LAW AND HISTORY BY NUMBERS: USE, BUT WITH CARE

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This Article deals with the historical development of corporate law in the United States, focusing in so doing on the promise and perils of quantification. The Article is part of a larger project where the authors have already deployed the "anti-director rights index" ("ADRI"), a well-known mechanism for quantifying the protection various nations' corporate laws offer investors, to "score" Delaware corporate law from the turn of the twentieth century to the present day (http://ssrn.com/abstract=2079505). The authors are currently expanding their research by investigating two additional bodies of corporate law (Illinois and the Model Business Corporations Act) and by taking into account an "anti-self-dealing index" ("ASDI") that focuses on regulation of transactions between a company and those who control it. They identify in this Article various reasons for undertaking a quantitative, historically-oriented analysis of U.S. corporate law. This Article focuses primarily on the logistical challenges associated with such an inquiry. The authors indicate that it is impossible to code U.S. corporate law historically with clinical precision but nevertheless conclude that the quantification exercise in which they are currently engaging should provide sufficient insights to be worthwhile.

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I. INTRODUCTION

This Article deals with the historical development of corporate law in the United States, focusing in so doing on the promise and perils of quantification. Quantification of corporate law has become a prominent feature in empirical work done on comparative corporate governance, with particular emphasis on the contribution that robust shareholder protection can make to a nation's financial and economic development. While Larry Ribstein was a highly prolific scholar who explored numerous aspects of corporate law, this was not territory into which he ventured. Nevertheless, he did write extensively on corporate law aspects of competitive federalism,[1] a topic where historically oriented quantification can provide insights. Moreover, although Larry was not a frequent producer of empirical legal scholarship,[2] he was an active consumer and frequently attended and commented on papers at the annual Conference on Empirical Legal Studies.[3]

Larry, as a commentator on empirical legal scholarship, counseled legal academics against rushing headlong into the quantitative arena. He observed in 2009 that

> Legal scholars once decried too much untested theorizing. That time is long gone. Legal academics' discovery of empirical research has given rise to the greatest explosion of intellectual entrepreneurship since Al Gore created the Internet. Now instead of untested hypotheses we get unhypothesized tests . . . . The empirical bubble has encouraged scholars to go right to the data, sometimes without developing the theory adequately for a good empirical test.[4]

1. *See, e.g.*, Bruce H. Kobayashi & Larry E. Ribstein, *Nevada and the Market for Corporate Law*, 35 SEATTLE U. L. REV. 1165 (2012); Larry E. Ribstein & Erin Ann O'Hara, *Corporations and the Market for Law*, 2008 U. ILL. L. REV. 661; Larry E. Ribstein, *Efficiency, Regulation and Competition: A Comment on Easterbrook and Fischel's* Economic Structure of Corporate Law, 87 NW. U. L. REV. 254, 261–71 (1992).

2. He did, however, occasionally engage in it. *See, e.g.*, Larry E. Ribstein, *Statutory Forms for Closely Held Firms: Theories and Evidence from LLCs*, 73 WASH. UNIV. L. Q. 369, 412–30 (1995) (providing data in tabular form on the formation of LLCs and the presence of provisions in limited liability company legislation dealing with prescribed issues).

3. *See, e.g.*, Bill Henderson, *Ribstein's Rundown of Papers at CELS*, EMPIRICAL LEGAL STUD. (Nov. 9, 2007, 1:07 PM), http://www.elsblog.org/the_empirical_legal_studi/2007/11/ribsteins-rundo.html.

4. Larry Ribstein, *Why CELS?*, IDEOBLOG (Nov. 23, 2009, 3:48 PM), http://web.archive.org/web/20091201233450/http://busmovie.typepad.com/ideoblog/2009/11/why-cels.html.

Larry additionally called for a "focus on methodology" and "more humility by both empiricists and theoreticians."[5]

We have already engaged in quantitative analysis of the historical development of U.S. corporate law and are continuing with this research.[6] Nevertheless, somewhat akin to Larry, we adopt in this Article a cautionary tone concerning empirical analysis. The methodological approach we are employing has been characterized as "leximetrics," which involves quantitative measurement of law.[7] Some have expressed doubts about the whole enterprise, questioning whether it is even possible to develop sensible numerical measures of complex legal concepts.[8] Assuming for the sake of argument that it is theoretically possible to do this, one might assume that, once a robust coding protocol has been developed, it would at least be a reasonably straightforward task to find the law and translate it into numbers. As we describe in this Article, our experience suggests otherwise.

In the corporate law context, leximetrics has typically been deployed in cross-country studies that can be termed "comparative law and finance."[9] It is also possible, however, to focus on one country by coding the law across time.[10] This is what we have been doing. In a 2013 article we deployed the "anti-director rights index" ("ADRI"), a well-known mechanism for quantifying the protection various nations' corporate laws offer investors, to "score" Delaware corporate law from the turn of the twentieth century to the present day.[11] We are currently expanding our research by measuring two additional bodies of corporate law, Illinois' and the Model Business Corporations Act ("MBCA"), the model set of laws promulgated by the Committee on Corporate Laws of the Section of Business Law of the American Bar Association.[12] We are also measuring all three bodies of corporate law (Delaware, Illinois, and the MBCA) by reference to an "anti-self-dealing index" ("ASDI") that focuses on regulation of transactions between a company and those who control it.[13]

5. *Id*.

6. Brian R. Cheffins, Steven A. Bank & Harwell Wells, *Questioning "Law and Finance": US Stock Market Development, 1930–70*, 55 BUS. HIST. 601 (2013).

7. Priya P. Lele & Mathias M. Siems, *Shareholder Protection: A Leximetric Approach*, 7 J. CORP. L. STUD. 17, 18 (2007). The term "leximetrics" was first coined by Robert Cooter and Tom Ginsburg. *Id.* at 18 n.4 (citing Robert Cooter & Tom Ginsburg, *Leximetrics: Why the Same Laws Are Longer in Some Countries Than Others* 2 (Illinois Law & Econ. Working Papers Series, Working Paper No. LE03–012, June 2003), *available at* http://papers.ssrn.com/sol3/papers-cfm?abstract_id=456520).

8. John W. Cioffi, *Legal Regimes and Political Particularism: An Assessment of the "Legal Families" Theory from the Perspectives of Comparative Law and Political Economy*, 2009 BYU L. REV. 1501, 1504.

9. Mathias Siems & Simon Deakin, *Comparative Law and Finance: Past, Present, and Future Research*, 166 J. INSTITUTIONAL & THEORETICAL ECON. 120, 120 (2010).

10. *Id*. at 123.

11. Cheffins, Bank, & Wells, *supra* note 6.

12. *See* MODEL BUS. CORP. ACT ANN., at v (Leonard D. Adkins ed. 1960).

13. As this Article was in press, we expanded our analysis still further to take into account a ten variable shareholder protection index Mathias Siems developed in the late 2000s in tandem with an academic team associated with the Cambridge, U.K.-based Centre for Business Research. *See* Brian R. Cheffins, Steven A. Bank, & Harwell Wells, *The Race to the Bottom Recalculated: Scoring Corpo-*

One reason we have embarked on this research is the success quantitative analysis has already enjoyed in the corporate governance realm. According to Lucian Bebchuk and Assaf Hamdani, the ADRI is "[a]mong academic researchers, the most influential metric for evaluating governance arrangements worldwide," and the ADRI and the ASDI had, as of a few years ago, already provided the basis for more than one hundred cross-country studies.[14] Mathias Siems and Simon Deakin judge that the importance of the series of studies in which the ADRI and ASDI were initially conceived and applied "cannot be overestimated."[15] The publications providing the foundation for ADRI and ASDI research are indeed among the most cited in economics and law.[16]

A second reason we have undertaken this research is that, despite the growing importance of leximetrics, only a tiny handful of studies have attempted to measure quantitatively changes in U.S. corporate law across time. U.S. corporate law has been coded for the construction of the ADRI and the ASDI as well as for two shareholder protection indices Mathias Siems developed in tandem with an academic team associated with the Cambridge-based Centre for Business Research.[17] But only one of these indices, a sixty variable index Siems constructed that was deployed for five countries for the years 1970 to 2005, offers evidence of how matters developed in the U.S. over a significant period of time.[18]

Other efforts to quantify U.S. corporate law have focused on measuring the pace of change rather than the level of protection afforded. William Carney, in a 1998 paper, and Roberta Romano, in a 2006 article, measured the rate of diffusion of corporate law by quantifying states' adoption of measures dealing with a variety of important corporate law topics.[19] Carney's paper was an extension of research done for a 1997 ar-

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rate Law Over Time (ECGI – Law Working Paper No. 261/2014, 2014), *available at* http://ssrn.com/abstract=2475242. On the essential features of the Centre for Business Research index, see Mathias Siems, *Shareholder Protection Around the World (Leximetric II)*, 33 DEL. J. CORP. L. 111 (2008).

