agree to provisions that will maximize the social surplus. Such bargaining includes provisions regarding the resolution of disputes that might arise under the contract. Thus, for example, if a form of alternative dispute resolution, such as binding arbitration, provides greater social

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benefits than litigation, the dynamics of the process should tend to induce the parties to bargain to the efficient solution.[1] This article studies the actual contracting practices of large, sophisticated actors with respect to arbitration clauses. We examined over 2,800 contracts filed with the Securities Exchange Commission (SEC) in 2002 by public firms, and coded the presence of contract terms requiring arbitration. We find little evidence that these contracting parties routinely regard arbitration clauses as efficient or otherwise desirable contract terms. The vast majority of contracts did not require arbitration: only about 11 percent of the contracts included binding arbitration clauses.

Although the results reported here test hypotheses about the frequency of arbitration clauses, we regard our findings principally as hypothesis-generating rather than as providing definitive answers. The surprisingly low frequency of arbitration clauses, and their varying frequency across contract types, generate questions about the characteristics of the parties, their contracts, and their attorneys that should be the object of future modeling and research. For now, we interpret our findings as evidence that sophisticated actors often regard litigation as being preferable to arbitration.

Part II of this article sets forth the hypotheses we test about arbitration clauses. Part III describes the data and Part IV reports the results. Part V discusses the results and Part VI concludes.

II. Hypotheses and Existing Research

A. Arbitration Clauses Generally

[1] See, e.g., Keith Hylton, Agreements to Waive or to Arbitrate Legal Claims: An Economic Analysis, 8 Sup. Ct. Econ. Rev. 209 (2000) (if option to litigate reduces the joint wealth of contracting parties, market forces will push them in the direction of alternative forms of dispute resolution); Steven Shavell, Alternative Dispute Resolution: An Economic Analysis, 24 J. Legal Stud. 1, 5 (1995) ("parties would tend to adopt ADR if it would lead to mutual advantages").

One view of arbitration might suggest that sophisticated parties bargaining so as to maximize the surplus from trade would adopt binding arbitration clauses in their contracts nearly as a matter of course.[2] Arbitration is often said to be cheaper than litigation.[3] Other advantages of arbitration include that it can be completed more quickly,[4] that it can lower risks,[5] that discovery is limited,[6] and that it avoids the risks of out-of-control juries, a too-

[2] See, e.g., National Arbitration Forum, The Case for Pre-Dispute Arbitration Agreements (2004) (asserting that "many independent studies, including those conducted by the Litigation Section of the American Bar Association, have confirmed the comparative benefits of arbitration (versus lawsuits) for both businesses and consumers.")

[3] See, e.g., Allied-Bruce Terminix Cos. v. Dobson, 513 U.S. 265, 280 (1995); Gilmer v. Interstate/Johnson Lane Corp., 500 U.S. 20, 31 (1991); Thomas J. Stipanowich, ADR and the "Vanishing Trial": The Growth and Impact of "Alternative Dispute Resolution," 1. J. Empirical Legal Stud. 843, 876 (2004). Arbitration proponents frequently tout its benefits relative to litigation. See, e.g., Eric J. Mogilnicki & Kirk D. Jensen, Arbitration and Unconscionability, 19 Ga. St. U.L. Rev. 761 (2003); Roger S. Haydock, Civil Justice and Dispute Resolution in The Twenty-First Century: Mediation and Arbitration Now and for The Future, 27 Wm. Mitchell L. Rev. 745 (2000) (listing as "inherent advantages" of arbitration over litigation: (1) the preparation, filing, and service of claims and responses are much easier and faster, (2) relevant and reliable information can be or is more effectively exchanged between parties before a hearing, (3) there is no need for costly and lengthy motion proceedings, (4) parties can, when they are able to, represent themselves or choose to have an attorney represent them, (5) the rules are much fewer in number and much easier to understand, (6) the rules of evidence readily allow relevant and reliable information and do not restrict or complicate the admission of evidence, (7) the hearing procedures are more informal and less complex, (8) the arbitrator or administrative judge is a procedural and substantive law expert, (9) the arbitrator and administrative judge have more flexibility in allowing the parties to present the information they need to present, (10) the type of hearing can vary and allow parties and witnesses to participate by written documents, telephone, e-mail, video conference, and by personal appearance, (11) the day and time of the hearing can be specifically scheduled assuring parties that their case will be heard as scheduled, and (12) the entire proceeding, from beginning to end, may take a few months instead of years.). Studies of arbitration in the employment context tend to confirm some of these beliefs. See Theodore Eisenberg & Elizabeth Hill, Employment Arbitration and Litigation, 58 Disp. Resol. J. 44-55 (Nov. 2003-Jan. 2004), full version published in ADR & the Law, Fordham Urban L.J. (finding faster case processing in arbitration); U.S. Gen. Accounting Office, Alternate Dispute Resolution: Employers' Experiences With ADR in the Workplace 19 (1997) (finding that employer legal fees were generally lower in arbitration.); Lewis L. Maltby, The Projected Economic Impact of the Model Employment Termination Act, 536 Annals Am. Acad. Pol. & Soc. Sci., 103, 117 (1994) (finding that legal fees in employment arbitrations were surprisingly low).

[4] See, e.g., Eisenberg & Hill supra note 3; Mogilnicki & Jensen, supra note 3; Gary G. Mathiason & Pavneet S. Uppal, Evaluating and Using Employer-Initiated Arbitration Rules and Agreements, in Employment Discrimination and Civil Rights Actions in Federal and State Courts 875, 894 (1994) (average arbitration case resolved in less than half the time required for civil litigation).

[5] Shavell, supra note 1, at 5.

[6] But perhaps may not be dispensed with altogether, even in the commercial context. See Cole v. Burns Intern. Sec. Services, 105 F.3d 1465, 1482 (D.C.Cir. 1997).

generous judge's award,[7] and large class actions.[8] Procedural disputes can be resolved by informal, flexible procedures.[9] The limited rights of judicial review of arbitral awards also reduce the costs of the procedure,[10] although the lack of such rights also increases the risk of an erroneous award.[11]

Costs and risks can be further reduced because party choice in arbitration extends beyond the decision whether or not and how to arbitrate. The parties also enjoy broad autonomy to determine the arbitrator. Thus the parties can assure themselves *ex ante* that the forum for resolving their disputes will be relatively unbiased. Such assurances may not be as available in litigation, where judges and juries may come to the case with various

[7] That employers fear such jury awards is frequently stated in the literature. See, e.g., Alexander J.S. Colvin, Mandatory Arbitration and the Reconfiguration of Workplace Dispute Resolution, 13 Cornell J. L. & Pub. Pol'y 581 (2004). Eisenberg and Hill found that as between arbitration and litigation, median awards in the employment cases studied were roughly similar, but mean awards were much higher in litigation, suggesting that in a few cases courts award much higher damages than in similar arbitrated cases. See Eisenberg & Hill, supra note 3.

[8] Stephen J. Ware, The Case for Enforcing Adhesive Arbitration Agreements--with Particular Consideration of Class Actions and Arbitration Fees, 5 J. Am. Arbit. 251, 261 (2006).

[9] See Allied-Bruce Terminix Cos. v. Dobson, 513 U.S. 265, 280 (1995); Gilmer v. Interstate/Johnson Lane Corp., 500 U.S. 20, 31 (1991); Donna K. McElroy, Compulsory Arbitration Agreements ... Issues Concerning the Enforcement of Compulsory Arbitration Agreement Between Employers and Employees, 31 St. Mary's L. J. 1015 (2000).

[10] The Federal Arbitration Act specifies that a commercial arbitration award may be vacated: "(1) where the award was procured by corruption, fraud, or undue means; (2) where there was evident partiality or corruption in the arbitrators; (3) the arbitrators were guilty of misconduct in refusing to postpone the hearing, upon sufficient cause shown, or in refusing to hear evidence pertinent and material to the controversy . . . [and] (4) where the arbitrators exceeded their powers, or so imperfectly executed them that a mutual, final, and definite award upon the subject matter submitted was not made." 9 U.S.C. § 10(a). Some courts have recognized non-statutory grounds for vacating awards. See, e.g., Tanoma Mining Co. v. Local Union No. 1269, 896 F.2d 745, 749 (3d Cir. 1990) (manifest disregard for the law); United Paperworkers Int'l Union v. Misco, Inc., 484 U.S. 29, 43 (1987) (public policy); Montes v. Shearson Lehman Bros., Inc., 128 F.3d 1456, 1458 (11th Cir. 1997) (arbitrary and capricious.).

[11] Parties can try to contract around this risk by providing contractually for judicial review of arbitral decisions, but the efficacy of such contracts is not well established. See, e.g., Christopher R. Drahozal, Contracting Around Ruaa: Default Rules, Mandatory Rules, and Judicial Review of Arbitral Awards, 3 Pepp. Disp. Resol. L.J. 419 (2003) and authorities cited at nn. 19-22; Stephen J. Ware, "Opt-In" For Judicial Review of Errors of Law Under the Revised Uniform Arbitration Act, 8 Am. Rev. Int'l Arb. 263 (1997), and authorities cited at nn. 20-21.

prejudices and preconceptions that the parties cannot control. Some argue that because arbitrators compete to be selected by the parties, they have an incentive to develop reputations for fidelity to the parties' intent.[12] Furthermore, parties may specify the rules governing the arbitration proceedings,[13] control the schedule of hearings and other proceedings;[14] specify the law to be applied by the arbitrator,[15] specify rules for admissibility and presentation of evidence, and determine the law governing the interpretation of the scope of the arbitration clause itself.[16] The parties may even be able to determine contractually the extent of finality of the arbitrator's decision,[17] although this is subject to dispute.[18]

More subtly, it has been noted that arbitration can confer an adjudicative benefit relative to litigation because ADR-designated arbitrators may be better than judges at

[12] Bruce H. Kobayashi & Larry E. Ribstein, Contract and Jurisdictional Freedom, in The Fall and Rise of Freedom of Contract 325, 329 (F.H. Buckley ed., 1999)

[13] E.g., Green Tree Financial Corp.-Alabama v. Randolph, 531 U.S. 79, 94 (2000) (contract could have specified that arbitration would be governed by the rules of the American Arbitration Association).

[14] E.g., American Arbitration Association: Commercial Arbitration Rules and Mediation Procedures (Including Procedures for Large, Complex Commercial Disputes, Amended and Effective Sept. 15, 2005 E-8 (arbitrator may schedule additional hearings within seven business days after the initial hearing).

[15] See, e.g., Hackett v. Milbank, Tweed, Hadley & McCloy, 86 N.Y.2d 146, 154, 654 N.E.2d 95, 100, 630 N.Y.S.2d 274, 279 (1995); Bruce L. Benson, To Arbitrate or Litigate: That Is the Question, 8 Eur. J.L. & Econ. 91, 92 (1999); Lee H. Rosenthal, Competing and Complementary Rule Systems: Civil Procedure and ADR: One Judge's Perspective on Procedure as Contract , 80 Notre Dame L. Rev. 669 (2005) (parties may select state law and may specifically exclude the application of federal law). The ability to select an applicable law is potentially limited by the principle that the law chosen must bear some reasonable relationship to the parties or the transaction. See Curtis 1000, Inc. v. Suess, 24 F.3d 941, 948 (7th Cir. 1994); Restatement (Second) of Conflicts of Laws § 187(2).

[16] See, e.g., Pedcor Mgmt. Co., 343 F.3d at 361 (quoting Ford v. NYLCare Health Plans of the Gulf Coast, Inc., 141 F.3d 243, 248 (5th Cir. 1998)).

[17] See, e.g., Lapine Technology v. Kyocera, 130 F.3d 884 (9th Cir. 1997) (enforcing the standard for judicial review set forth in the parties' agreement to arbitrate).

