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ON THE INSIGNIFICANCE AND/OR ENDOGENEITY OF LA PORTA ET AL.'S 'ANTI-DIRECTOR RIGHTS INDEX' UNDER CONSISTENT CODING

Holger Spamann

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Harvard Law School
Cambridge, MA 02138

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The data and documentation for this paper are available at http://www.law.harvard.edu/academics/graduate/sjd_candidates/holgerspamann/. I welcome comments, in particular also on mistakes I may have made in the understanding and representation of individual countries' laws.

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Abstract

I re-code the "Antidirector Rights Index" (ADRI) of shareholder protection rules from La Porta et al. 1998 for 46 countries in 1997 and 2005 with the help of local lawyers. My emphasis is on consistent coding; I do not change the original variable definitions. Consistently coded ADRI values are neither distributed with significant differences between Common and Civil Law countries, nor predictive of stock market outcomes. The revision of the variable definitions in Djankov et al. 2005 salvages some of the original results, but reinforces severe endogeneity concerns regarding the index components that drive the remaining significant results. I review the other index components and conclude that the ADRI is unlikely to be a valid measure of shareholder protection. Results derived with the ADRI in the literature may have to be revisited. Along the way, I develop some general guidelines for consistent coding.

Keywords: "Antidirector Rights Index", ADRI, shareholder protection, law and finance.

JEL Classifications: G38, K22, P48.

Holger Spamann
Harvard University - Harvard Law School
Pound Hall 509
Cambridge
MA 02138
United States
e-mail: hspamann@law.harvard.edu

I. INTRODUCTION

I re-code the "Antidirector Rights Index" (ADRI) of shareholder protection rules for 46 countries in 1997 and 2005 with the help of local lawyers.[1] The ADRI was originally developed in La Porta et al.'s seminal article 'Law and Finance' (1998) for 49 countries, and recently revised and extended in Djankov et al. 2005 for 72 countries. It is now routinely used as a measure of legal shareholder protection in cross-country quantitative studies.[2] Proper re-coding reveals, however, that the results in La Porta et al. 1997, 1998 came about only through strong and systematic measurement error (inconsistent coding).[3] Consistently coded ADRI values are neither distributed with significant differences between Common and Civil Law countries, as found in La Porta et al. 1998, nor predictive of stock market outcomes, as found in La Porta et al. 1997, 1998. The revision of the variable definitions in Djankov et al. 2005 salvages some of the original results, but reinforces severe endogeneity concerns regarding the index components that drive all remaining significant results. To obtain my results, I neither change the variable definitions from La Porta et al. 1998 and Djankov et al. 2005, nor choose between different plausible understandings of ambiguous variable definitions. I merely emphasize

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[1] The ADRI is defined as the number of shareholder protection mechanisms from the following list of six that a country's laws provide for (definitions from La Porta et al. 1998, Table 1; revised definitions from Djankov et al. 2005 are cited below in Part III):

1) "proxy by mail allowed" – "the … law … allows shareholder to mail their proxy vote to the firm",
2) "shares not blocked before meeting" – "the … law … does not allow firms to require that shareholders deposit their shares prior to a general meeting, thus preventing them from selling those shares for a number of days",
3) "cumulative voting or proportional representation" – "the … law … allows shareholders to cast all their votes for one candidate standing for election to the board of directors (cumulative voting) or … a mechanism of proportional representation by which minority interests may name a proportional number of directors to the board",
4) "oppressed minorities mechanism" – "the … law … grants minority shareholders either a judicial venue to challenge the decisions of management or of the assembly 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. … Minority shareholders are defined as those shareholders who own 10 percent of share capital or less",
5) "preemptive rights" – "the … law … grants shareholders the first opportunity to buy new issues of stock, and this right can be waived only by a shareholders' vote",
6) "percentage of share capital to call an extraordinary shareholders' meeting … is less than or equal to 10% (the sample median)".

[2] See recently, e.g., Doidge et al. 2005, Licht et al. 2005, Pagano & Volpin 2005a, Stulz 2005, Georgakopoulos 2006.

[3] Other authors have pointed out mistakes for individual countries (Cools 2006 for Belgium and France; Vagts 2002, Berndt 2002, Wentrup 2002 and Braendle 2006 for Germany; all of the foregoing for the US; Enriques 2002 for Italy), but this paper is the first to show that the mistakes are widespread and systematic.

consistency of coding, i.e., categorizing all countries according to the same criteria, whatever they may be.