14. Lucian A. Bebchuk & Assaf Hamdani, *The Elusive Quest for Global Governance Standards*, 157 U. PA. L. REV. 1263, 1276, 1313–14 (2009).

15. Siems & Deakin, *supra* note 9, at 122.

16. *Id.*

17. On the coding of the United States under the ADRI and ASDI, see Simeon Djankov et al., *The Law and Economics of Self-Dealing*, 88 J. FIN. ECON. 430, 442, 454 (2008). On the ADRI, see also Rafael La Porta et al., *Law and Finance*, 106 J. POL. ECON. 1113, 1130–31 (1998) (coding the U.S. together with 48 other countries using the ADRI); Holger Spamann, *The "Antidirector Rights Index" Revisited*, 23 REV. FIN. STUD. 467 (2010) (discussing recoding of Delaware's ADRI score). On scoring the United States for the ASDI, see also a coding protocol drafted to supplement Djankov et al., *op. cit.*, *available at* http://scholar.harvard.edu/shleifer/publications/law-and-economics-self-dealing (data made available by Andrei Shleifer). On scoring the United States for the indices Siems developed see Lele & Siems, *supra* note 7, at 30–43 (stating that the United States was one of five countries coded using a sixty variable shareholder protection index); Siems, *supra* note 13, 122–34 (discussing scores for the United States and for nineteen other countries using a ten variable shareholder protection index).

18. Lele & Siems, *supra* note 7, at 30–32 (discussing general shareholder protection trends in the U.S. for 1970–2005).

19. See William J. Carney, *The Production of Corporate Law*, 71 S. CAL. L. REV. 715 (1998); Roberta Romano, *The States as a Laboratory: Legal Innovation and State Competition for Corporate Charters*, 23 YALE J. ON REG. 209 (2006).

ticle in which he developed a taxonomy of European Community Directives on company law and used this to assess the extent to which provisions in these Directives were part of corporate law in U.S. states.[20] Finally, in a 2001 article Mark West carried out a detailed breakdown of the contents of the MBCA, Illinois corporate legislation, and Japan's Commercial Code to compare the extent to which U.S. and Japanese corporate law diverged in the fifty years following Japan's 1950 adoption of a statutory scheme with a strong American flavor.[21]

Third and finally, we believe our historically-oriented quantification project is worth pursuing because it might offer valuable analytical insights. Our 2013 article, in which we deployed the ADRI in order to plot the evolution of Delaware corporate law over time, illustrates the point.[22] The standard historical narrative for U.S. corporate law is that competition between states, led by New Jersey and then Delaware, served to reduce constraints on managerial freedom of action and concomitantly displaced various shareholder rights.[23] While academics have disagreed whether the process was beneficial, there has been implicit agreement that meaningful change—a "race"—did occur.[24] Our analysis revealed a somewhat different story. Delaware's ADRI score remained unchanged between 1900 and 1967, dropped modestly in 1967, and held constant thereafter.[25] An inference that could plausibly be drawn from our leximetric research is that change was not as dramatic as the conventional wisdom implies.

Although we believe there are good reasons for undertaking a quantitative, historically-oriented analysis of U.S. corporate law, we readily acknowledge potential limitations on such an inquiry. Legal academics have frequently reacted coolly to efforts to rate law by reference to indices such as the ADRI and the ASDI.[26] One source of concern has been coding errors, particularly with the ADRI.[27] Doubts on this count have been at least partly assuaged, however, because several of the creators of the ADRI subsequently recoded the ADRI to meet various objections concerning their initial effort and because the scoring of the ASDI was done in consultation with practicing attorneys in each of the seventy-two countries focused upon.[28]

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20. William J. Carney, *The Political Economy of Competition for Corporate Charters*, 26 J. LEGAL STUD. 303, 319–27 (1997).

21. Mark D. West, *The Puzzling Divergence of Corporate Law: Evidence and Explanations from Japan and the United States*, 150 U. PA. L. REV. 527 (2001). We do not include in our discussion here a 2002 article by Bebchuk, Cohen, and Ferrell because their empirical analysis was restricted to one legal topic, namely anti-takeover laws. *See* Lucian Bebchuk et al., *Does the Evidence Favor State Competition in Corporate Law?*, 90 CAL. L. REV. 1775 (2002).

22. Cheffins, Bank, & Wells, *supra* note 6.

23. *Id.* at 604 nn.24–25.

24. *Id.* at 604 nn.26–27 and accompanying text.

25. *Id.* at 608–09.

26. Siems & Deakin, *supra* note 9, at 122.

27. For some examples of coding errors, see Spamann, *supra* note 17, at 472–73.

28. Djankov et al., *supra* note 17, at 432–33, 453–54.

More broadly, scholars have expressed doubts about whether it is in fact possible to distill law numerically.[29] Concerns of this sort arguably reflect a general hesitancy among legal academics to deploy analytical methods that require a reduction in complexity.[30] Forceful advocates of quantitative analysis of law have at times shown little patience for academic lawyers' concern that "law by numbers" is counterproductively reductionist. For instance, Andrei Shleifer, the distinguished economist who initiated the research project that generated the ADRI and ASDI, quipped in a 2005 interview that "Lawyers don't do empirical work . . . They just argue with each other."[31] Shleifer's criticism of legal academics, if it was ever apt, certainly seems to miss the mark now given that interest in empirical legal studies has been sufficient over the past decade to sustain an empirical legal studies society, journal, and annual conference.[32] Indeed, it has been said that "empirical legal scholarship is all the rage."[33] Even so, the instinctively skeptical reaction of many legal academics to quantitative legal research is not without foundation—it is hard to reduce law satisfactorily to numbers. Indeed, that is a key point this Article makes. Parts II and III indicate that quantifying corporate law satisfactorily using the ADRI and the ASDI, respectively, is a challenging process.

Given that the creators of the ADRI themselves saw fit to recode earlier findings, it is hardly a novel insight that using this index can be a challenge. In contrast, little has been said about difficulties associated with coding the ASDI, even though it may be supplanting the ADRI as the index of choice for corporate law-related law and finance research.[34] As Part III of our Article shows, however, deploying the ASDI can be far from straightforward.

Quantifying law is difficult, but we do not believe it is futile. The fact that we are seeking to track numerically the evolution of U.S. corporate law reflects our faith in the enterprise. Ultimately, we are optimistic that analyzing the historical development of U.S. corporate law through the prism of the ADRI and the ADSI can generate sufficient insights to justify proceeding. Still, the coding challenges we draw attention to in this paper indicate that, at least in this context, Larry Ribstein's invoca-

29. *See supra* note 8 and accompanying text.

30. Siems & Deakin, *supra* note 9, at 124 (acknowledging the line of thinking but ultimately advocating the use of quantitative analysis, carefully done); Holger Spamann, *Large-Sample, Quantitative Research Designs for Comparative Law?*, 57 AM. J. COMP. L. 797, 807 (2009) (adopting the same stance as Siems and Deakin).

31. Nicholas Thompson, *Common Denominator*, LEGAL AFF.,(Jan.–Feb. 2005), http://www.legalaffairs.org/issues/January-February-2005/feature_thompson_janfeb05.msp (last visited July 23, 2014).

32. *See About Us: Society for Empirical Legal Studies*: CORNELL U. L. SCH., http://www.lawschool.cornell.edu/SELS/about.cfm (last visited July 23, 2014).

33. Ken Kersch, *House-Breaking Law Professors: Michael Klarman's Backlash Thesis*, BALKINZATION (May 4, 2012, 11:51 AM), http://balkin.blogspot.co.uk/2012/05/housebreaking-law-professors-michael.html.

34. *See* discussion *infra* Part III.

tion to law professors not to rush headlong into the empirical realm is a valuable one.[35] The admonition "use with care" is one that is apt here.