[18] Compare Bowen v. Amoco Pipeline Co., 254 F.3d 925, 935 (10th Cir. 2001); Kyocera Corp. v. Prudential-Bache Trade Services, 341 F.3d 987 (9th Cir. 2003) (en banc), with Gateway Tech., Inc. v. MCI Telecomms. Corp., 64 F.3d 993, 996-97 (5th Cir. 1995).

detecting substandard performance by a contracting party.[19] In such cases, an arbitration clause's *ex ante* existence encourages parties to render proper performance. Arbitrators' expertise may supply another benefit that warrants sacrificing the benefits of litigation. Where contracts are highly standardized—as in the case of pooling and servicing or trust agreements—arbitration may add value as compared with litigation because expert arbitrators selected by the parties might be able to give a better-informed interpretation to the highly specialized terms contained in these agreements.

Uncertainty about arbitration is further reduced because, as a legal matter, little doubt exists as to the enforceability of the arbitration clauses in our sample. The Federal Arbitration Act (FAA) provides that arbitration agreements are enforceable "save upon such grounds as exist at law or in equity for the revocation of any contract."[20] This statute pre-empts state laws and extends to the full extent of the Congress's power under the Commerce Clause.[21] A plaintiff wishing to avoid arbitration in the face of an arbitration agreement must show that a ground "for the revocation of any contract" applies to the arbitration agreement.[22] The preference for arbitration expressed in the FAA is enthusiastically endorsed by many courts as part of a general trend towards encouraging the "outsourcing" of dispute resolution proceedings.[23] Some courts (perhaps questionably) have even gone so far as to bind to arbitration agreements parties who are not privy to the contract containing

[19] Shavell, supra note 1, at 6.

[20] 9 U.S.C. § 2 (1994 & Supp. 2000).

[21] Allied Bruce Terminix Cos., Inc. v. Dobson, 513 U.S. 265 (1995).

[22] 9 U.S.C. § 2 (1994 & Supp. 2000).

[23] See Judith Resnik, Procedure as Contract, 80 Notre Dame L. Rev. 593 (2005).

the arbitration clause.[24]

More nuanced views of arbitration exist, even among proponents of the procedure. Aside from adjudication costs, some regard arbitration as potentially inferior to litigation.[25] The litigants must pay the arbitrators—and if the chosen form of arbitration involves two party arbitrators and a neutral, this means paying three highly-compensated professionals; judges and juries, in contrast, are paid by the government.[26] A trial usually has a definite beginning and end, and in the case of jury trials, the process is compressed because of the need to maintain an empaneled jury. Party legal fees in arbitrations are not necessarily lower than in litigation.[27] Nor are arbitrations necessarily quicker than trials.[28] Arbitration proceedings are subject to the schedule of the arbitrator. Proceedings can be interrupted for months at a time, and then reconvened with non-trivial restartup costs. Unlike judges or juries, the arbitrator, paid by the hour or day, has short-term economic incentives to prolong

[24] Acosta v. Master Maintenance and Const., Inc., 52 F.Supp.2d 699, 706-07 (M.D. La. 1999); Ieyoub v. The American Tobacco Co., No. 97-1174 (JTT) W.D.La. Sept 11, 1997. Compare Merrill Lynch Inv. Managers v. Optibase, Ltd., 337 F.3d 125, 128, 131-32 (2d Cir. 2003) (investor was not entitled to compel arbitration with its investment adviser, where the investor had an arbitration agreement with its broker-dealer that referenced affiliates, but had no arbitration agreement with the investment adviser itself); Marathon Oil Co. v. Ruhrgas, A.G 115 F.3d 315 (5th Cir.1997) vacated on other grounds, 145 F.3d 211 (5th Cir.1998); In the Matter of Talbott Big Foot, Inc., 887 F.2d 611 (5th Cir.1989) and Zimmerman v. International Companies and Consulting, Inc., 107 F.3d 344 (5th Cir.1997) (refusing to subject non-signatories to arbitration clauses).

[25] See, e.g., Edward Brunet, Seeking Optimal Dispute Resolution Clauses in High Stakes Employment Contracts, 23 Berkeley J. Employment & Labor Law 107 (2002) (challenging popular conception that arbitration and mediation will be optimal for contracts between employers and highly-skilled employees).

[26] See Henry S. Noyes, If You (Re)Build It They Will Come: Contracts To Remake The Rules Of Litigation in Arbitration's Image, 30 Harv. J. Law & Public Policy (forthcoming 2006) (questioning whether arbitrations are cheaper than trials, given the need to pay the arbitrators).

[27] See, e.g., Tom Arnold, Delay and Cost Booby Traps in Arbitration Practice and How to Avoid Them, in ALI-ABA, Alternative Dispute Resolution: How to Use It to Your Advantage 99, 103 (Jan. 25-26, 1996) (describing an arbitration that lasted over seven years and generated more than $60 million in attorney fees).

[28] See Noyes, supra note 26.

proceedings.[29] If arbitrators issue an award that is not supported by the evidence, it may be difficult or impossible to correct the error. The potential lack of effective appellate review may make arbitration risky relative to litigation.[30] Arbitrators may lack the capacity to grant emergency or interim relief of the sort that is available to judges under their equitable jurisdictions. Cases that might be too expensive to litigate may be affordable to arbitrate; a defendant might therefore find itself paying on a claim in arbitration that would not even generate a lawsuit absent arbitration.[31] The parties cannot assume that arbitration proceedings will be confidential or exempt from discovery in later litigation.[32] Thus, some commentators encourage attorneys drafting arbitration provisions not simply to include boilerplate provisions but rather to think carefully about what provisions should be in the agreement.[33]

The claims of arbitration proponents that it is generally a more efficient dispute resolution procedure than litigation generates the hypothesis that, in a data set of contracts freely agreed to by sophisticated parties, we will always, or nearly always, observe pre-dispute arbitration clauses being used.[34] Thus, if an arbitration clause is absent from an agreement, it is reasonable to infer that the parties either preferred litigation or at least were

[29] See Noyes, supra note 26 (questioning whether arbitrations are cheaper than trials, given the need to pay the arbitrators).

[30] See id.

[31] Ware, supra note 8, at 261 (small meritorious claims, some of which might not be cost effective in litigation, may see higher awards in arbitration).

[32] Richard C. Reuben, Confidentiality in Arbitration: Beyond the Myth, Kansas L. Rev. (forthcoming), available at SSRN: http://ssrn.com/abstract=925281.

[33] See, e.g., Tony Starr, Choosing Between Litigation and Arbitration, Boston Bar J. (March/April 2005).

[34] We do not attribute this view to any particular scholar of arbitration, but rather advance it as a hypothesis against which to test the evidence.

indifferent as between arbitration and litigation.[35]

The incidence of arbitration clauses, if it is significantly less than 100 percent, provides some rough measure of the degree to which arbitration actually is perceived to provide greater efficiency in dispute resolution as compared with litigation.

Hypothesis: Sophisticated parties will (nearly) always opt for binding arbitration.

B. Arbitration Clauses in International Contractual Settings

To the degree that arbitration clauses are not uniformly adopted by sophisticated parties, it is useful to examine the possible reasons why parties may elect either arbitration or litigation. The contrast between domestic and international contracts is one possible fault line. Arbitration is viewed as particularly valuable in the case of international contracts. Arbitration is said to have become 'the preferred mechanism for resolving international disputes."[36] One reason for the widespread use of arbitration in commercial contracts is that people distrust a foreign country's legal system.[37] International arbitration awards also offer greater certainty of enforcement than domestic legal judgments. While other countries may

[35] The parties can, of course, agree to arbitration after a dispute has arisen. Unless the parties agree to arbitration before a dispute arises, however, it is doubtful that they will be able to achieve the benefits claimed by arbitration by subsequent agreement. Once a dispute has arisen, it is likely that strategic factors will cause one of the parties to refuse to arbitrate, even if the other makes a request. See David Sherwyn, Because it Takes Two: Why Post-Dispute Voluntary Arbitration Programs will Fail to Fix the Problems Associated with Employment Discrimination Law Adjudication, 34 Berkeley J. Employment & Labor Law 1 (2003); National Arbitration Forum, The Case for Pre-Dispute Arbitration Agreements (2004) (once a dispute has occurred, at least one of the parties is likely to perceive litigation as preferable to arbitration, and accordingly parties in real-life disputes only rarely submit their disputes to arbitration.) Accordingly, if the parties wish to guarantee that their disputes will be decided by an arbitrator, they must as a practical matter include an arbitration clause in the underlying contract.

[36] Susan D. Franck, The Role of International Arbitrators, 12 ILSA J. Int'l & Comp. Law 499, 499 (2006).

[37] See, e.g., Christopher R. Drahozal, Privatizing Civil Justice: Commercial Arbitration and the Civil Justice System, 9 Kan. J.L. & Pub. Pol'y 578 (2000). But empirical evidence about U.S. court mistreatment of foreigners is lacking. Kevin M. Clermont & Theodore Eisenberg, Xenophilia in American Courts, 109 Harv. L. Rev. 1120-43 (1996).

not (and often do not) afford full faith and credit to judgments of U.S. courts,[38] arbitral decrees are widely recognized and enforced under the New York Convention.[39] The parties' contractual choice-of-law is also entitled to potentially greater respect in international arbitrations than in domestic ones, where the courts or arbitrators may refuse to follow the designated law if it does not bear a reasonable relationship to the parties or the transaction.[40] Thus, a widely-held (although not universal[41]) view is that arbitration clauses are particularly beneficial in the case of contracts between parties located in different countries.

Hypothesis: Binding arbitration will be observed more frequently for international contracts than for domestic contracts.

[38] The Hague Convention on Choice of Court Agreements was concluded on June 30, 2005. 44 I.L.M. 1294 (2005). If ratified by enough countries, it may provide a viable alternative to arbitration for resolving international commercial disputes.

[39] United Nations Convention on the Recognition and Enforcement of Foreign Arbitral Awards, 330 U.N.T.S. 38, 21 U.S.T. 2517, T.I.A.S. No. 6997 (1958). There are 135 signatories to the New York Convention. William W. Park, The International Currency of Arbitral Awards (PLI March, 2005). The Convention has been implemented in the United States by 9 U.S.C. §§ 201-204.

[40] See Cindy G. Buys, The Arbitrators' Duty to Respect the Parties' Choice of Law in Commercial Arbitration, 79 St. John's L. Rev. 59 (2005).

[41] International arbitration carries with it potentially significant costs, including the fees of the private arbitrators and the costs of the dispute resolution forum (if any). See Linda Silberman, International Arbitration: Comments from a Critic, 13 Am. Rev. Int'l Arb. 9 (2002). The virtues of international arbitration are claimed to have eroded as arbitration becomes more like litigation. Franck, supra note 36, at 500-01. It is even claimed that international arbitration may not be less expensive than litigation, although the relative advantage of arbitration over litigation likely varies across court systems. Christian Bühring-Uhle, Arbitration and Mediation in International Business 140-48 (1996) (arbitration is not less expensive but it may be quicker), cited in Franck, supra note 24, at 500 n.4. And a recent paper argues that some classes of international disputes have become increasingly judicialized. Andrea Schneider, Not Quite A World Without Trials: Why International Dispute Resolution is Increasingly Judicialized, J. Disp. Resol. (forthcoming), available at Available at SSRN: http://ssrn.com/abstract=920510 (arguing that judicialization of international disputes has occurred in he areas of human rights, economic and trade disputes, and border and maritime disputes).

C. Standardized Contracts and Industry Practice

Some commentators have suggested that arbitration clauses will be preferred, relative to litigation, when the rules of decision are clear and unambiguous.[42] Further, by making standardized provisions subject to binding arbitration, a repeat player can avoid the risk of being subject to offensive nonmutual collateral estoppel in disputes with new parties under identical contract terms.[43] This would suggest that we would tend to observe binding arbitration terms with standardized contracts. Arbitration clause rates are likely associated with industry contracting practices, which may be only partly captured by a measure of contract-type standardization. Some industries likely have developed a practice of including arbitration clauses to a greater extent than other industries.

These considerations suggest the following hypotheses:

Hypotheses: 1. Arbitration will be more commonly observed when contracts are standardized than when they are individually negotiated.

2. Arbitration clause rates will vary by industry.

D. Choice-of-Law

The selection of arbitration versus litigation may relate to the law chosen to govern the arbitrator's decisions. It is difficult to separate *ex ante* whether, in a particular contract, arbitration was chosen because other considerations dictated a particular choice of law, or a particular state's law was chosen because of a desire to provide for arbitration. Regardless of the direction of causation, contracting parties may regard some states' laws as providing desirable or undesirable arbitration-related features. Therefore, one might expect to observe

[42] William M. Landes & Richard A. Posner, Adjudication as a Private Good, 8 J. Legal Stud. 235, 249 (1979).