Using the original variable definitions from La Porta et al. 1998, consistent coding eliminates most of the differences in mean ADRI values between legal families, or even reverses them. The remaining differences are not statistically significant. Consistency in coding also causes the ADRI to lose significance as a predictor of stock market outcomes in almost all of the regressions from La Porta et al. 1997, 1998 and Djankov et al. 2005.[4] Isolated significant results remaining after recoding disappear when two more observations are added to the regression from La Porta et al. 1998, and when I perform a simple robustness check with the regressions from Djankov et al. 2005. This simple robustness check is to define a different but equally plausible cut-off for the derivation of one particular binary index component from a continuous variable, the "percentage of shares required to call an extraordinary shareholder meeting". Whereas La Porta et al. 1998 and Djankov et al. 2005 set the binary index component equal to 1 (protective mechanism present) for percentages below *or equal to* the median of 10%, the robustness check is to count *only* percentages *below* the median. This robustness check will appear at various points throughout the paper.

Djankov et al. 2005 revised some of the ADRI variable definitions. With these revisions, the impact of recoding is weaker but still strong. Consistent recoding now requires elimination of one revised ADRI component, the "oppressed minority" variable. I explain in detail why this component cannot be coded consistently based solely on the variable definition or even straightforward gap-filling assumptions. As before, consistent re-coding diminishes the differences in ADRI values between legal families, and even reverses them as between Common Law and German legal origin jurisdictions. The difference between Civil and Common Law jurisdictions is still significant after recoding, but not after the aforementioned robustness check. Regression results with the recoded revised ADRI are less consistent (some significant results, but sign reversals or insignificance in others) than those with the original ADRI.

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[4] In which particular regressions the ADRI maintains significance depends on which coding assumptions I make.

Nevertheless, some regression results with the recoded revised ADRI are still relatively strong. Some of these results also survive the aforementioned robustness check. To investigate the remaining strength of the recoded revised ADRI further, I isolate the components that drive the results in disaggregated regressions. The "shares not deposited" variable appears as the by far most influential component. I explain why this particular variable gives rise to very serious endogeneity concerns, which are reinforced by the revision of the variable definition in Djankov et al. 2005. I also discuss the empirical strength and theoretical basis of the other index components and conclude the ADRI is probably not a valid measure of legal shareholder protection. Results derived with the ADRI in the literature may have to be revisited.

Neither the frequently mentioned robustness check, nor the disaggregation of the index, nor even the elimination of the "oppressed minority" index component leads to similar results with the ADRI values from La Porta et al. 1998 or Djankov et al. 2005. The driving force of this paper is consistent coding. Hence, the following Part II illuminates some of the issues that must be borne in mind to ensure consistent coding. While I use examples drawn from my recoding of the ADRI, the guidelines developed there should be of more general application for work in quantitative comparative law. Part III applies these guidelines to a complete recoding of both the original and the revised ADRI. For the sake of completeness, I also recode the two other shareholder protection variables developed in La Porta et al. 1998: "one share – one vote", and "mandatory dividend".[5] I go into considerable detail to ensure transparency of the coding decisions as a precondition of consistency and replicability. Part IV discusses summary statistics and tests-of-means for the recoded values across legal families, both for individual variables and various ways of aggregating them into the ADRI. Part V presents my regression results. Part VI interprets these regression results. Part VII sketches implications of my findings for the literature and concludes.

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[5] "One share – one vote" is defined as "the … law … requires that ordinary shares carry one vote per share [or, e]quivalently, … the law prohibits the existence of both multiple-voting and nonvoting ordinary shares and does not allow firms to set a maximum number of votes per shareholder irrespective of the number of shares owned". "Mandatory dividend" is "the percentage of net income that the … law … requires firms to distribute as dividends among ordinary stockholders." (La Porta et al. 1998, Table 1)

II. SOME GUIDELINES FOR CONSISTENT CODING

In a sense, the need for, and key to, consistent coding is self-evident. To ensure that a variable measures what it is said to measure, all coding decisions must, and need only, be taken in conformity with the variable definition. If the variable definition is ambiguous, coding rules need to fill the gap.[6] In any event, all observations (here: countries) must be classified according to the same classification scheme – otherwise, values assigned to different observations (countries) will be incomparable. Moreover, to discipline the researcher and to enable others to interpret and replicate the results, the classification scheme should eliminate subjective judgment as far as possible, and it should be made publicly accessible. These desiderata are standard in the social science methodology literature (e.g., King et al. 1994 p. 25-26; Epstein & Martin 2005).