II. THE ANTI-DIRECTOR RIGHTS INDEX

A. *The ADRI's Elements*

Studies deploying the ADRI and the ASDI are part of a burgeoning law and finance literature oriented around quantitative comparative analysis which aims to trace the relationship between nations' laws and legal institutions on the one hand and their corporate governance and financial systems on the other.[36] A key message of this literature has been that "law matters", in the sense that laws that protect shareholders typically constitute the foundation for well-developed equity markets.[37] Given the current prominence of U.S. stock markets, it follows that U.S. corporate law should have been shareholder-friendly in the period when the nation's equity markets developed. The primary motivation underlying the 2013 article in which we plotted the evolution of Delaware corporate law by reference to the ADRI was to test this proposition.[38]

The ADRI was constructed and deployed in a 1998 *Journal of Political Economy* article and related publications by four financial economists, Rafael La Porta, Florencio López-de-Silanes, Andrei Shleifer, and Robert Vishny, generally referred to as "LLSV".[39] As we described in our 2013 article,[40] the ADRI codes the presence or absence of six elements of a jurisdiction's company law, each of which LLSV believed gave shareholders power against directors: (1) the ability to mail in a proxy vote; (2) the absence of a requirement that shareholders deposit shares before a shareholder meeting, rendering them non-transferable ("no block"); (3) the availability of cumulative voting, which permits minority shareholders to "bundle" their votes and thereby increases the likelihood they can elect their representatives to the board of directors; (4) mechanisms offering relief to minority shareholders who have been oppressed or unfairly prejudiced; (5) rules obliging a company to give existing shareholders a right of first refusal when new shares are issued ("preemptive" rights); and (6) the ability of shareholders owning ten percent or more of a company's shares to call an extraordinary shareholders' meeting.[41] LLSV awarded countries "0" or "1" with respect to each variable, depending on how each country's company law dealt with each is-

35. *See* Ribstein, *supra* note 4.

36. For an overview of the literature and its popularity, see John Armour et al., *How Do Legal Rules Evolve? Evidence from a Cross-Country Comparison of Shareholder, Creditor and Worker Protection*, 57 AM. J. COMP. L. 579, 582–85 (2009).

37. Cheffins, Bank, & Wells, *supra* note 6, at 598.

38. *Id.* at 599, 604, 608.

39. La Porta et al., *supra* note 17, at 1113. While this paper was published in 1998, LLSV identified 1993-94 as the point in time they examined the legal rules of the countries in their sample, *Id.* at 1119 n.2.

40. Cheffins, Bank, & Wells, *supra* note 6, at 604–05.

41. *Id.*

sue, with a higher cumulative score signaling a more shareholder-friendly legal regime.[42] The maximum score any country could receive was "6", though "5" in fact was the highest score LLSV awarded.[43]

B. Delaware and the ADRI

LLSV focused on Delaware when coding the U.S. and, being aware that incorporating under Delaware law was a popular option for large publicly traded companies throughout most of the twentieth century, we did the same in our 2013 article.[44] Delaware's present-day ADRI score was our departure point.[45] We then worked backwards, searching for changes to Delaware law that would have altered the score for any of the variables.[46]

One might presume that generating Delaware's ADRI score over time would be reasonably straightforward, given the small number of variables involved and Delaware's longstanding corporate law pre-eminence. We discovered differently.[47] Our first challenge came at the outset, when we needed to choose appropriate present-day benchmarks. At first glance, the obvious departure point would be the score of "5" out of "6" LLSV awarded the U.S. in their 1998 article, with the only "0" occurring because shareholders lack pre-emptive rights under Delaware law.[48] In a 2008 article, however, La Porta, López-de-Silanes, and Shleifer, together with Simeon Djankov ("DLLS"), revised key ADRI definitions and coded the U.S. and seventy-one other countries using the new version based on those countries' laws as of 2003.[49] We correspondingly needed to decide which version of the ADRI to use in our historical analysis.

Our choice mattered because scores generated under DLLS's revised ADRI differed quite substantially from scores awarded under LLSV's original ADRI.[50] Overall, the coding correlation between the two was only 0.60,[51] due in large part to the fact that with the revised version of the ADRI, enabling (or "opt-in") provisions—rules that a corporation could choose to adopt but were neither mandatory nor default terms—were coded differently. Under LLSV's original ADRI protocol, a company law rule that allowed a corporation to "opt in" to a particular shareholder-protective arrangement could be coded as a "1". DLLS, in contrast, coded such an optional provision as a "0".[52] In Delaware, the

42. La Porta, et al., *supra* note 17, at 1128.
43. *Id.*
44. *Id.* at 1119; Cheffins, Bank & Wells., *supra* note 6, at 605–06.
45. Cheffins, Bank, & Wells, *supra* note 6, at 606.
46. *Id.*
47. *See generally* La Porta et al., *supra* note 17.
48. *Id.* at 1128 n.6, 1130.
49. Djankov et al., *supra* note 17, at 453.
50. *Id.* at 455.
51. *Id.*
52. *Id.* at 454.

U.S. state that both LLSV and DLLS focused on,[53] both cumulative shareholder voting and the ability of a ten percent shareholder to call an extraordinary meeting are "opt in" provisions.[54] LLSV thus gave the United States a "1" for both variables but DLLS coded them as "0".[55] The U.S., with its new DLLS score of "3," was correspondingly transformed from a top rank corporate law country to a jurisdiction that provided below average protection.[56]

Given that DLLS themselves implicitly treated the revised ADRI as superior to the original ADRI, we decided to use the revised ADRI in our study. There was an additional benchmark candidate to consider, however, before looking backwards. DLLS generated their revised ADRI in response to a then on-going effort to recode the original LLSV by Holger Spamann.[57] Spamann's methodology was more rigorous and transparent than LLSV's, in that he consulted with local lawyers of each country being coded to ascertain what the law in fact was in their jurisdiction, made his raw legal data available online, and deployed a detailed coding protocol, again made available online, to convert the raw data into ADRI scores for each country.[58]

For the purposes of our study, Spamann's methodological advantages may well have been irrelevant if he had given the United States the same score on each ADRI component as did DLLS. Had he done so, we could simply have used DLLS's revised ADRI, drawing upon Spamann's insights as and when they were pertinent. In fact, however, Spamann scored the United States differently than DLLS, giving it a "2" overall rather than "3" because he adopted a tougher standard than DLLS for awarding a "1" for proxy voting that Delaware failed to meet.[59] We took the view that Spamann's coding of Delaware law provided as credible a departure point for our analysis as did DLLS's, so we correspondingly opted to rely on both.

With our benchmarks in place we then searched backwards for changes to Delaware law that would have caused the score to change for any of the variables. For pre-emptive rights, the one variable where we determined that Delaware's score changed over time, we were able to deduce the chronology quite readily. Shareholders in Delaware companies had pre-emptive rights under common law principles.[60] Correspondingly, a "1" was justified as of our kick-off date of 1899, the year

53. *Id.*
54. *Id.* at 455.
55. Cheffins, Bank, & Wells, *supra* note 6, 606.
56. *Id.*
57. Spamann, *supra* note 17, at 474–75.
58. *Id.* at 470.
59. Spamann only awarded a country a "1" for the proxy voting variable if the law required that proxy documentation provide for "yes or no" "two way" voting, something Delaware law does not do. *See* Cheffins, Bank, & Wells, *supra* note 6, at 606–07.
60. ADOLF A. BERLE JR. & GARDINER C. MEANS, THE MODERN CORPORATION AND PRIVATE PROPERTY 133–34 (1932).

Delaware enacted a new general incorporation statute based on New Jersey law to attract incorporation business.[61]

Delaware amended its corporate law in 1927 to permit corporations to use their certificate of incorporation to displace pre-emptive rights.[62] This alteration to the law was insufficient, however, to merit a change to Delaware's ADRI score because the presumption remained that shareholders had pre-emptive rights.[63] Only in 1967 did Delaware's score on the pre-emptive rights variable fall from "1" to "0", due to a provision in the Delaware General Corporation Law ("DGCL") enacted that year which statutorily abolished common law pre-emptive rights.[64]

While identifying the ADRI variable that changed between 1899 and the present day was reasonably straightforward, matters became more complicated when we sought to confirm that other variables had *not* changed during the period. The component focusing on oppressed or unfairly prejudiced minority shareholders illustrates the point. LLSV, in their 1998 article, awarded a country "1" if its corporate law granted minority shareholders

> a judicial venue to challenge the decisions of management or of the assembly (shareholders)[,] or the right to step out of the company by requiring the company to purchase their shares when they object to certain fundamental changes, such as mergers, asset dispositions, and changes in the articles of incorporation.[65]

Although we opted not to use LLSV's ADRI as a present-day ADRI benchmark, this definition remained relevant to us because Spamann relied upon it in his recoding of the original ADRI.[66]

We were confident a "1" was appropriate for Delaware under the original ADRI version of the oppressed minority component because from 1899 onward Delaware law provided dissenting shareholders with an appraisal remedy when mergers and combinations occurred.[67] It was also appropriate because a "1" was awarded under the original ADRI if shareholders had a "judicial venue to challenge management," and we concluded that Delaware shareholders had the right to bring a derivative suit against management throughout the twentieth century. Proving this

61. Cheffins, Bank, & Wells, *supra* note 6, at 605.

62. *Id.* at 609 tbl.3; DEL. CODE ANN.§ 5 par. 10 (1927).