[43] See Robert E. Scott & J.W. Montgomery III, The Lawlessness of Arbitration, 9 Conn. Ins. L.J. 355 (2002/03).

an association between the presence of an arbitration clause and choice-of-law or other factors that will influence the choice of law.

Two classes of reasons relating to choice-of-law may influence the decision to include an arbitration clause. First, parties may agree to arbitrate based on the perceived efficiency of a state's courts and laws. In states in which litigated cases proceed to judgment expeditiously, contracting parties may feel reduced pressure to include arbitration clauses. States with slow or inefficient case processing may increase incentives to include arbitration clauses.

Second, a state's law doctrinal law relating to arbitration can influence incentives to include arbitration clauses. For example, California law allows arbitration to be stayed pending the outcome of related litigation,[44] and is less receptive than most other states' laws, including New York's, to arbitration clauses banning class actions.[45] These features might influence parties designating California law to include or not include an arbitration clause if they regard these provisions as desirable or undesirable. And New York's highest court held that awarding punitive damages in arbitration violated public policy,[46] a decision that

[44] Cronus Investments, Inc. v. Concierge Servs., 107 P.3d 217 (Ca. 2005) (statute permitting stay of arbitration pending outcome of related litigation does not contravene the FAA).

[45] Discover Bank v. Superior Court, 113 P.3d 1100 (Ca. 2005) (limiting authority to preclude class-based activity). See also Kristian v. Comcast Corp., 446 F.3d 25 (1st Cir. 2006) (invalidating prohibitions on treble damages, attorney fees and costs, and class actions; can waive Massachusetts state law antitrust claim); Jenkins v. First Am. Cash Advance of Georgia, 400 F.3d 868 (11th Cir.2005) (question of arbitrability presented by ban on class actions); Livingston v. Associates Fin., Inc., 339 F.3d 553 (7th Cir.2003) (same); Whitney v. Alltel Communications, Inc., 173 S.W.3d 300, 309-311 (Mo. App. 2005) (class action arbitration ban unconscionable). Compare Tsadilis v. Providian Nat. Bank, 13 A.D.3d 190, 191, 786 N.Y.S.2d 478, 480 (N.Y. App. Div. 2004) (arbitration provision waiving class actions is enforceable).

[46] Garrity v. Lyle Stuart, Inc., 40 N.Y.2d 354 (1976) (arbitrator award of punitive damages violates public policy). California courts did not follow *Garrity*. See Baker v. Sadick, 162 Cal. App. 3d 618, 630, 208 Cal. Rptr. 676, 683-84 (Cal. App. 1984).

has since been limited,[47] but is still cited by New York courts.[48] If state law varies with respect to the enforceability or other treatment of particular arbitration provisions, we would expect that the incidence of arbitration clauses will vary depending on the contacts between the contract in question and a state.

In our models below, we effectively treat the decision to include an arbitration decision as a function of the contacts between a contract in question and a state. The direction of the association, like the direction of causation, may also be the subject of uncertainty. Parties who strive for certainty in arbitration may prefer the law of states that limit judicial authority to influence the substance or procedure of arbitration outcomes. Parties who strive for flexibility or fairness in arbitration may be less reluctant to embrace the law of states more willing to allow judges to influence or review arbitration. It is thus difficult, *ex ante*, to anticipate whether a particular states' laws will be associated with the increasing or decreasing presence of arbitration clauses,

What does seem clear is that a state's laws' or courts' perceived performance and attitude towards arbitration can influence contracting parties' decisions to include an arbitration clause. For present purposes, we hypothesize that California's historically flexible attitude towards judicial involvement in arbitration will attract arbitration clauses

[47] See Mastrobuono v. Shearson Lehman Hutton, Inc., 514 U.S. 52 (1995) (FAA preempts state law); Dandong Shuguang Axel Corp. v. Brilliance Machinery Co., 2001 WL 637446, at *6 (N.D. Cal.) (Supreme Court has severely limited *Garrity*); Ratheon Co. v. Automated Business Systems, Inc, 822 F.2d 6 (1st Cir.1989) (upholding punitive award in arbitration conducted under arbitration rules that allow punitive damages); Todd Shipyards Corp. v. Cunard Line. Ltd., 943 F.2d 1056, 1062 (9th Cir.1991) (same); Barnes v. Logan, 122 F.3d 820, 822-24 (9th Cir.1997) (upholding punitive damage award under Minnesota law); Painewebber, Inc. v. Landay, 903 F.Supp. 193, 204 (D.Mass.1995) (upholding punitive damages award rendered under NASD rules); Drywall Systems Inc. v. ZVI Construction Co., Inc, 747 N.E.2d. 168 (Mass. App. Ct. 2001) (rejecting *Garrity*).

[48] In re Mohawk Valley Community College, 28 A.D.3d 1140, 814 N.Y.S.2d 428, 429 (N.Y. App. Div. 2006) (quoting *Garrity* re an award imposing punitive damages violating public policy).

on the ground that flexibility may promote fairness in a particular case at the cost of some certainty. We do not mean to suggest that particular clauses, such as those relating to class actions, are necessarily highly relevant to each of the contracts studied here. We do suggest that perceptions of a state court's general willingness to strictly enforce arbitration clauses, as reflected by the relevant corpus of the state's decisions, may influence parties' decisions to include arbitration clauses.

Hypothesis: The incidence of arbitration will vary geographically, and there will be more arbitration clauses for contracts with California connections than for contracts with New York connections.

E. Relational Contracts

If, as arbitration's proponents sometimes claim, arbitration is less disruptive and adversarial than litigation, then we might expect to see arbitration selected more frequently in the case of "relational" contracts in which the parties expect to work together for a substantial period of time**.** Without detailed knowledge of the contracting parties' relations, one cannot precisely identify which contracts are relational and which are not. But we believe some contract categories are more likely to be relational than others. The contract categories are described in Part III below. For now, we merely identify the following categories as tending to be relational: credit commitments, employment, licensing, pooling and servicing agreements, security agreements, and trust agreements. Asset sales, bond indentures, mergers, securities purchase agreements, and underwritings are less likely to be relational. Settlement agreements are too ambiguous to lump with one group or the other.

Hypothesis: Arbitration clauses will be observed more frequently for relational contracts and less frequently for one-off contracts.

F. Prior Research

Little information exists about arbitration clause incidence in sophisticated contracts and we know of no study examining as broad a range of contracts as this study.[49] The empirical evidence that does exist shows that arbitration has been expanding as a dispute resolution mechanism.[50] The American Arbitration Association's overall caseload grew from about 1,000 cases in 1960 to more than 17,000 in 2002, with a decline to 15,800 in 2003.[51] A 1998 Cornell University study of Fortune 1,000 companies yielded responses from more than 600 companies. The study found that ADR processes are well established in corporate America, widespread in all industries and for nearly all types of disputes. ADR practice was not haphazard or incidental but rather seemed to be integral to a systematic, long-term change in the way corporations resolve disputes.[52] Whatever the growth rate, the study also found that arbitration is not as ubiquitous as some might believe. About 80 percent of the companies stated that they had used arbitration of disputes arising out of

[49] A comprehensive study of arbitration clauses in end user software license agreements is Florencia Marotta-Wurgler, "Unfair" Choice of Law, Forum, and Arbitration Clauses: Much Ado About Nothing?, in "Boilerplate:" Foundations of Market Contracts (O. Ben-Shahar, ed., Cambridge Univ. Press, 2007) (forthcoming). For a call for more empirical research in the area of contract law, see David V. Snyder, Go Out and Look: The Challenge and Promise of Empirical Scholarship in Contract Law, 90 Tulane L. Rev. 1009 (2006).

[50] See Elizabeth S. Rolph, Erik Moller & Laura Petersen, Escaping the Courthouse: Private Alternative Dispute Resolution in Los Angeles 18-20 (1994) (private ADR caseload in the Los Angeles area grew by an average of 15 percent per year from 1988 to 1993, while the court system caseload was stable); Bruce Benson, An Exploration for the Impact of Modern Arbitration Statutes on the Development of Arbitration in the United States, 11 J. L. Econ. & Org. 479, 490 (1995).

[51] Stipanowich, supra note 3, at 873.

[52] David B. Lipsky & Ronald L. Seeber, The Appropriate Resolution of Corporate Disputes: A Report on the Growing Use of ADR by U.S. Corporations (Cornell/PERC Inst. on Conflict Resol., 1998).

existing agreements only "occasionally" or less often. Only 7.5 percent reported using arbitration frequently.[53] International arbitration is also reported to be increasing.[54]

Several studies look to the incidence of binding arbitration of employment disputes in the workplace. These studies, inconsistently with what might be the predictions of theory, find that employers do not—or at least, to date have not yet—overwhelmingly adopted binding arbitration procedures despite their perceived benefits over litigation. A 1995 General Accounting Office Study of 1,448 establishments subject to EEOC reporting requirements found that only 7.6 percent had adopted binding arbitration.[55] Colvin's studies of the telecommunications industry find that only about 14 to 16 percent of firms adopted binding employment arbitration.[56] Schwab and Thomas's study of CEO contracts in large public firms found that 41.6 percent had arbitration clauses.[57]

An informal review of franchise contracts by Drahozal found that about half the franchise agreements in Minnesota provided for arbitration.[58] He found that the agreements that did provide for arbitration tended to involve major national franchisors such as

[53] Id., as summarized in Stipanowich, supra note 3, at 880.

[54] See Data on Filings with International Arbitration Institutions (Appendix 1), in Towards a Science of International Arbitration: Collected Empirical Research 341 (Christopher R. Drahozal & Richard W. Naimark eds. 2004) (showing filings in a collection of international arbitration institutions increased from 1,392 in 1993 to 2,577 in 2003).

[55] General Accounting Office, GAO/HEHS 95-150, Employment Discrimination: Most Private Sector Employers Use Alternative Dispute Resolution 12 (1995). For a study using EEOC and other data to suggest new paths for empirical research in employment arbitration, see David Sherwyn, Samuel Estreicher & Michael Heise, Assessing the Case for Employment Arbitration: A New Path for Empirical Research, 57 Stan. L. Rev. 1557 (2005).

[56] See Colvin, supra note 7.

[57] Stewart J. Schwab & Randall S. Thomas, An Empirical Analysis of CEO Employment Contracts: What Do Top Executives Bargain For?, 63 Wash. & Lee L. Rev. 231, 234 (2006).

[58] Drahozal, supra note 37.

McDonalds. He seemed surprised that the incidence of arbitration agreements was that low.[59] Drahozal and Hylton find a statistically significant, negative correlation between the percentage of company-owned units in a franchise network and the probability of an arbitration clause appearing in the franchise contract.[60] Both of these results suggest that one might expect arbitration clauses to appear in most of the contracts studied here. But Marotta-Wurgler's recent study of 597 end user software license agreements finds low rates (about six percent) of arbitration clauses,.[61]

With respect to international contracts, there are estimates that as much as ninety percent of international contracts have binding arbitration provisions.[62] Drahozal and Naimark report that, from 1993 to 1996, 15 of 17 (88.2 percent) of international joint venture agreements in the SEC EDGAR database included an arbitration clause.[63] Casella reports that officials of the Netherlands Arbitration Institute indicate that more than 80 percent of private international contracts have arbitration clauses.[64] But it is recognized that systematic knowledge of international arbitration is thin.[65]

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[59] Id.

[60] Christopher R. Drahozal & Keith N. Hylton, The Economics of Litigation and Arbitration: An Application to Franchise Contracts, 32 J. Legal Stud. 549 (2003).

[61] Marotta-Wurgler, supra note 49.

[62] Klaus Peter Berger, International Economic Arbitration 8 n.62 (1993) (citing Albert Jan Van Den Berg et al., Arbitragerecht 134 (1988)).

[63] Christopher R. Drahozal & Richard W. Naimark, Commentary, in Drahozal & Naimark (eds.), supra note 54, at 57, 59.