Implementing these desiderata for legal data is difficult though. Legal rules differ across many relevant dimensions, in particular in international comparison, and variable definitions will often fail to draw the lines in each of them (underspecification). As I will illustrate, such underspecification is a major problem in La Porta et al. 1998 and, to a lesser extent, in Djankov et al. 2005. I start off in Section A with one particularly important example of underspecification of the variable definitions in La Porta et al. 1998, the distinction between mandatory, default, and optional rules.[7] In Section B, I illustrate other forms of underspecification and of ways to deal with them using the example of the "preemptive rights" variable from La Porta et al. 1998 and Djankov et al. 2005. (Here and later, wherever possible, I make alternative assumptions in clarifying ambiguous variables in order not to prejudice the outcome. But I need to make some definite choices (guided by the hypothesis to be tested), or else the number of variable variants would soon get out of hand.)

A particular concern of lawyers in relation to studies such as La Porta et al. 1998 is that it is often hard to know what the law "is" in even just one given country. Rules are

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[6] Coding rules are, of course, just refinements of the variable definition. If coding were viewed (or, for that matter, practiced) as answering a legal questionnaire for each country, the requirement could be restated as the truism that ambiguity must be avoided in the design of survey questions (cf. Martin 2005, p. 725 on questionnaire design).

[7] Other legal commentators have already pointed out problems related to this distinction in La Porta et al. 1998; see, e.g., Enriques 2002, n. 43, and Cools 2006.

not only multidimensional in content, they are also constituted by multidimensional sources which are at times contradictory and often unclear (e.g., Sacco 1991). Comparative lawyers caution that it is especially hard to know the law in a *foreign* country. The researcher is prone to overlook or misunderstand sources in the foreign country (e.g., Zweigert & Kötz 1998 [1996] § 3 II). Both concerns are in different ways intimately connected to the problem of variable underspecification and coding rules. Regarding the first concern, coding rules (variable definitions) will have to specify the degree of uncertainty that will or will not entail a particular value. This also includes the question what should be counted as law in the first place. I will address these points in Section C. Teamwork with foreign lawyers, as in Djankov et al. 2005 and other newer studies, is an obvious way to address the second concern (ascertaining foreign law). But as I will discuss in Section D, teamwork of this kind also exacerbates problems of underspecified variable definitions because different team members may fill gaps differently.

This Part's broader point is that law is complex and multi-dimensional, and hence difficult to condense into quantitative data. Legal comparatists have therefore been skeptical of the very idea of quantitative comparative studies of law (e.g., Siems 2005). In this paper, I do not take a position on this or other broader points regarding La Porta et al. 1998, Djankov et al. 2005, or other work of this type. My exclusive concern here is the ADRI data, and developing some minimum guidelines for coding legal data if it is attempted. I do want to point out, however, that the core result of this paper – data in La Porta et al. 1998 were unreliable – cannot simply be generalized to other studies in the 'Law and Finance' tradition, such as Pistor et al. 2000, Djankov et al. 2003, 2006, La Porta et al. 2006a. These later studies used more detailed and precise variable definitions, and collected data from primary legal materials with the help of local lawyers (as opposed to using English-language secondary materials, as in La Porta et al. 1996, 1998 – cf. below Part VI). In particular, the use of a hypothetical case fact pattern in Djankov et

al. 2005 for the derivation of the Anti-Self-Dealing-Index (ASDI) promises a significant improvement, circumventing many of the problems described below.[8]

A. Mandatory, Default, and Optional Rules

Perhaps the most basic question for coding of legal variables like the ADRI is whether only mandatory rules, or all default rules, or even optional rules should be counted. Djankov et al. 2005 explicitly coded for default rules (with one exception discussed below in Section C.3.b).[9] Although La Porta et al. 1998 also seems to have been primarily concerned with default rules[10], the fact that that article did not take an explicit position on this may have been responsible for some inconsistencies in coding. In my re-coding for the original ADRI, I alternatively code for each of the three possibilities, which I shall now explain in more detail.