63. Cheffins, Bank, & Wells, *supra* note 6, at 609 tbl.3.

64. The statute still allowed a corporation to "opt in" to preemptive rights in its charter. Delaware General Corporation Law 1967, § 102 (b) (3). This remains the case but is insufficient to justify giving the U.S. a "1" with respect to pre-emptive rights. *See* Holger Spamann, *Appendix to The 'Antidirector Rights Index' Revisited*, 184, (2008) *available at* http://rfs.oxfordjournals.org/content/suppl/2009/09/24/hhp067.DC1/hhp067_suppl_data.pdf.

65. La Porta, et al., *supra* note 17, at 1122.

66. *See* Spamann, *supra* note 17, at 476–77 (rejecting the DLLS definition of the oppressed minority index component on the grounds that it was too vague).

67. GENERAL CORPORATION LAWS OF THE STATE OF DELAWARE § 61 (1899) ("If any stockholder in either corporation consolidating as aforesaid, who objected thereto in writing, shall within twenty days after the agreement of consolidation has been filed . . . demand in writing from the consolidated corporation payment of his stock, such consolidated corporation shall . . . pay to him the value of the stock at the date of consolidation.").

latter point, however, was surprisingly difficult. While the right of shareholders to file derivative suits against directors can be traced back in the United States at least as far as 1831,[68] the earliest Delaware case we could find confirming matters was from 1923.[69] However, in a 1924 case the Delaware Chancery Court indicated that "the principle [was] well-settled" that when a shareholder asserted a right on behalf of a corporation the right was derivative.[70] We inferred from this that it was well understood prior to this point in time that derivative suits could be brought under Delaware law even if there was no case law specifically on point.

While a "1" was clearly the correct score for Delaware under the original LLSV definition of the "oppressed minority" component, DLLS complicated matters by modifying the relevant definition in their 2008 article. According to DLLS, a "1" would be merited if a minority shareholder could successfully challenge a resolution of the board and shareholders that was "unfair, prejudicial, oppressive, or abusive."[71] DLLS did not further define these broad terms. Anyone subsequently using the DLLS version of the ADRI to measure the quality of corporate law correspondingly had extremely wide coding discretion.

Using the discretion available to us, we ultimately concluded that, because minority shareholders in Delaware apparently had the scope to bring derivative suits prior to 1900 and continued to have scope to do so thereafter, a "1" was appropriate under DLLS's version of the oppressed minority variable from 1899 to the present day. The judgment call, however, was not entirely straightforward. In contrast with the position in many U.S. states, in 1993 the Delaware Supreme Court, in *Nixon v. Blackwell*, declined to afford to "oppressed" minority shareholders of closely held corporations special judicial protection.[72] We also were aware of a 2006 study of the pre-Great Depression "plight of minority shareholders" by economic historians Naomi Lamoreaux and Jean-Laurent Rosenthal in which they said U.S. judges "were not willing to allow disgruntled shareholders easy access to the courts."[73] Nevertheless, given the derivative action option, and given that even Lamoreaux and Rosenthal were prepared to concede that "complaining stockholders were in a much stronger position if they could also show that the controlling group had knowingly behaved improperly,"[74] we opted to take advantage of the generality of the language DLLS used so as not to compli-

68. Taylor v. Miami Exporting Co., 5 Ohio 162 (1831). The U.S. Supreme Court recognized the derivative suit in *Dodge v. Woolsey*, 59 U.S. 331 (1855), which subsequently became the leading case.

69. Allied Chemical & Dye Co. v. Steel & Tube Co. of Am., 120 A. 486, 491 (Del. Ch. 1923).

70. Fleer v. Frank H. Fleer Corp., 125 A. 411, 414 (Del. Ch. 1924).

71. Djankov et al., *supra* note 17, 455, tbl.9 (indicating also that a country was awarded 0.5 if a shareholder could challenge conduct that was "unfair, prejudicial or oppressive").

72. Nixon v. Blackwell, 626 A.2d 1366, 1377 (Del. 1993); Robert A. Ragazzo, *Toward a Delaware Common Law of Closely Held Corporations*, 77 WASH. U. L. Q. 1099, 1101 (1999).

73. Naomi Lamoreaux & Jean-Laurent Rosenthal, *Corporate Governance and the Plight of Minority Shareholders in the United States Before the Great Depression,* CORRUPTION AND REFORM: LESSONS FROM AMERICA'S ECONOMIC HISTORY 125, 147 (Edward L. Glaeser & Claudia Goldin eds., 2006).

74. *Id*. at 145.

cate our coding unduly. We correspondingly concluded that the United States should be given a "1" from 1899 to the present for the oppressed minority shareholder component under the DLLS as well as the LLSV definition of minority shareholder oppression.[75]

C. *Cumulative Voting Under the MBCA*

We are, as mentioned, extending our historical ADRI coding efforts beyond Delaware to Illinois and the Model Business Corporations Act. This research is on-going, so at this point we cannot provide any sort of definitive analysis of the challenges associated with this coding effort. However, we can already identify at least one topic where coding is difficult to do satisfactorily, namely cumulative voting under the MBCA. It is important to remember in this context that the MBCA is not a statutory measure *per se*. Instead it offers guidance to states on statutory provisions to adopt, and correspondingly can with a particular topic provide simultaneously for mandatory, presumptive or enabling rules. With cumulative voting, between 1955 and 1984 the MBCA waffled in a way that complicates ADRI coding.

The original MBCA, issued in 1950, provided for mandatory cumulative voting.[76] The approach changed in 1955, when the ABA's Corporate Law Committee adopted a new approach which gave states adopting the Act a choice among several provisions.[77] The new version of the Act retained the language of the 1950 Act for jurisdictions that required mandatory cumulative voting.[78] For states not so bound the MBCA made available two options. An adopting jurisdiction could adopt either a presumptive ("unless the articles of incorporation otherwise provide") or permissive ("the articles . . . may provide that") approach to cumulative voting.[79] The 1969 version of the Act no longer included any sort of mandatory cumulative voting provision but the alternative presumptive and permissive formats were retained.[80] Only in 1984 was the presumptive option dropped, leaving the "opt in" approach as the recommended provision.[81]

75. Cheffins, Bank, & Wells, *supra* note 6, at 609 tbl.3.

76. *See* MODEL BUS. CORP. ACT ANN. §§ 31, 4, set out in Michael P. Dooley and Michael D. Goldman, *Business Corporation Act*, 6 BUS. LAW. 1, 25 (1950) ("Every shareholder entitled to vote at such election shall have the right . . . to cumulate his votes by giving one candidate as many votes as the number of such directors multiplied by the number of his shares shall equal . . . .").

77. Herbert F. Sturdy, *Mandatory Cumulative Voting: An Anachronism*, 16 BUS. LAW. 550, 574 (1961). The history related here is, oddly, misreported in the most recent version of the annotated MBCA. *Compare* MODEL BUS. CORP. ACT § 7.28, (4th ed., 2008) (referring to a change in 1960) *with* 1 MODEL BUS. CORP. ACT ANN § 31 ¶ 1 (Leonard D. Adkins ed.1960) (dating the change to allow "permissive cumulative voting as an equal alternative" to 1955).

78. *See* MODEL BUS. CORP. ACT ANN. § 31 (1960).

79. MODEL BUS. CORP. ACT ANN. § 31 ¶ 1 (1960).

80. MODEL BUS. CORP. ACT ANN. § 33 ¶ 4 (2d ed., 1971).

81. COMMITTEE ON CORPORATE LAWS OF THE SECTION OF CORPORATION, BANKING AND BUSINESS LAW OF THE AMERICAN BAR ASSOCIATION, REVISED MODEL BUSINESS CORPORATION ACT § 7.28(b) (1984).

DLLS, when they recoded the ADRI, expressly drew attention to cumulative voting as an illustration of the consequences of their new scoring of enabling provisions.[82] They awarded the United States (i.e., Delaware) a "0" for cumulative voting rather than "1" because Delaware law simply permitted corporations to adopt a cumulative voting scheme.[83] By analogy, with the MBCA the appropriate score currently should be "0" because it has the same enabling format as Delaware. A "0", moreover, would be appropriate at least back to 1984, when the Act adopted the purely "opt in" approach.

Conversely, the cumulative voting score for the MBCA should be "1" between 1950 and 1955, given that it instructed states to adopt a mandatory rule.[84] Between 1955 and 1984, however, the situation is uncertain, given the even-handed approach the MBCA drafters took between a permissive and presumptive rule.[85] Our inclination at this point is to score the MBCA a "1" for cumulative voting prior to 1969 and "0" from 1969 to 1984. This is because between 1955 and 1969 room was left open for continued use of the mandatory approach in addition to the permissive and presumptive options whereas the introduction of the pure permissive/presumptive choice in 1969 implied a shift away from a presumptive format. We have not yet, however, resolved this issue definitively.