[64] Alessandra Casella, On Market Integration and the Development of Institutions: The Case of International Commercial Arbitration, 40 Eur. Econ. Rev. 155, 156-57 (1996).

[65] Christopher R. Drahozal & Richard W. Naimark, Empirical Perspectives on International Commercial Arbitration, in Drahozal & Naimark (eds.), supra note 54, at 3 ("much of what we know about international arbitration is based on anecdote . . . rather than careful empirical study").

III. The Data Set

The data consist of thirteen categories of material contracts contained as exhibits to Form 8-K "current report" filings with the SEC for several months in 2002. Form 8-K must be filed by SEC-reporting firms to disclose certain material corporate events or changes that have not previously been reported by the company. We searched all Form 8-K filings and coded information about any contract that fit into one of Table 1's categories. The resulting sample consisted of 2,858 contracts.

The types of contracts studied are listed in Table 1. Each of the contract types in Table 1 was reported to be, or to be related to, a material corporate event. For twelve contract categories, six months of contracts, covering the period January 1 to June 30, 2002, were studied. For merger contracts, the study covered a seven-month period from January 1 to July 31, 2002. The slightly expanded period for merger contracts exploits our earlier detailed work on choice-of-law and choice of forum in merger contracts.[66] Most of the contract types are self-explanatory. "Pooling and servicing" contracts are used in mortgage pass-through and other asset-backed securities arrangements; they represent agreements under which an owner transfers receivables to a trustee which holds title to and collects the

[66] Theodore Eisenberg & Geoffrey P. Miller, *Ex Ante* Choices of Law and Forum: An Empirical Analysis of Corporate Merger Agreements (July 20, 2006), NYU Law & Econ. Research Paper No. 06-31, available at SSRN: http://ssrn.com/abstract=918735, Vanderbilt L. Rev. (forthcoming).

income from the assets and passes the funds through to investors.[67] Trust agreements establish these trusts and define certain of their powers and responsibilities.[68]

Table 1. Types of Contracts Studied (Number of contracts in parentheses)

Asset sale/purchase (314)	Pooling and servicing (173)
Bond indentures (155)	Securities purchase (460)
Credit commitments (216)	Security agreements (37)
Employment (111)	Settlements (72)
Licensing (48)	Trust agreements (48)
Mergers (411)	Underwriting (351)
	Other (362)

Source. SEC EDGAR database, LEXIS EDGAR PLUS database, Jan. 2002 to June 30, 2002 for all contract types other than mergers and Jan. 2002 to July 31, 2002 for merger contracts.

Securities purchase agreements were the most frequent contract type and accounted for 16.1 percent of the total of 2,858 contracts. Credit-related contracts—bond indentures, credit commitments, pooling and servicing agreements, and security agreements—accounted for another 20.3 percent of the contracts. Merger contracts were about 14 percent of the sample but note that they had one extra month of coverage in the data. Together, the contract types offer a reasonably rich variety of relations. Several types, including the credit-related contracts, obviously involve substantial financial institutions. Others, asset sale/purchase and merger contracts, involve corporate restructurings. Settlements involved resolution of disputes. Employment contracts offer insights into dispute resolution contract terms in agreements between key employees and large corporate employers.

[67] E.g., Circuit City Credit Card Master Trust, Form 8-K, Exh. 4.2, Amended and Restated Master Pooling Service Agreement, Dated as of December 31, 2001, filed Jan. 31, 2002, Doc. No. 02523859, at 21-22. See generally Thomas E. Planck, The Security of Securitization and the Future of Security, 25 Cardozo L. Rev. 1655 (2004).

[68] E.g., First Consumers National Bank, Form 8-K, Exh. 4.3, Trust Agreement Between First Consumers Credit Corporation, as Seller, and Bankers Trust Company, as Owner Trustee, Dated as of March 1, 2001, and amended and restated as of December 31, 2001, filed Jan. 31, 2002, Doc. No. 02524022.

As noted in our previous study of choice-of-law and forum in merger contracts, the contracts in our sample have attractive features as an object of study.[69] Because the contracts studied here are by definition material events in the corporate lives of publicly traded corporations, the contracts are a reasonable sample of what sophisticated parties specify as *ex ante* contract terms relating to arbitration. The contracts' importance to the reporting firms' operations suggests that the contracts receive some degree of care and attention during the negotiation and drafting phase, either from the reporting firm's employees or from outside counsel. Because the contracts are written before disputes arise, moreover, we can be reasonably confident that in most cases the contracting parties did not anticipate the precise nature of all disputes that might arise, and therefore would not know whether a particular term would help or hurt them in the event of a particular conflict. These characteristics suggest the hypothesis that, within some range of error, the contract terms that we observe may represent what the parties regard as reasonably efficient allocations of rights and duties between them *ex ante*.

IV. Empirical Results

We analyzed each contract to determine whether it contained a binding arbitration clause. We first report results for the basic frequency of arbitration clauses by contract type and then report results subdivided by whether there was a non-U.S. party to the contract. Although the type of contract is the strongest influence on whether the contract contains an arbitration clause, we also explore secondary influences—the degree of standardization for

[69] Eisenberg & Miller, supra note 66.

the type of contract and the contractual category's relational status, choice-of-law, place of incorporation, place of business, and attorney locale.

A. Arbitration Clauses

Table 2 reports the frequency and percent of contracts that contain arbitration clauses. As the table's "Total" row shows, the overwhelming majority, about 89 percent, do not mandate arbitration.[70] Whatever arbitration's efficiencies, sophisticated actors are not flocking to it in a broad range of important contracts. Some contract types—pooling and servicing agreements and trust agreements—never provided for arbitration. Others—bond indentures, underwriting agreements, and security agreements—almost never did. But material variation exists across contract types. Forty-one of 111 employment contracts, about 37 percent, provided for arbitration, and one-third of the 48 licensing agreements provided for arbitration. Clearly, the nature of the contract is associated with whether the parties agree *ex ante* to arbitrate.

The results support the view, expressed by corporate lawyers, that the decision whether to include an arbitration provision in a commercial contract is a complex one that cannot be determined across-the-board. The infrequency of arbitration across the entire range of categories also suggests that the purported benefits of arbitration over litigation may not in fact be perceived by sophisticated contracting parties.

[70] Some observers have noted that arbitration is not the preferred form of dispute resolution among corporate lawyers, despite its purported benefits. See Rebecca Callahan, Arbitration v. Litigation: The Right to Appeal and Other Misperceptions Fueling the Preference for a Judicial Forum, available at http://law.bepress.com/expresso/eps/1248 (reporting on survey of 400 business lawyers in Southern California).

Table 2. Summary of Arbitration Clause Presence by Contract Type

Contract type	No arbitration clause	Arbitration clause	Total
Mergers (N)	333	78	411
Percent	81.02	18.98	100
Bond indentures (N)	154	1	155
Percent	99.35	0.65	100
Settlements (N)	60	12	72
Percent	83.33	16.67	100
Securities purchase (N)	406	54	460
Percent	88.26	11.74	100
Employment contracts (N)	70	41	111
Percent	63.06	36.94	100
Licensing (N)	32	16	48
Percent	66.67	33.33	100
Asset sale purchase (N)	253	61	314
Percent	80.57	19.43	100
Credit commitments (N)	211	5	216
Percent	97.69	2.31	100
Underwriting (N)	350	1	351
Percent	99.72	0.28	100
Pooling & servicing (N)	173	0	173
Percent	100	0	100
Security agreements (N)	35	2	37
Percent	94.59	5.41	100
Trust agreements (N)	48	0	48
Percent	100	0	100
Other (N)	429	33	462
Percent	92.86	7.14	100
Total (N)	2554	304	2858
Percent	89.36	10.64	100

Source. SEC EDGAR database, LEXIS EDGAR PLUS database, Jan. 2002 to June 30, 2002 for all contract types other than mergers and Jan. 2002 to July 31, 2002 for merger contracts.

B. Arbitration Clauses in International Contracts

Table 3 reports the frequency of arbitration clauses by the presence of a non-U.S. party to the contract. Consistently with our hypothesis, arbitration clauses are present more frequently in international contracts than in domestic contracts. Clauses appear at about twice the domestic rate when the contract includes a non-U.S. party, and the result is highly statistically significant ($p<0.001$). More surprisingly, however, the international contracts,

like the domestic contracts, contain arbitration clauses at a low absolute rate. Only about 20 percent of international contracts contain arbitration clauses. This contrasts with predictions or descriptions that arbitration is *the* dispute resolution mechanism in international contractual settings and that the vast majority of international contracts provide for binding arbitration.

Table 3. Arbitration Clause Presence by Party Status

	No arbitration clause	Arbitration clause	Total
U.S. parties only (N)	2334	249	2583
Percent	90.36	9.64	100
Non-U.S. party (N)	217	55	272
Percent	79.78	20.22	100
Total (N)	2551	304	2855
Percent	89.35	10.65	100

Pearson chi-squared(1) = 28.96; $p < 0.001$. Source. SEC EDGAR database, LEXIS EDGAR PLUS database, Jan. 2002 to June 30, 2002 for all contract types other than mergers and Jan. 2002 to July 31, 2002 for merger contracts. Contracts in which either party is a non-U.S. entry are coded as Non-U.S. party contracts.

Table 4 breaks down the results in Table 3 by contract type. The first row reported for each contract type shows the proportion of contracts containing an arbitration clause, subdivided by international (first numerical column) and domestic (second numerical column) contracts. For example, the first row in the table shows that 19.0 percent of the domestic merger contracts and 18.6 percent of the international merger contracts had arbitration clauses. The second row for each contract type shows the number of contracts in the sample. For example, the second row in the table shows that there were 368 domestic merger agreements and 43 international merger agreements.

Although the rate of arbitration clauses in merger contracts does not vary by domestic/international status, it does significantly or near-significantly vary for other

contract types. Securities purchase contracts ($p=0.078$), licensing contracts ($p=0.027$), assets sale or purchase contracts ($p=0.067$), and underwriting contracts ($p=0.040$) show statistically significantly ($p<0.05$) or nearly statistically significantly ($p<0.10$) increased rates of arbitration clauses in international contracts compared to domestic contracts. Perhaps the most striking figure in the table is the 63.6 percent of international licensing contracts that mandate arbitration, the only figure that conforms to the received wisdom about the frequency of arbitration clauses in international contracts. The relatively few contracts on which the figure is based (7 of 11) suggests caution in reaching conclusions based solely on this study.

Table 4. Arbitration Clause Presence by Party Status and Contract Type

Contract type	No non-U.S. party	Non-U.S. party	Total
Mergers	0.19	0.186	0.19
	368	43	411
Bond indentures	0.007	0	0.01
	151	4	155
Settlements	0.15	0.25	0.167
	60	12	72
Securities purchase	0.105	0.182	.118*
	382	77	459
Employment contracts	0.377	0.2	0.369
	106	5	111
Licensing	0.243	0.636	.333**
	37	11	48
Asset sale purchase	0.175	0.304	.194*
	268	46	314
Credit commitments	0.02	0.05	0.023
	196	20	216
Underwriting	0	0.071	.003**
	337	14	351
Pooling & servicing	0	0	0
	170	3	173
Security agreements	0.056	0	0.054
	36	1	37
Trust agreements	0	-	0
	48	0	48
Other	0.064	0.167	.072**
	424	36	460
Total	0.096	0.202	0.106
	2583	272	2855

Source. SEC EDGAR database, LEXIS EDGAR PLUS database, Jan. 2002 to June 30, 2002 for all contract types other than mergers and Jan. 2002 to July 31, 2002 for merger contracts. Contracts in which either party is a non-U.S. entry are coded as Non-U.S. party contracts. First row for each contract type shows the proportion of contracts containing arbitration clauses. Second row shows the number of contracts used to compute the proportion. * indicates domestic/international arbitration clause rate difference is significant at p<.10; ** indicates p<.05. p-values are based on Fisher's exact test.