The law can mandate or forbid a certain arrangement. Alternatively, it can provide a replaceable rule as a default, which allows divergent contractual or charter provisions ("opt-ins" and "opt-outs"). The latter result can be achieved either by provisions which explicitly allow a particular clause (specific enabling provisions), or by general standards (whether embodied in an explicit provision or unwritten principles) which allow alternative contractual arrangements for a broad range of issues (general enabling standards).

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[8] The ASDI derivation is similar to the technique employed by the 'Common Core' projects, the most ambitious projects to date to attempt to describe the law of a large number of countries in comparison (Schlesinger 1968, Bussani & Mattei 1997). Both the ASDI derivation and the 'Common Core' projects rely on hypothetical fact patterns to elicit lawyers' responses, rather than abstract legal concepts. This is not to say that there are no important differences between the ASDI's derivation and the 'Common Core' projects (but quantitative studies tolerate more random measurement error than the descriptive projects of legal comparatists). The major difference in approach is that Djankov et al. 2005 first asked lawyers to describe a *transaction* that private actors could use given the facts, and then to evaluate the litigation risks for this transaction. By contrast, the 'Common Core' projects only require lawyers to describe how a given *complete* set of facts would be evaluated by the law of their country. The approach in Djankov et al. 2005 is more comprehensive because it anticipates 'gaming' of the rules by private actors, but also requires the participating lawyers to be much more careful, comprehensive and far-sighted in their replies. This present a potential problem, in particular because another major difference between Djankov et al. 2005 and the 'Common Core' projects is that the latter use a much more detailed data collection protocol and spent much more time designing the questionnaire and reviewing its answers (cf. Schlesinger 1968, Bussani & Mattei 1997).

[9] Djankov et al. 2005, Table XI and p. 28.

[10] Cf. the discussion of Easterbrook & Fischel 1991 in La Porta et al. 1998, p. 1121.

For purposes of coding, a choice must be made if only mandatory protective arrangements will be counted, or if any default rule (including replaceable rules) or even just an opt-in possibility (optional rule) is sufficient. One could also distinguish specific enabling provisions and general enabling standards (on the sensibility of this distinction, see Section C.3.b) below). Which of the criteria should be chosen would seem to depend on the hypothesis one sets out to test. All of this would remain *within* the law-matters hypothesis, but it would correspond to different ideas of exactly *how* the law influences, e.g., financial market participants' behavior.[11] As a first take, all components of an index should probably be coded according to the same criterion. But there may sometimes be good theoretical reasons for a differentiated approach (cf. Bebchuk 1989, Black & Kraakman 1996, Bebchuk & Hamdani 2002). In any event, it is indispensable that all *countries* must be coded according to the same criterion for any given variable.

The coding of cumulative voting and preemptive rights in the US and certain other countries in La Porta et al. 1998 illustrates the problem, both within and across countries. Neither preemptive rights nor cumulative voting are provided by default under US corporate law (by which I mean Delaware law in this paper, as La Porta et al. 1998 and Djankov et al. 2005 do[12]). The statute merely contains specific enabling provisions for both of them.[13] However, the US are coded as 0 (protective mechanism missing) for preemptive rights, and 1 (protective mechanism present) for cumulative voting. From the perspective of consistent coding, this is not a problem as long as this differentiated

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[11] Where the law allows flexibility, we observe all types of behavior ("good" and "bad" refer to the ADRI classification of these rules): US corporations routinely (1) abolish "good" default rules that allow extraordinary shareholder meetings (Bebchuk et al. 2004), (2) keep "bad" default rules that do not provide for cumulative voting (ibid.), and (3) keep "good" default rules that shares need not be deposited/blocked before the meeting (see below III.B). As an example of corporations opting into the "good" regime, see the adoption by some Dutch companies of a convenient proxy voting mechanism for their shareholders, the so called "communications channel": http://www.communicatiekanaal.nl/index.php?template=pagina&pageid=5&gparent=7&lang=english (visited 16 November 2005).

[12] In one instance ("percentage of share capital to call an extraordinary shareholder meeting"), La Porta et al. 1998 (but not Djankov et al. 2005) relied on the law "in the majority of US states", see below n 117 and accompanying text.