III. ANTI-SELF-DEALING INDEX

A. *Why Focus on the ASDI in Addition to the ADRI?*

Given the popularity of the anti-director rights index one might wonder why we decided to add a second index, the ASDI, to our project. There are good reasons, though, why coding the ASDI historically should be an equal if not higher priority than the ADRI. First, DLLS explicitly proffered the ASDI as a superior alternative to the ADRI.[86] According to them, the ADRI was "based on an ad hoc collection of variables" while the ASDI dealt "with corporate self-dealing in a more theoretically grounded way."[87] In developing the ASDI, DLLS's chosen approach was to craft a hypothetical self-dealing transaction, measure the legal hurdles that would have to be addressed to execute the transaction and award scores to countries based on how high the hurdles were.[88]

Second, the quality of the legal research underpinning DLLS's coding of the ASDI was superior to that underpinning either LLSV's original ADRI or DLLS's revised ADRI. LLSV and DLLS essentially coded

82. *See* Djankov et al., *supra* note 17, at 453–54.
83. *Id*.
84. *Supra* note 76 and accompanying text.
85. *Supra* note 82 and related discussion.
86. Bebchuk & Hamdani, *supra* note 14, at 1279.
87. Djankov et al., *supra* note 17, at 432.
88. *Id*. at 431–32.

the ADRI relying purely on their own desk-top secondary research.[89] With the ASDI, in contrast, DLLS consulted lawyers in each of the seventy-two countries covered in that index and coded the data accordingly.[90] Third, the ASDI delivered more potent empirical results than the ADRI. DLLS found that, when ASDI elements measuring private enforcement were controlled for using the ADRI and vice versa, the private enforcement ASDI was a more robust predictor of stock market development.[91]

Fourth, and finally, the ASDI has proven popular among those carrying out empirical law and finance research, with more than thirty academic papers deploying this index to measure legal protection afforded to investors.[92] The ASDI could indeed be supplanting the ADRI as the primary numerical measure of the quality of corporate law. In some instances, authors use both the ADRI and ASDI, sometimes citing the ASDI's methodological advantages and sometimes without expressing a preference for one or the other.[93] With other papers the ASDI is deployed without any reference to the ADRI.[94] Another variation is that the ADRI is mentioned, but the ASDI is used without any explanation for the choice.[95] There are also occasions where authors indicate they are deploying the ASDI in preference to the ADRI because there was a better "fit" with the data.[96] Finally, there are various papers where the ASDI's methodological advantages and robust results are explicitly invoked to explain why it is being used rather than the ADRI.[97]

B. The ASDI's Core Elements

The hypothetical transaction that DLLS used as the departure point for coding the ASDI revolves around Buyer Co., a publicly traded food

89. Spamann, *supra* note 17, at 470–72 (describing LLSV's methodology).

90. *Supra* note 28 and accompanying text.

91. Djankov et al., *supra* note 17, at 456.

92. A list of papers where the ADRI had been deployed up to June 2013 is available from the authors on request.

93. *See, e.g.*, Abed Al-Nasser Abdallah et. al., *The Effect of Cross-Listing on Trading Volume: Reducing Segmentation Versus Signaling Investor Protection*, 34 J. FIN. RES. 589, 596 (2011) (citing no preference); Reena Aggarwal et al., *Does Governance Travel Around the World? Evidence from Institutional Investors*, 100 J. FIN. ECON. 154, 164 (2011) (citing no preference); Kose John et al., *Investor Protection and Cross-Border Acquisitions of Private and Public Targets*, 16 J. CORP. FIN. 259, 263–64 (2010) (judging ASDI to be methodologically superior).

94. *See, e.g.*, Suman Banerjee et. al., *Cross-country IPOs: What Explains Differences in Underpricing*? 17 J. CORP. FIN. 1289, 1291 (2011); Stephen Bryan et al., *Law and Executive Compensation: A Cross- Country Study*, 23 J. APPLIED CORP. FIN. 84, 85 (2011); Julian Franks et. al., *The Life Cycle of Family Ownership: International Evidence*, 25 REV. FIN. STUD. 1675, 1686–87 n.10 (2012).

95. Radhakrishnan Gopalan & Sudarshan Jayaraman, *Private Control Benefits and Earnings Management: Evidence from Insider Controlled Firms*, 50 J. ACCT. RES., 117, 119, 137 (2011).

96. Mingzhi Liu & Michael Magnan, *Self-Dealing Regulations, Ownership Wedge, and Corporate Valuation: International Evidence*, 19 CORP. GOV. INT'L REV. 99, 101–02 (2011) (indicating that the ASDI was better suited to dealing with companies with dominant shareholders, which predominated in the population of companies the authors were focusing upon).

97. *See e.g.*, Klaus Gugler, *The Determinants of Rent Extraction in the Parent-Subsidiary Relation*, 40 EMPIRICA 343, 347, 359 (2013); In-Mu Haw et. al., *The Contribution of Stock Repurchases to the Value of the Firm and Cash Holdings Around the World*, 17 J. CORP. FIN. 152, 156 (2011).

manufacturer, agreeing to purchase an unused fleet of trucks from Seller Co., a privately held retailer.[98] Mr. James, a director and sixty percent shareholder of Buyer Co. and a ninety percent shareholder of Seller Co., proposes the transaction.[99] It is unclear whether the transaction is unfair to Buyer Co. According to DLLS, "[a]ll required approvals are obtained and all the required disclosures made," but Buyer Co. shareholders still sue "the interested parties and the approving body."[100]

To measure the law governing their hypothetical self-dealing transaction DLLS compiled two anti-self-dealing indices, one measuring private enforcement (civil remedies) and the other public enforcement (fines and other criminal sanctions).[101] Their private enforcement index was in turn composed of two sub-indices.[102] One focused on *ex ante* private control of self-dealing (regulation of the process by which the sale of the trucks could be validated). The other measured *ex post* private control (the ease with which minority shareholders of Buyer Co. could establish potential wrongdoing in the courts after the transaction had been entered into).

DLLS used a wider range of sources of law when coding the ASDI than they did for the ADRI. For instance, while LLSV's original ADRI focused on company and bankruptcy/organization law and therefore implicitly excluded securities law, DLLS expressly took into account each country's "stock market act and regulations" with the ASDI.[103] Also, while LLSV refrained from referring to stock exchange listing rules when coding the ADRI, DLLS treated such measures as being equivalent to statutory provisions and case law principles.[104]

C. Scoring the United States (Delaware) Under the ASDI

Following the approach we adopted with the ADRI, with the ASDI we begin with a jurisdiction's current score then work back through time to identify changes to the law that would change that score. A member of the DLLS team (Shleifer) has made available publicly the scores they awarded when compiling the ASDI for the seventy-two countries they considered.[105] The scores for the United States, which were derived from Delaware law,[106] trailed the world average markedly in some instances. The most obvious example was public enforcement (Table 1), where the United States was awarded 0.00.

98. Djankov et al., *supra* note 17, at 433 fig. 1.
99. *Id.*
100. *Id.*
101. *Id.* at 436–37.
102. *Id.* at 434–35 tbl. 1.
103. *Id.* at 433; La Porta et al., *supra* note 17, at 1120.
104. Djankov et al., *supra* note 17, at 433; La Porta et al., *supra* note 17, at 1120.
105. See Shleifer, *supra* note 17.
106. Djankov et al., *supra* note 17, at 442.

TABLE 1: PUBLIC ENFORCEMENT, U.S. SCORE AND WORLD AVERAGE

ASDI Variable	US score	World average
Fine imposed on approving parties assuming disclosure occurs (0 for "no" or 1 for" yes")	0	0.46
Prison term imposed on approving parties assuming disclosure occurs (in years)	0	2.22 years
Fine imposed on Mr. James assuming disclosure occurs (0 for "no" or 1 for" yes")	0	0.36
Prison term imposed on Mr. James assuming disclosure occurs (in years)	0	1.87 years
Public enforcement index	0.00	0.41
Prison term for Mr. James if he does not disclose	25 years	4.63 years

Source: DLLS (2008), Table 4; data made available via Andrei Shleifer's website

With the public enforcement index the discrepancy between the United States and the global average was somewhat misleading. Statutory provisions that yielded positive scores on this index for various countries often did not deal specifically with the sort of transaction in DLLS's hypothetical. Instead the offenses in question often were general in nature, such as misuse of company assets (Belgium), intentionally causing damage to the company (Sweden) and breach of trust for failing to care properly for company assets (Germany).[107] In the United States, some states stipulate that criminal sanctions can be imposed on directors who declare dividends unlawfully or fail to prepare and keep required corporate records.[108] It does not appear, however, that criminal sanctions are imposed for related party transactions or for general corporate malfeasance, meaning the U.S. public enforcement index score of 0.00 is correct on its own terms. Based on DLLS's findings, however, the fact that public enforcement may lag in the United States would not be expected to affect outcomes, as their chosen public enforcement measures did not correlate in a meaningful way with measures of stock market development.[109]

107. *Id.* at 437.
108. WILLIAM E. KNEPPER & DAN A. BAILEY, LIABILITY OF CORPORATE OFFICERS AND DIRECTORS §§ 8-3, 8-4 (6th ed. 1998).
109. Djankov et al., *supra* note 17, at 452.