C. Secondary Sources of Variation in Rates of Arbitration Clauses

The varying frequency of arbitration clauses suggests the possible utility of more detailed modeling of whether a contract contains an arbitration clause. This subpart explores five possible influences on the presence of an arbitration clause: the degree of

standardization in the type of contract being considered for an arbitration clause, the contract type's relational status, the choice of law in the contract, the place of business of a party to the contract, and the locale of attorneys who appear in the Form 8-K report containing the contracts. We first explore each influence separately and then combine them in regression models.

1. Standardization and Industry Practice

As shown in Table 2, the rate of arbitration clause presence varies substantially depending on the type of contract. One possible reason for this variation is the degree of standardization. Highly standardized contracts may be perceived as having a low risk of litigation. Standard terms will have led to a common understanding that reduces the disparate views of contractual meaning that might lead to litigation. Arbitration clauses may not be regarded as being necessary or as worth sacrificing any perceived benefits to litigation.[71] On the other hand, where contracts are highly standardized – as in the case of pooling and servicing or trust agreements – it might be the case that arbitration could add value as compared with litigation because expert arbitrators selected by the parties might be able to give a better-informed meaning to the highly specialized terms contained in these agreements.

The degree of contract standardization is not a commonly-defined metric. We construct an objective measure of standardization by examining the distribution of choice-of-law pattern for each contract type. A class of contract that regularly chooses a single choice

[71] At least one commentary has suggested that arbitration clauses are more likely to be seen in nonstandardized contracts, in the specific context of insurance policies. See Scott & Montgomery, supra note 43 ("Few standard-form primary commercial liability and property insurance policies issued by American insurers contain arbitration clauses. Certain non-standard insurance policies, in contrast, do contain mandatory arbitration clauses.").

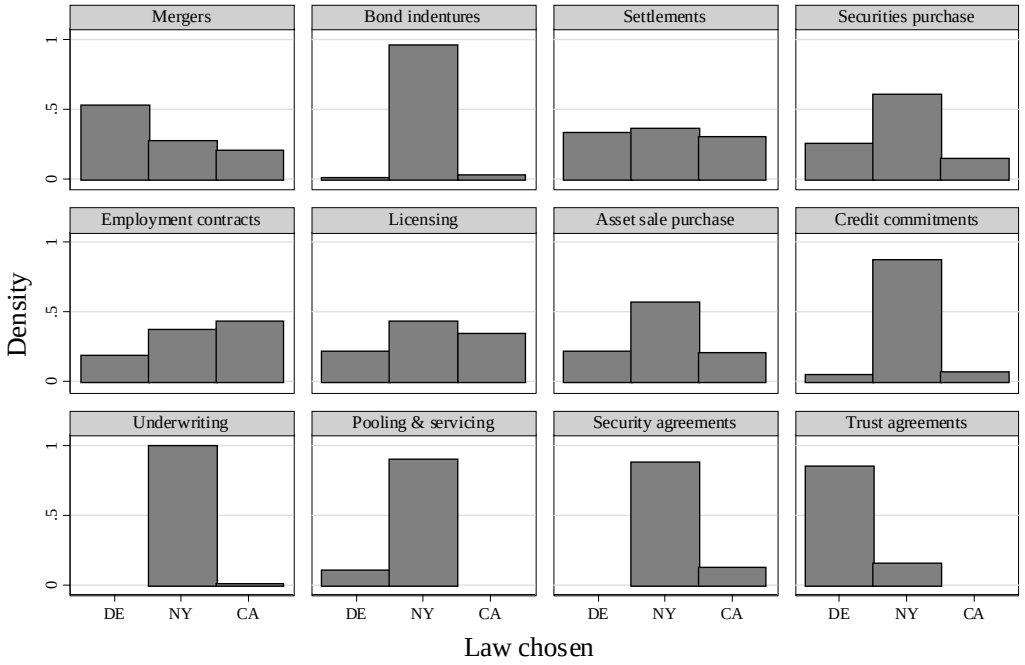
of law likely has achieved a degree of standardization beyond that of a class of contract that designates many different choices of law. It is of course theoretically possible for contracts to be completely standardized in all other terms and vary only in choice of law. But that is not likely to be the general tendency. Furthermore, as shown below, the results of categorizing using our standardization measure appear quite plausible. Highly regularized financial transactions such as pooling service agreements and trust agreements score high in standardization. Less regularized contracts, such as settlements and licensing agreements score low by our standardization measure.

In measuring the concentration of choice-of-law, it is helpful to note that approximately 70 percent of the contracts designate New York (47 percent), Delaware (14 percent), or California (seven percent) law as the governing law. The choice-of-law for other contracts is widely dispersed across many locales and these contracts can be excluded without sacrificing a reasonable measure of concentration. No other locale accounts for even four percent of the choices of law. We use the degree of concentration among the three leading states to classify contracts as having high, medium, or low rates of standardization.

Figure 1 shows, for each of twelve contract categories (the contract category "Other" is excluded from this analysis), the distribution of choice-of-law among New, York, Delaware, and California. It shows that bond indentures, credit commitments, underwriting contracts, pooling service agreements, security agreements, and trust agreements all have high choice-of-law concentrations. For example, nearly all bond indentures and underwriting contracts designate New York law as the governing law. Trust agreements are concentrated in selecting Delaware as the choice of law. The others concentrate in selecting

New York law. We treat mergers, securities purchase agreements, and asset sale purchase agreements as having medium concentrations. Each has a concentration (or density[72]) of over 0.5 in one state according to the histograms but these three contract types are not nearly as concentrated as the highly concentrated group. Settlements, employment contracts, and licensing agreements have low choice-of-law concentrations. None has a density of 0.5 in the histograms.

Figure 1. Distribution of Choice-of-Law by Contract Type



Source. SEC EDGAR database, LEXIS EDGAR PLUS database, Jan. 2002 to June 30, 2002 for all contract types other than mergers and Jan. 2002 to July 31, 2002 for merger contracts. Each histogram shows the distribution of contracts by choice of law. Contracts designating Delaware, New York, or California law are included. All other contracts are coded as designating an "Other" choice-of-law and not used in the standardization computation.

[72] The height of a bar in a relative frequency histogram represents the density of data points in the histogram cell that the bar is drawn over. If a cell centered at x has width w and contains k data points, the height of the bar is h(x) = (k/n) x (1/w), which is directly proportional to the density of points in the interval, where density = k/w.

Choice-of-law concentration is strongly associated with the presence of an arbitration clause. Almost no contracts, 0.9 percent, with high choice-of-law concentrations have arbitration clauses. In contrast, 16.3 percent of contracts with medium choice-of-law concentrations have arbitration clauses, and 29.9 percent with low choice-of-law concentrations have arbitration clauses. Our standardization index clearly conveys some information about the relation between type-of-contract and inclusion of an arbitration clause.

The standardization measure has an advantage over individualized contract types as an explanatory variable in modeling, as reported below, the presence of an arbitration clause. The standardized measure does not require excluding contract types that are so standardized that they exhibit no choice-of-law variation. Table 2 above shows that pooling service contracts and trust agreements never contain arbitration clauses. This lack of variation precludes modeling the decision to have an arbitration clause by using a dummy variable for these contract types.

We hypothesized that arbitration clause rates may vary by industry.[73] A reporting company's SEC filing includes its Standard Industry Classification (SIC), which consists of a four-digit SIC code.[74] The SIC system used in SEC filings yields many industry categories that contain too few firms to allow for reasonable statistical analysis. We therefore regroup the SIC categories into 17 reasonably-sized classifications.[75]

[73] This hypothesis was suggested by Florencia Marotta-Wurgler in comments to an earlier draft.

[74] See http://www.sec.gov/info/edgar/siccodes.htm.

[75] We started with the 28 industry groups used in U.S. Gen. Acct. Off., Public Accounting Firms: Mandated Study on Consolidation and Competition, GAO–3-864, at 111 (July 2003). These were reduced to the 17 industry groups used in Theodore Eisenberg & Jonathan R. Macey, Was Arthur Andersen Different?: An Empirical Examination of Major Accounting Firms' Audits of Large Clients, 1 J. Empirical Legal Studies 263

Table 5 reports the rate of arbitration clause use by these classifications. Arbitration clause use varies substantially by industry. The table as a whole yields statistically significant differences ($p<0.001$). The "Finance, insurance, real estate" grouping is the largest and has an extremely low rate (4.7 percent) of arbitration clauses. The highest rate of arbitration clause use, 25.0 percent, is in the "Industrial machinery and equipment" grouping.

(2004).

Table 5. Arbitration Clause Status by Industry

SIC-based groups	No arbitration clause	Arbitration clause	Total
Mineral industries (N)	89	12	101
Percent	88.12	11.88	100
Construction industries (N)	22	4	26
Percent	84.62	15.38	100
Manufacturing (N)	141	17	158
Percent	89.24	10.76	100
Transportation and utilities (N)	104	4	108
Percent	96.3	3.7	100
Communications (N)	98	9	107
Percent	91.59	8.41	100
Wholesale trade (N)	77	8	85
Percent	90.59	9.41	100
Retail trade (N)	87	10	97
Percent	89.69	10.31	100
Finance, Insurance, real estate (N)	755	37	792
Percent	95.33	4.67	100
Services (N)	469	86	555
Percent	84.5	15.5	100
Instruments and related products (N)	57	11	68
Percent	83.82	16.18	100
Food and kindred products (N)	33	1	34
Percent	97.06	2.94	100
Paper and allied products (N)	19	2	21
Percent	90.48	9.52	100
Chemicals and allied products (N)	130	26	156
Percent	83.33	16.67	100
Industrial machinery and equipment (N)	75	25	100
Percent	75	25	100
Electrical and electronic equipment (N)	112	17	129
Percent	86.82	13.18	100
Transportation equipment (N)	25	4	29
Percent	86.21	13.79	100
No SIC listed or SIC missing (N)	261	31	292
Percent	89.38	10.62	100
Total (N)	2554	304	2858
Percent	89.36	10.64	100

Source. SEC EDGAR database, LEXIS EDGAR PLUS database, Jan. 2002 to June 30, 2002 for all contract types other than mergers and Jan. 2002 to July 31, 2002 for merger contracts.

2. Relational Contracts

We find little evidence that relational contracts, as best we can code for that characteristic, are more associated with inclusion of arbitration clauses. The six contract types that we estimate to be more relational than the other contract types—credit commitments, employment, licensing, pooling and servicing agreements, security

agreements, and trust agreements—had arbitration clauses in 64 of 633 (10.1 percent) contracts. The five contract types that we estimate to have been less relational than other contract types—asset sales, bond indentures, mergers, securities purchase agreements, and underwritings—had arbitration clauses in 195 of 1,691 (11.5 percent) contracts. The direction of the effect is opposite to what we expected and the result is not close to being statistically significant (p=0.332). Results do not materially change if we characterize trust agreements as ambiguous and include them in neither the relational nor non-relational categories. The relational category then has a 10.9 percent arbitration clause rate and the non-relation category an 11.5 percent rate, with hint of a significant association (p=0.698). We do not include a variable for relational contracts in our subsequent analyses.

3. Choice-of-Law

Independent of its association with standardization, choice-of-law information may help explain the pattern of arbitration clauses. As discussed above, state law treatment of arbitration provisions could also influence parties' decisions to include arbitration clauses. The state law chosen, as distinct from the bare concentration of choice-of-law, may reflect underlying views about the desirability of arbitration over litigation or vice versa. If the parties believe a particular state's law is highly efficient, that might be viewed as reducing the costs of litigation, and provide a reason to decline to include an arbitration clause.[76] Because choice-of-law is concentrated in three states, we report the rates of arbitration

[76] Similar considerations might support using choice-of-forum information instead of or in addition to choice-of-law. But many fewer contracts specify choice-of-forum that choice of law. At least 1,700 contracts did not specify a choice-of-forum whereas nearly all specify a choice-of-law. See also Eisenberg & Miller, supra note 66 (fewer merger agreements specify choice-of-forum than choice-of-law).

clauses for four choices of law: Delaware, New York, California, and Other.[77]

Table 6 shows, for each contract type and choice-of-law locale, the proportion of contracts containing arbitration clauses. For mergers, settlements, employment contracts, licensing agreements, and credit commitments, California law is associated with a higher proportion of arbitration clauses than New York or Delaware as a choice of law. California has a higher rate arbitration clauses in five of the seven contract types for which California is designated more than three times as the choice of law. Overall, about 24 percent of California-law contracts contain arbitration clauses compared to 12 percent for Delaware contracts, four percent for New York contracts, and about 16 percent for other locales.