What about private enforcement? To put DLLS's findings into context, the U.S. self-dealing regime has its critics. In a 2011 article exploring constraints on "tunnelling" (extraction of wealth from companies by their managers and controlling shareholders) in the United States, Vladimir Atanasov, Bernard Black, and Conrad Ciccotello characterized matters generally as "a glass at best half-full" and said regulation of asset sales to related parties was "weak."[110] On the other hand, in a 2000 paper comparing the law governing self-dealing in the United States, the United Kingdom, Italy, France, and Germany, Luca Enriques observed that "self-dealing regulation is more sophisticated and has more bite in the United Kingdom and the United States than in the other sample countries."[111] Similarly, the nine authors of *The Anatomy of Corporate Law*, a 2009 study of corporate law in six "core" jurisdictions of France, Germany, Italy, Japan, the United Kingdom, and the United States, indicated that Delaware courts were much more willing to review conflicted transactions for fairness than courts elsewhere and said that for controlling shareholders (such as Mr. James) the liability risk was highest in the United States.[112]

DLLS' ASDI coding for private enforcement corroborates this mixed verdict. For ex ante control, U.S. law scored a mediocre 0.33 out of a possible "1," below the global average of 0.36 (Table 2). The low score was attributable primarily to the fact that Delaware does not require a vote by disinterested shareholders on a self-dealing transaction such as the one involving Buyer Co. and Mr. James.[113] Of the twenty-three countries that had a higher score than the United States, only five (Belgium, Chile, Israel, Norway, and Taiwan) similarly lacked this requirement.[114]

110. Vladimir Atanasov et. al., *Law and Tunneling*, 37 J. CORP. L. 1, 24, 49 (2011).
111. Luca Enriques, *The Law on Company Directors' Self-Dealing: A Comparative Analysis*, 2 INT'L & COMP. CORP. L.J. 297, 330 (2000).
112. REINIER KRAAKMAN *ET. AL.*, THE ANATOMY OF CORPORATE LAW: A COMPARATIVE AND FUNCTIONAL APPROACH 175, 178 (2d ed., 2009).
113. Djankov et al., *supra* note 17, at 442.
114. Derived from Shleifer, *supra* note 17, at Ex-Ante Control tab.

TABLE 2: EX ANTE CONTROL OF SELF-DEALING, U.S. SCORE AND WORLD AVERAGE

ASDI Variable	US score	World average
Buyer Co.'s disinterested shareholders must approve the transaction (0 or 1)	0	0.25
Disclosures Buyer Co. must make before the transaction can be approved (possible scores of 0, 0.33, 0.66 and 1)	1	0.44
Disclosures Mr. James must make before the transaction can be approved (possible scores of 0, 5. and 1)	1	0.67
Independent review of transaction required (0 or 1)	0	0.31
Ex ante disclosure (average of preceding three variables)	0.67	0.47
Ex ante private control (average of approval by disinterested shareholders and ex ante disclosure)	0.33	0.36

Source: Data made available via Andrei Shleifer's website

In contrast, DLLS's coding of ex post control captures the potency of U.S. regulation of self-dealing transactions. The United States' overall ex post control score of 0.98 (Table 3) was second only to Singapore's, driven upwards both by a legal system conducive to litigation and a disclosure regime the *Anatomy of Corporate Law* authors characterized as being more intense than that of any other country they focused on.[115] Combining this high score with the mediocre score of 0.33 for *ex ante* private control yielded an overall score of 0.65 for private control of self-dealing, tenth highest among the seventy-two countries DLLS coded and well above the global average (Table 3).[116]

115. KRAAKMAN ET. AL., *supra* note 112, at 156.
116. Derived from Shleifer, *supra* note 17, Ex-Post Control tab.

TABLE 3: EX POST CONTROL OF SELF-DEALING, U.S. SCORE AND WORLD AVERAGE

ASDI Variable	US score	World average
Disclosures required in annual reports and other periodic disclosure documentation (ranging from 0 to 1)	1	0.56
Minority shareholder – standing to sue (0 or 1)	1	0.74
Rescission as a remedy for the transaction	1	0.19
Ease of holding Mr. James liable (ranging from 0 to 1)	1	0.43
Ease of holding directors liable who approved the transaction (ranging from 0 to 1)	1	0.49
Access to evidence (possible scores of 0, 0.25, 0.5, 0.75 and 1)	0.75	0.56
Ease in proving wrongdoing (average of preceding five variables)	0.95	0.48
Ex post private control of self-dealing (average of disclosure in periodic filings and ease of proving wrongdoing)	0.98	0.52
ASDI for private enforcement (average of ex ante private control and ex post private control)	0.65	0.44

Source: Data made available via Andrei Shleifer's website

While Shleifer has made available spreadsheets showing the score each country was awarded for each ASDI variable, DLLS have not provided background information documenting how they determined particular scores. This has created difficulties for our research, as our protocol has been to start with present-day coding for the United States and work backwards to find changes in the law. Because DLLS have not explained how they awarded particular scores, we have not always been sure what laws they looked to in order to justify a particular result. The coding for disclosure rules illustrates the problem.

DLLS gave the U.S. a "1" for *ex post* disclosure of their hypothetical transaction in annual reports and other periodic disclosure documentation (Table 3). Here the source for the coding was easy to identify. By virtue of federal securities law companies with securities traded on a stock market are obliged to file annually a Form 10-K, item 13 of which stipulates that such a company must furnish the information required by

Item 404 of Regulation S-K.[117] Item 404, which deals with transactions between companies and related persons, in turn sets out detailed requirements which match the criteria DLLS identified as sub-components of their disclosure in periodic filings variable.[118]

DLLS also gave the U.S. a "1" for *ex ante* disclosures required from Buyer Co. and Mr. James (Table 3). In contrast with *ex post* disclosure, it is not obvious what laws justified this coding. The Federal securities laws do not require disclosure of proposed transactions.[119] U.S. state law also does not directly mandate such disclosure, unlike (for instance) U.K. companies legislation, which explicitly requires a director with a personal interest in a proposed transaction with the director's company to disclose the personal interest to the board.[120] U.S. state law instead provides "safe harbors" for related party transactions which set out procedures that, if followed, will help shield a transaction from challenge and directors from liability.[121] The most likely explanation for the United States receiving a "1" for ex ante disclosure, we have concluded, is that DLLS expected those procedures would be followed in the hypothetical transaction and that disclosure would occur in fulfilment thereof.

DLLS, as mentioned, focused on Delaware corporations[122] and the state's safe harbor provision is in section 144 of the DGCL. If the terms of the section are fulfilled this will limit but not eliminate court scrutiny of a related party transaction.[123] The safe harbor kicks in if a related party transaction is approved by a majority of disinterested directors or by a good faith vote of disinterested shareholders or is approved otherwise by the board or the shareholders and is fair to the corporation.[124] Approval will not be effective under the safe harbor, however, unless the directors or shareholders have been told, or already know, the material facts.[125] As noted, DLLS assume in their hypothetical that approvals which were supposed to be sought in fact had been obtained and all mandatory disclosures had been made.[126] We conclude that DLLS awarded the United

117. UNITED STATES SECURITIES AND EXCHANGE COMMISSION, *Form 10-K*, at 10, *available at* http://www.sec.gov/about/forms/form10-k.pdf.

118. 17 C.F.R. § 229.404 (2014).

119. *See* THOMAS LEE HAZEN, THE LAW OF SECURITIES REGULATION § 1.2, at 28–53 (6th ed. 2009).

120. Companies Act, 2006, c. 46, § 177 (U.K.).

121. MODEL BUS. CORP. ACT ANN. § 8.60 (Leonard D. Adkins ed. 2013) (listing statutory provisions from all states of this nature).

122. *See supra* note 53 and accompanying text.

123. *See, e.g.,* Fliegler v. Lawrence, 361 A.2d 218, 222 (Del. 1976) ("Nothing in [§ 144] sanctions unfairness . . . or removes the transaction from judicial scrutiny."); Edward P. Welch et al., 1 FOLK ON THE DELAWARE GENERAL CORPORATION LAW s. 144.2.2, GCL-IV-249 (2013).

124. Lawrence E. Mitchell, *Fairness and Trust in Corporate Law*, 43 DUKE L.J. 425, 440 (1993); Eric G. Orlinsky, *Corporate Opportunity Doctrine and Interested Director Transactions: A Framework for Analysis in an Attempt to Restore Predictability*, 24 DEL. J. CORP. L. 451, 464–66 (1999).

125. DEL. CODE ANN. tit. 8, § 144(a)(1) (2014) ("The material facts as to the director's or officer's relationship or interest and as to the contract or transaction are disclosed or are known to the board . . . ."); *id.* at § 144 (a)(2) ("The material facts as to the director's or officer's relationship or interest and as to the contract or transaction are disclosed or are known to the stockholders . . . .").

126. *See supra* note 100 and accompanying text.

States a "1" for *ex ante* disclosure by Mr. James and Buyer Co. because they (and their legal advisors) would have assumed that the transaction could only be approved under Delaware's safe harbor provision if they had made proper disclosures to the board and shareholders.[127]

D. Challenges Associated with Scoring the ASDI Chronologically

Having done our best to ascertain why DLLS coded the United States the way they did, we still face the evidentiary problem of discovering when the law took its present form. When, for instance, was *ex post* disclosure of related party transactions first required? Item 404 of Regulation S-K currently justifies DLLS awarding the U.S. a "1" for this variable, and the SEC first promulgated Item 404 in 1982, to take effect in 1983.[128] In so doing it indicated that Item 404's origins could be traced back to a 1942 SEC release revamping rules imposing disclosure requirements on companies soliciting proxies.[129] One might presume correspondingly that prior to that point the appropriate score for *ex ante* disclosure would be "0" rather than "1". As 1934 drew to a close, however, the *Wall Street Journal* published verbatim the contents of a model Form 10 that companies registered with the SEC had to submit and this mandated disclosure of material contracts between the company and any of its directors or officers.[130] Correspondingly, it would seem that a "1" was appropriate as far back as 1935. We have found, however, this is difficult to confirm, as even the SEC does not have on file early Form 10 precedents.

The difficulties associated with chronology are potentially even more acute when case law is involved. When coding is based on a statutory measure or supporting regulations—assuming evidentiary difficulties can be addressed—it typically should be possible to identify with precision when the law changed, namely when the relevant provisions were promulgated, amended, or deleted. When deducing a rule from case law, however, as David Kershaw observed in a 2012 article on the

127. The situation may in fact be somewhat more complex than the text reflects. DLLS assume that all mandatory disclosures were made but Delaware law does not mandate any particular form of disclosure by a particular party. Instead, § 144 of the Delaware General Corporation Law offers three different ways for a self-interested transaction to be approved and the disclosure involved differs with each. If disinterested director approval is sought under § 144(a)(1) then the directors must either receive disclosure of material facts or must already know them. The same is true with the shareholders if shareholder ratification is sought under § 144(a)(2). Finally, under § 144(a)(3) a related party transaction may be upheld if it received some kind of approval and was fair to the corporation. While the first two approaches available under § 144 typically require affirmative disclosure § 144(a)(3) arguably does not so long as a court would eventually find the deal "entirely fair." Despite this a prudent lawyer instructed to protect DLLS' related party transaction from legal challenge could quite reasonably conclude after reviewing the statute and case law that lack of disclosure would doom it. The fact that it is not entirely clear whether disclosure would be necessary under Delaware law under DLLS' hypothetical facts nevertheless illustrates effectively the complexities involved with coding the law under the ASDI.

128. Disclosure of Certain Relationships and Transactions Involving Management, 47 F.R. 55661 (December 13, 1982) (codified at 17 C.F.R. pts. 229, 239, 240, and 249).

129. *Id.* at 55662.

130. *Text of Form for Permanent Security Registrations*, WALL ST. J., Dec. 26, 1934, at 8–9.

evolution of U.S. and U.K. fiduciary law governing self-dealing, "[i]dentifying evolutionary shifts in legal doctrine and attributing time periods within which they took place is a precarious task."[131] Case law authorities can, for instance, conflict. Also, there might well not be a case from a state directly on point even though the law would have been thought of at the time as being well settled.

Our attempts to code historically the "standing to sue" ASDI variable illustrate the difficulties associated with coding based on case law. To show this, we need quickly to review the development of the law concerning shareholder approval of related party transactions. As DLLS correctly say, currently "[t]he U.S. does not require shareholder approval for related-party transactions . . . ."[132] Shareholder approval can, however, affect outcomes and shift burdens of proof in litigation over related party transactions, which is not surprising given the role disinterested shareholder ratification plays in statutory provisions such as section 144 of the DGCL. To quote DLLS again, in the hypothetical transaction, with Mr. James being a controlling shareholder as well as a director, under Delaware law "[a]pproval by . . . disinterested shareholders . . . would shift the burden of the proof to the plaintiff, but the standard of review would remain entire fairness."[133] Shareholder ratification may have mattered more, however, in the past because it might well have been the only means available to regularize a related party transaction. This in turn may have affected the standing a shareholder would have had to launch a legal challenge to the transaction and meant that the score for standing to sue should have been "0" rather than "1."

As noted above, under section 144 of the DGCL approval by informed, disinterested directors, or flawed approval of a transaction that was fair to the corporation, will have the same insulating effect as a good faith shareholder vote.[134] Section 144 was originally enacted in 1967.[135] Even before then, though, Delaware courts had held that the common law did not treat shareholder approval as the only means available to insulate a related party transaction (at least partially) from judicial scrutiny. For instance, in the 1953 case of *Gottlieb v. Heyden Chemical Corp.*, the Delaware Supreme Court indicated that a contract in which a majority of directors were interested could withstand a legal challenge if the

131. David Kershaw, *The Path of Corporate Fiduciary Law*, 8 N.Y.U. J. L. & BUS. 395, 476 (2012).

132. Djankov et al., *supra* note 17, at 442.

133. *Id.* at 442 n.5. If Mr. James had been director but not a controlling shareholder then shareholder ratification would prompt a court to deploy the business judgment rule. *In re* Wheelabrator Techs., Inc. S'holders Litig., 663 A.2d 1194, 1203 (Del. Ch. 1995); Michael P. Dooley & Michael D. Goldman, *Some Comparisons Between the Model Business Corporation Act and the Delaware General Corporation Law*, 56 BUS. LAW. 737, 744 (2001).

134. *See supra* note 124 and accompanying text.

135. Mary A. Jacobson, *Interested Director Transactions and the (Equivocal) Effects of Shareholder Ratification*, 21 DEL. J. CORP. L. 981, 989 (1996).

transaction had been entered into in good faith and was intrinsically fair.[136]

Further back in time matters apparently used to be different. According to a widely cited 1966 article by Harold Marsh, during the late nineteenth and early twentieth centuries at common law a related party transaction was voidable at the request of the corporation notwithstanding that it was fair or was approved by a disinterested majority of directors.[137] This characterization of the law's development has been questioned, most notably in two articles by Norwood Beveridge, but continues to be widely accepted.[138] A point not in question, however, is that even if a related party transaction was otherwise voidable a corporation's shareholders could regularize everything by way of ratification.[139]

If a related party transaction could only be regularized by the shareholders this had potentially significant implications for enforcement. As Beveridge put it, the corollary to giving shareholders collectively the exclusive power to validate a related party contract was that "an individual shareholder could not sue to avoid an interested director contract regardless of its fairness since the decision to bring this claim was to be made by the shareholders as a group". . . .[140] Marsh indeed noted that an 1899 New York Court of Appeals decision was authority for the proposition "that the question of the voidability of a contract between a corporation and one of its directors . . . could not be raised by a shareholder in a derivative suit, but only by the corporation itself."[141]

To return to the standing to sue component of the private enforcement ASDI, how should this be coded for the era when only shareholder ratification could validate a related party transaction? DLLS say that a "1" is only the appropriate score for the standing to sue variable if a mi-

136. Gottlieb v. Heyden Chem. Corp., 90 A.2d 660, 663 (Del. 1952).

137. Harold Marsh, Jr., *Are Directors Trustees? Conflict of Interest and Corporate Morality*, 22 BUS. LAW. 35, 36–37 (1966).