[77] For contracts that designate more than one state's law (for example, New York law governs except where Delaware law applies), we use the first-mentioned state.

Table 6. Arbitration Clause Presence by Choice-of-Law and Contract Type

Contract type	DE	NY	CA	Other
Mergers	0.12	0.174	0.373	0.212
	133	69	51	66
Bond indentures	0	0.01	0	0
	1	138	4	12
Settlements	0.167	0.231	0.273	0.111
	12	13	11	36
Securities purchase	0.167	0.053	0.152	0.162
	78	188	46	148
Employment contracts	0.333	0.333	0.357	0.38
	6	12	14	79
Licensing	0.2	0.3	0.5	0.32
	5	10	8	25
Asset sale purchase	0.313	0.134	0.233	0.194
	32	82	30	170
Credit commitments	0	0	0.111	0.042
	6	105	9	96
Underwriting		0	0	0
		327	1	23
Pooling service	0	0		0
	17	149		7
Security agreements		0	0	0.167
		22	3	12
Trust agreements	0	0		0
	39	7		2
Other	0.068	0.038	0.143	0.095
	88	185	42	147
Total	0.12	0.04	0.237	0.162
	417	1307	219	823

Source. SEC EDGAR database, LEXIS EDGAR PLUS database, Jan. 2002 to June 30, 2002 for all contract types other than mergers and Jan. 2002 to July 31, 2002 for merger contracts. The first row for each contract type shows the proportion of contracts of that type containing an arbitration clause. The columns break down the results by choice-of-law locale. The second row for each contract type shows the total number of contracts of that type with or without arbitration clauses. All contracts not designating, Delaware, New York, or California law are coded as "Other."

Table 6's breakdown by contract type shows that arbitration clauses' relative prominence in California is not solely a consequence of different contract types being associated with different states' laws. Regression analysis confirms this in a model that simultaneously controls for contract type and choice of law.[78] California contracts also

[78] In a logistic regression model with arbitration clause as the dependent variable and dummy variables for contract type, law chosen, and non-U.S.-party as the explanatory variables, the coefficient on California law being chosen is statistically significant (p=.035). Delaware law served as the reference category. But the lack of variation in the presence of arbitration clauses for pooling service agreements and trust agreements precludes

contain arbitration clauses at significantly higher rates than New York contracts.

4. Place of Business

In addition to choice of law and contract type, one might expect a business's location to influence the decision to include an arbitration clause. Business location is associated with where events affecting a business might occur. The location of events influences choice of law and adjudication forum. Place of business is associated with choice of law[79] but they are far from always the same.

Designating a single place of business per contract requires considering the nature of the contract. For some types of contract, such as merger, two places of business are plausible, the acquiring company's and the acquired company's. For such contracts, we used what would one might expect would normally be the dominant place of business. For example, for merger contracts, we use the acquiring company's place of business. Table 7 shows the business locale chosen for twelve types of contracts. Because of the varied nature of the contract category "Other," we exclude such contracts from this analysis.

including them in the model. California's difference from Other was significant at p=.018. California's difference from New York was significant at p<.0001.

[79] Eisenberg & Miller, supra note 66.

Table 7. Place of Business Used by Contract Type

Contract type	Place of business used
Mergers	Acquiring company's place of business
Bond indentures	Issuer's place of business
Settlements	Reporting company's place of business
Securities purchase	Issuer's place of business
Employment contracts	Employer's place of business
Licensing	Licensor's place of business
Asset sale purchase	Buyer's place of notice location
Credit commitments	Principal lender's designated office
Underwriting	Issuer's place of business
Pooling service	Depositor's place of business
Security agreements	Registrant's place of business
Trust agreements	Registrant's place of business

Source. SEC EDGAR database, LEXIS EDGAR PLUS database, Jan. 2002 to June 30, 2002 for all contract types other than mergers and Jan. 2002 to July 31, 2002 for merger contracts. Excludes contracts categorized as "Other".

Table 8 reports, for each contract type and place of business, the proportion of contracts with arbitration clauses. To keep the output manageable, we report results only for states with at least 50 contracts with places of businesses. States with fewer such contracts are included in the residual category, "Other."

Table 8 confirms Table 6's finding that arbitration clauses appear at a greater rate in contracts with California connections. Table 8 shows for place-of-business what Table 6 showed for choice-of-law. For every type of contract with more than a handful of arbitrations, California's arbitration clause rate, shown in the table's first numerical column, exceeded the arbitration clause rate for all places of business combined, shown in the table's last numerical column. For example, 23.7 percent of California merger contracts had arbitration clauses compared to 19 percent for all states combined. Table 8's penultimate row shows that only Pennsylvania had a higher rate of contracts with arbitration clauses, 21.1 percent, than California's 15.7 percent. But Pennsylvania had only about 20 percent as many business locations as California.

Table 8. Arbitration Clause Presence by Place of Business and Contract Type

Contract type	CA	CO	FL	IL	MA	MN	NC	NJ	NY	PA	TX	VA	Other	Total
Mergers	0.24	0	0.1	0	0.1	0	0	0.1	0.27	0.19	0.26	0	0.21	0.19
	93	9	19	14	15	4	4	12	45	16	23	7	150	411
Bond indentures	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	27	2	6	5	4	5	3	5	6	3	22	4	63	155
Settlements	0.33	0	0.33	0	0			0.5	0	0.33	0	0	0.17	0.167
	9	1	6	2	1			2	4	3	13	2	29	72
Securities purchase	0.14	0.24	0.1	0	0	0	0	0.1	0.13	0.19	0.14	0.1	0.14	0.117
	95	17	40	9	15	10	7	17	38	16	35	13	148	460
Employment contracts	0.46	0.2	0.4	0	0.3	0.5	0.5	0.5	0.43	0.58	0.57	0	0.26	0.369
	11	5	10	3	10	2	2	6	7	12	7	1	35	111
Licensing	0.46	0		0.5	0	0		0	0	0.5	0.25	0	0.5	0.333
	11	1		2	3	1		4	3	2	4	1	16	48
Asset sale purchase	0.26	0.2	0.44	0.22	0.17	0.27	0.29	0.21	0.1	0.25	0.17	0.25	0.18	0.194
	43	10	9	9	6	11	7	14	38	4	23	4	136	314
Credit commitments	0.1	0	0	0	0	0	0.1	0	0	0	0		0	0.02
	14	1	3	16	8	3	11	1	56	2	21		80	216
Underwriting	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	43	6	14	18	8	7	9	9	30	16	50	19	122	351
Pooling service	0		0	0	0	0	0	0	0	0	0	0	0	0
	21		1	13	2	17	8	9	52	2	7	3	38	173
Security agreements	0		0.25	0	0			0	0		0	1	0	0.05
	8		4	1	2			1	4		5	1	11	37
Trust agreements	0		0	0		0	0	0	0		0	0	0	0
	7		3	1		2	2	2	6		2	1	22	48
Total	0.16	0.14	0.12	0	0.1	0.1	0.1	0.11	0.1	0.21	0.1	0.1	0.12	0.113
	382	52	115	93	74	62	53	82	289	76	212	56	850	2396

Source. SEC EDGAR database, LEXIS EDGAR PLUS database, Jan. 2002 to June 30, 2002 for all contract types other than mergers and Jan. 2002 to July 31, 2002 for merger contracts. The first row for each contract type shows the proportion of contracts of that type containing an arbitration clause. The columns break down the results by place of business. The second row for each contract type shows the total number of contracts of that type with or without arbitration clauses. All locales that are places of business in fewer than 50 contracts, and unknown locales, are designated "Other."

We recognize of course that choice-of-law locales and business locales are not independent of one another. The central result is that using either locale shows California to have relatively high arbitration clause rates.

5. Attorney Place of Business

An attorney's location could influence whether an arbitration clause is used if local practice or custom includes whether or not to include an arbitration clause. Attorney locale is likely associated with choice-of-law and place-of-business.[80] Nevertheless, there may be an attorney effect with respect to arbitration clauses in addition to choice-of-law and place-of-business effects. For example, in merger contracts New York attorneys are more likely than other attorneys to specify a litigation forum.[81] Information about attorney locale is sketchier in our data than is information about choice-of-law or place-of-business. Attorney locale is only available for law firms mentioned in the Form 8-K so we are limited to using whatever law firms appear in the form with useable addresses. And we could not always link an attorney mentioned with a principal party to the contract.

Table 9 reports the rate of arbitration clauses for each the twelve contract types, broken down by attorney locale. Attorney locale is more widely dispersed than choice-of-law. As shown above, Delaware, New York, and California account for almost 70 percent of the choices-of-law but they account for less than 50 percent of the attorney locales. Even taking into account the greater likelihood of missing data for attorney locale (note the high number of locales coded as Other in Table 9), New York and California are the leading attorney locales but they represent only a small portion of the contracts. Table 9's last row

[80] Eisenberg & Miller, supra note 66.

[81] Id.

indicates that New York can be identified as an attorney locale in 269 out of 2,396 contracts and California can be identified as an attorney locale in 182 of 2,396 contracts. Interestingly, Delaware as a locale for attorneys was not extracted from even 50 contracts. The large Other category makes us reluctant to conclude whether attorney locale is more or less concentrated than business locale.

Table 9. Arbitration Clause Presence by Attorney Locale and Contract Type

Contract type	CA	IL	MA	NY	PA	TX	Other	Total
Mergers	0.24	0.1	0.12	0.1	0.19	0.13	0.23	0.19
	74	18	17	67	16	15	204	411
Bond indentures	0	0	0	0	0	0	0	0
	4	2	1	13	1	7	127	155
Settlements	0.4	1		0	0		0.16	0.17
	5	1		6	3		57	72
Securities purchase	0.1	0.2	0.2	0.12	0.14	0.12	0.11	0.12
	48	10	15	60	7	17	303	460
Employment contracts		0	0.67	0.14	0.43	1	0.36	0.37
		1	3	7	7	2	91	111
Licensing	1			0.67		0	0.3	0.33
	1			3		1	43	48
Asset sale purchase	0.29	0	0.43	0.13	0.4	0.18	0.19	0.19
	24	9	7	45	5	11	213	314
Credit commitments	0	0	0	0	0	0	0	0
	5	4	4	14	3	10	176	216
Underwriting	0	0	0	0	0	0	0	0
	14	5	7	51	8	26	240	351
Pooling service							0	0
							173	173
Security agreements	0	0	0	0			0.1	0.1
	7	1	1	3			25	37
Trust agreements							0	0
							48	48
Total	0.18	0.1	0.18	0.1	0.18	0.1	0.11	0.11
	182	51	55	269	50	89	1700	2396

Source. SEC EDGAR database, LEXIS EDGAR PLUS database, Jan. 2002 to June 30, 2002 for all contract types other than mergers and Jan. 2002 to July 31, 2002 for merger contracts. The first row for each contract type shows the proportion of contracts of that type containing an arbitration clause. The columns break down the results by attorney locale. The second row for each contract type shows the total number of contracts of that type with or without arbitration clauses. All locales that are attorney locales in fewer than 50 contracts, and unknown locales, are designated "Other."

Despite the sketchiness of the attorney data, they tend to confirm a key Table 8 finding about the relation between locale and the use of arbitration clauses. For every type

of contract with more than a handful of arbitration clauses, California's arbitration clause rate, shown in the table's first numerical column, exceeded the arbitration clause rate for all attorney locales combined, shown in the table's last numerical column. For example, 24.3 percent of California merger contracts had arbitration clauses compared to 19 percent for all states combined. Table 9's penultimate row shows that only Massachusetts had a higher rate of contracts with arbitration clauses, 18.2 percent, than California's 18.1 percent. But Massachusetts had only about 30 percent as many attorney locales as California. As in Table 8, Pennsylvania had a relatively high rate of arbitration clauses.

6. Regression Results

The previous subparts separately assess the relation between arbitration clause presence in a contract and: (1) presence of a non-U.S. party to the contract, (2) degree of contract standardization and industry, (3) choice-of-law, (4) place-of-business, and (5) attorney locale. This subpart models arbitration clause presence as a simultaneous function of these characteristics.

Each model in Table 10 is a logistic regression model in which the dependent variable equals one if an arbitration clause is in the contract and otherwise equals zero. Model (1) contains a dummy variable for a non-U.S. entity being a party to the contract and dummy variables for the degree of standardization as discussed above with respect to Figure 1. A low degree of standardization is the reference category. Model (2) adds dummy variables for choice-of-law, with Delaware as the reference category. Model (3) adds, but does not report, dummy variables for SIC codes as reported in Table 5. Model (4) adds, but does not report, dummy variables for place of business as described in Table 8. Model (5)

also adds, but does not report dummy variables for attorney locale as described in Table 9. Model (6) uses dummy variables for each contract type in lieu of the standardization dummy variables and includes dummy variables for SIC codes.

Table 10. Logistic Regression Models of Presence of an Arbitration Clause

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Dependent variable = 1 if contract has an arbitration clause						Model (3) marginal effects
Non-U.S. party	0.497**	0.535**	0.562**	0.575**	0.583**	0.655**	0.031*
	(2.69)	(2.75)	(2.85)	(2.84)	(2.88)	(3.31)	(2.24)
Medium standardization	-0.809**	-0.695**	-0.728**	-0.741**	-0.760**		-0.032**
	(4.91)	(3.98)	(4.10)	(4.11)	(4.11)		(3.63)
High standardization	-3.790**	-3.315**	-3.217**	-3.170**	-3.205**		-0.157**
	(10.36)	(8.31)	(7.96)	(7.82)	(7.87)		(8.82)
New York law		-0.583*	-0.539*	-0.635**	-0.608*	-0.473+	-0.024*
		(2.49)	(2.26)	(2.63)	(2.50)	(1.85)	(2.14)
California law		0.578*	0.608*	0.541+	0.529+	0.586*	0.034+
		(2.36)	(2.44)	(1.90)	(1.84)	(2.30)	(1.88)
Other law		0.187	0.191	0.241	0.235	0.116	0.009
		(0.93)	(0.93)	(1.14)	(1.10)	(0.51)	(0.890
Bond indentures						-3.001**	
						(2.88)	
Settlements						-0.233	
						(0.63)	
Securities purchase						-0.521*	
						(2.30)	
Employment contracts						0.902**	
						(3.23)	
Licensing						0.632+	
						(1.73)	
Asset sale purchase						-0.048	
						(0.21)	
Credit commitments						-2.216**	
						(4.58)	
Underwriting						-3.807**	
						(3.67)	
Security agreements						-1.194	
						(1.51)	
Constant	-0.919**	-1.055**	-0.496	-0.278	-0.241	-0.981*	
	(6.27)	(4.73)	(1.15)	(0.56)	(0.46)	(2.49)	
Observations	2395	2303	2303	2303	2303	2082	2303
SIC code dummies	No	No	Yes	Yes	Yes	Yes	Yes
Place of business dummies	No	No	No	Yes	Yes	No	No
Attorney locale dummies	No	No	No	No	Yes	No	No

Source. SEC EDGAR database, LEXIS EDGAR PLUS database, Jan. 2002 to June 30, 2002 for all contract types other than mergers and Jan. 2002 to July 31, 2002 for merger contracts. Absolute values of robust t, z statistics in parentheses. + significant at 10%; * significant at 5%; ** significant at 1%. Reference categories are low standardization, Delaware as the choice of law, and mergers as the contract type in model (6). Model (6) omits pooling service and trust agreements because they do not vary–all lack arbitration clauses. Models (3) through (6) include, but we do not report, dummy variables for SIC codes as reported in Table 5. Models (4) and (5) include, but we do not report, dummy variables for place of business as reported in Table 8. Model (5) includes, but we do not report, dummy variables for attorney locale as reported in Table 9. Column (7) reports the change in probability of observing an arbitration clause based on the presence of a variable, while constraining the other variables to their mean values.

All models confirm the bivariate analyses results. Contracts without a U.S. party tend to have arbitration clauses. Contracts with medium standardization are less likely to have arbitration clauses than contracts with low standardization. Contracts with high standardization tend not to have arbitration clauses compared to contracts with medium or low standardization. Contracts with medium standardization tend not to have arbitration clauses compared to contracts with low standardization.[82]

Contracts with California contacts tend to have arbitration clauses more than contracts without California contacts. Contracts with New York contacts tend to shun arbitration clauses compared to contracts lacking New York contacts. These results are statistically significant or nearly so for all variables in all models. The marginal significance of the California law dummy variable in models (4) and (5) may be due to the multicollinearity of that variable with the California business and attorney locale dummy variables included in the models.

Note that model (6) has fewer observations than the other models. This is because pooling service agreements and trust agreements drop out of the model due to lack of variation–they never contain arbitration clauses. The model nevertheless confirms the non-U.S.-party of state choice-of-law results that emerge in the other models. The coefficients on the contract-type dummy variables in model (6) are also consistent with the results suggested by using the standardization dummy variables in models (1) to (5). For example the highly standardized, bond indentures, credit commitments and underwriting contracts are all negatively, and statistically significantly associated with the presence of an arbitration

[82] Keith Hylton's observation that loan contract provisions are clear and well-understood by courts is consistent with our standardization variables' results, which suggest that more standardized contracts are less likely to include arbitration clauses. Hylton, supra note 1.

clause compared to the reference category, merger contracts. Employment contracts and licensing agreements, with relatively low degrees of standardization, are positively associated with the presence of arbitration clauses, compared to merger contracts. Model (6) thus establishes that the coding of contract types into our three standardization categories does not distort the relation between contract-type and the presence of an arbitration clause.

Table 10's models also suggest that, of the variables we explore, most of the information about the presence of an arbitration clause is embodied in the non-U.S. party variable, the choice-of-law variables, and the standardization variables. In models (4) and (5), a test of the hypothesis that the place-of-business dummy variables are jointly equal to zero yields p-values that preclude rejecting the hypothesis. Similarly in model (5), one cannot reject the hypothesis that the attorney locale dummy variables are jointly equal to zero.

The marginal effects of the explanatory variables for model (3) are shown in Table 10's right-most column. They report the estimated change in the probability of the presence of an arbitration clause as an explanatory variable changes from 0 to 1, while assigning the other explanatory variables their average values. The marginal effects should be interpreted against the background of the small overall probability, about 0.11, of an arbitration clause appearing in a contract. So, for example, the .031 probability increase in the probability of an arbitration clause when a non-U.S. party is present, is about a 30 percent increase in the probability of an arbitration clause, given the low rate of arbitration clauses. In this perspective, all of the statistically significant marginal effects are substantial, with the effect of high standardization being extraordinarily large at negative 0.157.

V. Discussion of Results

This is the first study of its kind and it is important to recognize its limitations. First, the contracts we study exist in a small slice of time so ideally we would like information for periods before and after the first half of 2002. Second, the variation across our twelve contract types in the rates of dispute resolution clauses studied suggests that more sophisticated modeling of the decision to include such clauses could be fruitful. The details of the relations between the contracting parties and the motivations of those drafting the clauses could and should be studied. Third, while corporate actors may be expected to seek efficient solutions, they act through agents. If litigation raises costs, some of those costs go to attorneys who play a prominent role in drafting contracts. The agency issues raised by our findings should be the object of interesting research. Subject to these limitations, and recognizing the need for future research, we explore what strike us as some of the possible implications of our results.

A. The Paucity of Arbitration Clauses

The most striking result is the paucity of arbitration clauses, even in international contracts. Our results contradict some received wisdom but are consistent with the 1998 Cornell University survey finding that relatively few large corporations use arbitration frequently,[83] and a later Cornell survey finding substantial variation in corporate approaches to conflict resolution.[84] The finding of greater use of arbitration clauses in employment

[83] Stipanowich, supra note 3, at 880.

[84] See generally, David B. Lipsky et al., Emerging Systems for Managing Workplace Conflict: Lessons from American Corporations for Manager and Dispute Resolution Professionals (2003); David B. Lipsky et al., An Uncertain Destination: On the Development of Conflict Management Systems in U.S. Corporations, in Alternative Dispute Resolution in the Employment Arena, Proceedings of New York University 53rd Annual Conference on Labor 109 (Samuel Estreicher & David Sherwyn eds. 2004).

contracts, as reported in Table 2 and confirmed in Table 9's regression models, is consistent with the Cornell survey.[85] The infrequency of arbitration in financial contracts confirms the observation of William Park that banks prefer to litigate rather than arbitrate loan defaults.[86]

Our international contract arbitration clause findings show substantial variation by contract type. The highest arbitration clause rate is shown in Table 4 to be 63.6 percent for international licensing contracts. This high rate suggests that our findings, although generally showing low rates, are not necessarily inconsistent with Drahozal and Naimark's reported 88.2 percent arbitration clause rate for international joint venture agreements. Both high rates are consistent with standardization influencing arbitration clause inclusion. Licensing and joint venture contracts are likely to be less standardized than most other contracts.

Why are arbitration clauses so infrequent? The paucity of such clauses may partially reflect the view of corporate counsel that the decision whether or not to include binding arbitration in an agreement is not one that can be made across the board, but rather depends on the needs and circumstances of the parties.[87] But that arbitration is not called for in every instance would not explain why it is observed so rarely. Perhaps the reason has something to do with education and inertia: transactional attorneys may not be fully aware of the dispute resolution options.[88] But we doubt that the sophisticated attorneys who draft these

[85] Stipanowich, supra note 3, at 881.

[86] William W. Park, Arbitration in Banking and Finance, 17 Annual Rev. Bank. L. 213, 215-16 (1998).

[87] Brad S. Karp, The Litigation Angle in Drafting Commercial Agreements, PLI, Drafting Corporate Agreements 2004-2005 (Dec. 2004 - Jan. 2005).

[88] See Stipanowich, supra note 3, at 893 (observing that "although 'trial lawyers' have often had experience with mediation and other approaches, corporate transactional counsel tend to have had little or no experience with these choices—and are reluctant or unable to incorporate discussions about dispute resolution in commercial contract negotiations.. See also Celeste M. Hammond, The (Pre)(As)sumed "Consent" of

major commercial contracts would be unaware of the availability of binding arbitration as an alternative to judicial dispute resolution. Parties might be electing to omit arbitration clauses on the theory that if a dispute arises, they can agree to submit the matter to arbitration at that time. However, *ex post* arbitration is not an effective substitute for arbitration agreed to *ex ante* because once a dispute has arisen, one or the other party will typically have a strategic reason to demand litigation.[89] Another, perhaps more plausible, explanation is simply that the benefits of arbitration have been oversold. Arbitration may simply not be as efficient a method for resolving disputes as its most ardent supporters claim.[90]

B. Arbitration Clause Rates and Perceptions of Court Fairness

Similarly, the downside of litigation may have been exaggerated. One reason for shunning litigation is the presumed greater variance, unpredictability, and risk of unfairness in adjudication. If these reasons are in fact at work, one might expect a strong association between the perceived quality of states' civil justice systems and the rate of arbitration clauses in contracts connected to a state via incorporation or place of business. Incorporating in a state and having a substantial place of business in a state should be associated with increase risk of adjudication in a state's courts. Our data allow ranking states based on the arbitration clause rates of contracts connected to the states. The Chamber

Commercial Binding Arbitration Contracts: An Empirical Study of Attitudes and Expectations of Transactional Lawyers, 36 John Marshall L. Rev. 589, 613 (2003) (many transactional lawyers are misinformed about the operation of arbitration).

[89] Shavell, supra note 1.

[90] Stipanowich, supra note 3, at 894-95.

of Commerce of the United States annually ranks states' civil justice systems.[91] One measure of whether fear of state court systems explains arbitration clause rates is whether states that are perceived as having the least fair arbitration systems have the highest rates of arbitration clauses.