138. Norwood P. Beveridge, Jr., *The Corporate Director's Fiduciary Duty of Loyalty: Understanding the Self-Interested Director Transaction*, 41 DEPAUL L. REV. 655, 659–62 (1992) (contending that the Marsh characterization was erroneous); Norwood P. Beveridge, *Interested Director Contracts at Common Law: Validation Under the Doctrine of Constructive Fraud*, 33 LOY. L.A. L. REV. 97, 98–99 (1999) [hereinafter Beveridge, *Interested*] (acknowledging that his critique of Marsh's scholarship generated considerable interest but did not yield a high degree of acceptance); Kershaw, *supra* note 131, 439–40 (acknowledging the wide acceptance of Marsh's view while offering a critique of it). While Kershaw is critical of Marsh's analysis, he does concede that New York courts treated related party transactions as voidable when the director on the other side of the contract acted for the corporation. *See* Kershaw, *supra* note 131, at 471–72. This matches the facts in the DLLS hypothetical, where Mr. James proposed the transaction. *See* Djankov et al., *supra* note 17, at 433.

139. WM. L. COOK, HANDBOOK OF THE LAW OF PRIVATE CORPORATIONS 494, 500 (1907) (indicating that shareholders could ratify related party transactions and saying that in New York and some other jurisdictions such transactions were voidable even if fair, noting as well though that such contracts were enforceable until avoided); Beveridge, *Interested*, *supra* note 138, at 123 (saying of New York and New Jersey law "even where a majority of the directors were interested in a contract with the corporation, such a contract could be ratified by the shareholders . . . ."); Marsh, *supra* note 137, at 48 ("All of the cases seem to hold that such ratification will suffice to validate the transaction with an interested director, at least in the absence of fraud or unfairness.").

140. Beveridge, *Interested, supra* note 138, at 120–21, 123–24.

141. Marsh, *supra* note 137, at 42, (citing Burden v. Burden, 54 N.E. 17 (N.Y. 1899)).

nority shareholder can sue derivatively.[142] Marsh's statement, taken at face value, suggests that a state where courts followed the New York jurisprudence should be awarded a "0" for standing to sue since individual shareholders could not challenge a related party transaction. The point, however, is not entirely clear. Even in those jurisdictions where only shareholders acting collectively could ratify a related party transaction, minority shareholders apparently could challenge in court a related party transaction that was fraudulent or illegal.[143] The departure from the general rule was thought to be narrowly cast,[144] but fraud seemingly could be established in cases lacking truly exceptional facts.[145]

Even assuming that a U.S. state should be awarded a "0" for the standing to sue variable because shareholder ratification was the only way to regularize a related party transaction and individual shareholders correspondingly lacked the power to challenge the transaction merely because it was unfair, to code historically we still need to determine the dates when this was the applicable rule. Here we come upon another, unexpected, stumbling block: for the first part of the twentieth century, there is remarkably little Delaware case law to draw upon. This may surprise those aware that a rich body of case law precedent is a major selling point the state currently relies upon to retain its status as the jurisdiction of choice among publicly traded U.S. companies.[146] Nevertheless, Kershaw has said "that Delaware self-dealing law in the early twentieth century was in effect a blank sheet of paper,"[147] observing "[t]he dearth of Delaware self-dealing case law is striking."[148]

According to Kershaw, "Delaware law on self-dealing commenced in the 1920s" with the 1921 decision in *Cahall v. Lofland*.[149] In this case the Delaware Supreme Court indicated that, where directors arranged a contract between themselves and the company, the contract was voidable, with approval by the shareholders being the mechanism available to correct matters.[150] Correspondingly, it is plausible that Delaware should

142. Djankov et al., *supra* note 17, at 434.

143. Beveridge, *Interested*, *supra* note 138, at 124. The fraud exception was also acknowledged in *Burden*, 54 N.E. at 23.

144. ARTHUR W. MACHEN, JR., A TREATISE ON THE MODERN LAW OF CORPORATIONS 1312–13 (1908) ("[A] minority shareholder can never enjoin the execution of such contracts, unless they are actually fraudulent, if the shareholders are to have an opportunity to avoid them."). By 1940, in contrast, it was generally accepted that a minority shareholder could obtain standing to challenge a related party transaction and could succeed by showing "gross unfairness" in addition to fraud or illegality. *See* WILLIAM J. GRANGE, CORPORATION LAW FOR OFFICERS AND DIRECTORS: A GUIDE TO CORRECT PROCEDURE 415 (1935).

145. Cases cited by Beveridge in support of his assertion that an individual shareholder could only sue upon showing a contract was fraudulent or illegal suggest that a minority shareholder could get standing if directors obtained assets for half the appropriate price or less. *See* Beveridge, *Interested*, *supra* note 138, at 124 n.156 (citing Endicott v. Marvel, 87 A. 230 (N.J. Ch. 1913); Landis v. Sea Isle City Hotel Co., 31 A. 755 (N.J. Ch. 1895)).

146. John Armour et al., *Delaware's Balancing Act*, 87 IND. L.J. 1345, 1349 (2012).

147. Kershaw, *supra* note 131, at 482.

148. *Id.* at 480.

149. *Id.*; Cahall v. Lofland, 114 A. 224 (Del. Ch. 1921).

150. *Cahall*, 114 A. at 231–32.

be coded as "0" for standing to sue in the opening decades of the twentieth century, assuming its courts followed the New York approach.[151] The paucity of case law means, however, that it is difficult to ascertain both whether this coding is correct and, if it is, when Delaware's standing to sue score would have increased to "1."

IV. CONCLUSION

The foregoing analysis of the historical development of corporate law in the United States indicates that tracking change by way of leximetrics, in the form of the widely deployed anti-director rights and anti-self dealing indices, is by no means a straightforward affair. Open-ended definitions, such as the one DLLS adopted with the minority shareholder oppression component of the ADRI, can make it difficult to code the law satisfactorily. Even when the nature of a particular variable in a legal index is clear, ascertaining what the law in fact was going back through time can be challenging. The fact that a dearth of Delaware case law complicates coding of the ASDI for that state bears this out.

The challenges associated with deploying leximetrics to investigate the development of U.S. corporate law over time illustrate the wisdom of Larry Ribstein's cautionary words concerning legal academics and empirical legal scholarship. Still, in this instance the game should be worth the candle. Due to definitional difficulties and evidentiary gaps, coding U.S. corporate law historically cannot be done with clinical precision. Nevertheless, so long as uncertainties are appropriately acknowledged it should be possible to generate acceptably accurate historical anti-director rights and anti-self dealing indices.

Using the ADRI and ASDI to quantify the development of U.S. corporate law should not merely be feasible but could also generate valuable insights. We already know from our research concerning Delaware that its ADRI score did not drop in the way the deregulatory "race" nomenclature that dominates the literature implies it would. Though our ASDI research is ongoing, it also could generate a challenge to what is conventional wisdom with the development of the law governing related party transactions, namely that fiduciary standards were watered down over time.[152] In the case of Delaware, its private enforcement ASDI score may well have increased during the twentieth century, im-

151. *Cahall v. Lofland* does not provide any guidance on the issue because a minority shareholder did not challenge the impugned transaction. This instead was done by the company's receiver. *Id.* at 227.

152. On the conventional wisdom, see, e.g., J. Robert Brown, Jr., *The Irrelevance of State Corporate Law in the Governance of Public Companies*, 38 U. RICH. L. REV. 317, 342 (2004) (saying in the context of self-dealing transactions "Court decisions . . . sharply restricted. . . . the duty of loyalty . . . ."); Ahmed Bulbulia & Arthur R. Pinto, *Statutory Responses to Interested Directors' Transactions: A Watering Down of Fiduciary Standards?*, 53 NOTRE DAME L. REV. 201, 204 (1977) ("Thus the common law moved from the traditional inflexible rule with its certainty of application, to a more flexible but uncertain approach involving questions of fairness."); Marsh, *supra* note 137, at 57 ("[The] legal history in this area seems to demonstrate that the courts have progressed from condemnation, to toleration, to encouragement of conflict of interest.").

plying that regulation of self-dealing became more robust when a relaxation of the rules would have been anticipated. As we have seen, the disclosure in annual filings score would have moved from "0" to "1" in the mid-1930s with the introduction of SEC disclosure rules, while the standing to sue score may also have risen during the opening decades of the twentieth century when Delaware courts ultimately acknowledged that it was possible to safeguard a related party transaction without shareholder ratification.[153] If Delaware's ASDI private enforcement score in fact increased over time a rethink of the historical evolution of regulation of related party transactions may be in order.

We acknowledge that to the extent our results contradict received wisdom this may reflect the limitations of leximetrics rather than casting legitimate doubt on accepted history. Still, given the popularity of the ADRI and ASDI even this would be a worthwhile insight. The upshot is that even accepting that caution is an appropriate byword with empirical legal studies in this instance the historically-oriented quantification exercise in which we are currently engaging should prove to be worthwhile.

153. *See supra* notes 130, 149–51 and accompanying text.