Figures 2 and 3 show the relation between a state's rate of arbitration clauses and large corporations' (as surveyed by the Chamber of Commerce) perceptions of the overall ranking of state liability systems.[92] The Chamber's overall ranking is based on the scores for several topics,[93] including treatment of tort and contract litigation, judges' impartiality, judges' competence, juries' predictability, and juries' fairness.[94] Figure 2 reports the relation between arbitration clause rates in our data based on state of incorporation and the Chamber's overall state ranking. Figure 3 reports the relation between arbitration clause rates in our data based on place of business and the Chamber's overall state ranking. Place of business for a contract is assigned as described in connection with Table 7. Place of incorporation for a contract is assigned using the same criteria. For example, in merger contracts, the acquiring company's place of incorporation is used.

[91] E.g., U.S. Chamber of Commerce State Liability Systems Ranking Study, Final Report, Jan. 11, 2002 (Study No. 14966). The Chamber and other business groups use the Chamber's ranking studies to try and influence courts to restrict causes of action and constrain legal actions against the business community. E.g., Brief of Chamber of Commerce of the United States, 2004 WL 2125702, Henry v. The Dow Chemical Co., 701 N.W.2d 684 (Mich. 2005); Amicus Curiae Brief of Wisconsin Manufacturers and Commerce, 2002 WL 32699975, Wischer v. Mitsubishi Heavy Inds. America, Inc., 673 N.W.2d 303 (Wisc. App. 2002).

[92] Chamber of Commerce, supra note 91, at 14 (tbl. 3 Overall Ranking of State Liability Systems).

[93] Id. at 8 n.1.

[94] Id. at 17-18 (tbl. 5). Other factors are treatment of class actions, punitive damages, timeliness of summary judgment/dismissal, discovery, and scientific and technical evidence. Id.

Figure 2. Arbitration Clause Rank and State Liability System Rank

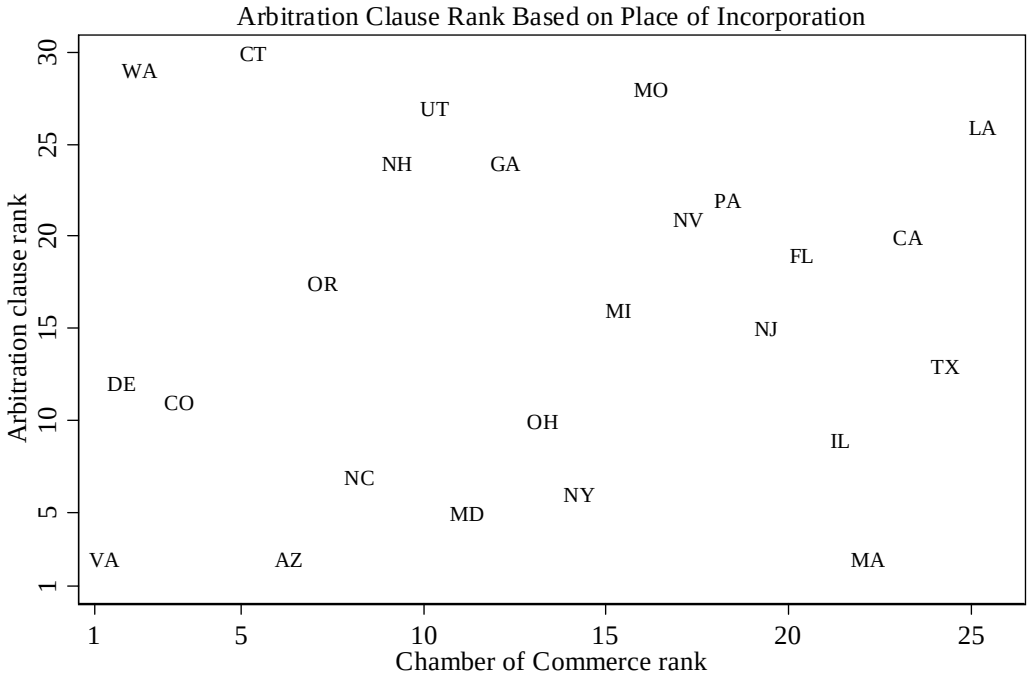
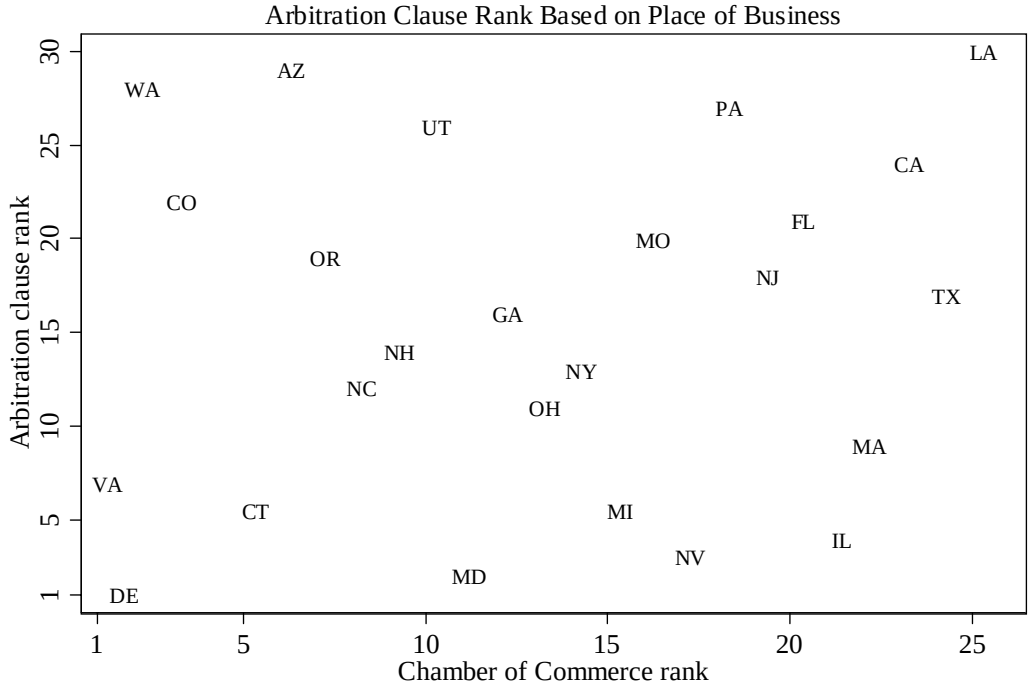


Figure 3. Arbitration Clause Rank and State Liability System Rank



If there were a positive association between civil justice perceptions and arbitration clauses, the data points in the figure should flow from lower left to upper right. The lower left of the figures, near the origin, corresponds with high rankings in civil justice systems and low rankings in arbitration clause rates.[95] The upper right corresponds with low rankings in civil justice systems and high ranking arbitration clause rates. The expected relation is not observed. Both figures indicate that no significant association exists between rates of arbitration clauses and the Chamber's rankings. The patterns appear to be essentially random, though some caution is necessary because several states have few observations. If the Chamber's ranking methodology has validity, then the figures suggest that arbitration clauses are being used for reasons other than perceived interstate variation in judicial systems' performance.

C. Arbitration Clause Rates and State Laws and Courts

The associations between state contacts and use of arbitration clauses, shown in Tables 6, 8, 9, and 10, suggest the need for further research into the relation between state law and arbitration clause use. One factor we suggested as possibly explaining use of arbitration clauses, the speed with which state courts process cases, does not appear to be helpful in explaining the observed pattern of arbitration clauses.

Available information about state court case-processing indicates that California cases resolved by trial are resolved more quickly than New York cases. The Bureau of Justice Statistics studied all 2001 state court trial terminations in 46 of the nation's 75 largest

[95] Low numerical rankings in the Chamber's system correspond to more favorably ranked systems. Lower numerical rankings for arbitration clauses correspond to lower arbitration clause rates.

counties.[96] The study included New York County (Manhattan) and nine California counties.[97] For the nine large California counties, the study included 1,264 trials. The mean time from trial to verdict was 601 days, with a median of 510 days. The large New York county had 309 trials, with a mean time from tiral to verdict of 1,245 days and a median time of 1,043 days. These dramatically faster disposition times in large California counties persist when one controls for the differing mix of case types in the two states.

Thus, if contracting parties are attracted to arbitration in states in which adjudication times are relatively slow, we would expect parties with contracts with New York contacts to be attracted to arbitration compared to parties with contracts with California contacts. Yet we find just the opposite. Parties are drawn to arbitration California relative to New York. Indeed, California's tried-case processing time was noticeably faster than the 46 county mean and median. For all 46 counties, the mean time from filing to verdict was 753 days and the median was 629. Yet our contract data show California contracts tend to include arbitration clauses compared to other states. We interpret this as evidence that substantive legal rules tend to have a greater influence over decisions to include arbitration clause than does case-processing efficiency.

D. Observed Arbitration Clause Rates Compared to Consumer Contracts

Our core arbitration clause finding contrasts with the reportedly widespread use of mandatory arbitration clauses in certain consumer contracts.[98] Business interests defend

[96] For a summary of the data and methodology, see Bureau of Justice Statistics Bulletin: Civil Justice Survey of State Courts, 2001: Civil Trial Cases and Verdicts in Large Counties, 2001 (April 2004).

[97] The included California counties were Alameda, Contra Costa, Fresno, Los Angeles, Orange, San Bernardino, San Francisco, Santa Clara, and Ventura. Id.

[98] Consumer Reports observes that the largest credit-credit card issuers "insist on arbitration." You Can Avoid Arbitration, ConsumerReports.org (Jan. 2004); available at www.consumerreports.org/cro/personal-finance/avoid-arbitration-credit-card-creditcard-companies-madatory[sic]-arbitration/index.htm, accessed Aug.

consumer arbitration as a "less-expensive, more efficient alternative to a court dispute resolution."[99] Some suggest that arbitration clauses in consumer contracts may be being used for some other purpose, such as a mechanism to avoid dispute resolution by foreclosing class actions,[100] or to gain advantage in dispute resolution over parties who cannot realistically negotiate.[101] Our study suggests the value of further inquiry into the advantages and disadvantages of using binding arbitration in standardized consumer contracts.[102]

VI. Conclusion

We present evidence that large corporate actors do not systematically embrace arbitration. International contracts include arbitration clauses more than domestic contracts but also at a surprisingly low rate. Our results have implications for the reasons underlying widespread use of arbitration clauses in consumer contracts. If the justifications offered supporting arbitration in the consumer context—simple, low-cost adjudication—are correct, it is surprising that public companies do not seek these advantages in disputes among

11, 2006. Consumer Reports also states that most community banks and credit unions that issue credit cards do not require arbitration. Consumer Action, similarly, reports that 21 of 47 (45 percent) of banks surveyed in 2005 required consumers to settle disputes using arbitration. Consumer Action, New Credit Card Study Shines Light on Industry Practices, July 28, 2005, available at http://www.consumer-action.org/press/articles/new_credit_card_study_shines_light_on_industry_practices/, accessed Aug. 11, 2006. On the other hand, in the perhaps unusual setting of software end-user licensing agreements, Marotta-Wurgler found an even lower rate of mandatory arbitration clauses (6%) than is evidenced in our sample of sophisticated business contracts. Marotta-Wurgler, supra note 49.

[99] Marc Furletti, Mandatory Arbitration Clauses in the Credit Card Industry 1 (Jan. 2003), Fed. Res. Bank of Phila., Discussion Paper: Payment Cards Center (reporting on workshop led by Alan S. Kaplinsky, chair of the Consumer Financial Services Group, Ballard Spahr Andrews & Ingersoll, LLP).

[100] See generally Furletti, supra note 99; Richard A. Nagareda, Aggregation and its Discontents: Class Settlement Pressure, Class-Wide Arbitration, and CAFA, 106 Colum. L. Rev.(2006) (forthcoming).

[101] See generally Richard M. Alderman, Consumer Arbitration: The Destruction of the Common Law, 2 J. Am. Arbit. 1 (2003).

[102] Common sense and life experience with mobile phones suggest that disputes with mobile phone suppliers exist. If arbitrations are very rare, even when they constitute the only available dispute resolution mechanism, their scarcity may be evidence that arbitration clauses are serving not to efficiently resolve disputes but to shelter corporate conduct that might be challenged if a cost-effective, aggregate dispute resolution mechanism were available.

themselves. In the simple economic view, our results suggest that corporate representatives believe that litigation can add value over arbitration.