[13] See Delaware General Corporation Law §§ 102(b)(3), 214 (Delaware); cf. Model Business Corporation Act §§ 6.30, 7.28. Cumulative voting used to be more firmly entrenched in the US states' corporate laws, but by 1992 only 6 economically marginal states maintained a mandatory cumulative voting rule (Gordon 1994, p. 142-146). As a practical matter, cumulative voting is rarely used in listed US corporations: In 1992, only 14% of public US corporations used cumulative voting (Gordon 1994, p. 160), and in 2002 the proportion was down to 10% (Bebchuk et al. 2004).

treatment of preemptive rights and cumulative voting is uniform across countries. However, as discussed below in Part III.C, many other countries with specific enabling provisions regarding board elections, including cumulative voting, are coded as 0 in La Porta et al. 1998.

B. Classifying the Content of the Law – The Example of Preemptive Rights

There are many other ways in which a variable definition can be underspecified. These can be obvious ones such as a mechanism's scope of application, or very subtle ones where different baselines in different jurisdictions make it difficult to understand even the core of the variable. I shall illustrate both types with the example of the "preemptive rights" variable.[14] La Porta et al. 1998 (Table 1) defines this variable as follows: "the … law … grants shareholders the first opportunity to buy new issues of stock, and this right can be waived only by a shareholders' vote."[15]

1. Filling In Details of the Variable Definition

The core idea of the definition seems straightforward enough (but see Subsection 2 below). However, coding immediately reveals further questions that are not answered in the definition. What if the law grants shareholders first opportunity not in all issues of new shares, but only in a certain type of issue (e.g., for cash consideration, as under Art. 29 of the 2nd EC Company Law Directive[16])? What if new shares not subscribed by individual shareholders entitled thereto (surplus) may be offered to outsiders, instead of to other shareholders willing to subscribe more than their pro-rata part? What are the requirements for a waiver vote – simple majority, supermajority, and/or special quorum requirements? And so on.

The key point here is that these questions are not answered in the variable definition. The variable definition can be interpreted (i.e., filled with detail) so that it answers the

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[14] As before, my only concern is drawing precise outer boundaries for the components of the ADRI in order to enable consistent coding. It is obvious that a useful description of any individual country's law would have to be much more detailed both within and without these boundaries (for an example of the possible complexity, see Schlesinger 1968).

[15] The definition in Djankov et al. 2005 is identical for present purposes.

[16] Council Directive 77/91/EEC of 13 December 1976 (as amended) (European Communities).

questions, but it is then a necessarily subjective and uncertain interpretation which answers the question, and not the variable definition as printed above. I emphasize this point to underline that it is impossible simply to ignore the questions above and "stick with" the variable definition. For example, "ignoring" the first question above and applying a coding of 1 even if preemptive rights are only provided in certain types of issues means that the variable has been interpreted to mean "… the first opportunity to buy *certain* new issues of stock". Being inevitable, such interpretations are necessarily legitimate, and it is certainly better to reveal them openly. Such interpretations should not be confused with re-defining, expanding or restricting the variable, which would be altering the limits that *are* drawn through the variable definition. The problem presently under consideration is what to do with those limits that have *not* been drawn in the definition.

In the case of "preemptive rights", I adopt broad interpretations: countries are coded as 1 even if their law does not reserve shareholders the first opportunity to buy (unclaimed) shares beyond their pro-rata share, and/or grants preemptive rights only in certain types of issues. The former aspect is probably of minor importance in public corporations. The latter limitation is justified if and as long as one assumes that existing shareholders will be protected by other mechanisms in exempt issues, such as a market check in issues to the public market, or an audit of the contribution in non-cash issues. The data indicate that La Porta et al. 1998 and Djankov et al. 2005 took the same position on these issues. Regarding the waiver vote conditions, I make alternative assumptions and code for both simple majority and supermajority/superquorum requirements.

2. Uncertainties Regarding the Core of the Variable Definition

Problems of the type discussed in the preceding Subsection are common but manageable. Sometimes, though, the interpretation problems go to the heart of the variable definition, i.e., sometimes even the core of the variable is in doubt.[17] For "preemptive rights", such a problem arises because the definition allows the waiver of preemptive rights by

[17] I discuss an extreme case of this below in Part III.D.2, where I argue that the "oppressed minority" variable in the revised ADRI cannot be coded at all based on the definition given in Djankov et al. 2005

shareholder vote. Once preemptive rights are dependent on a shareholder vote, however, there is not only interaction, but logical overlap with shareholder approval requirements for share issues. I argue that the two (waiver vote and approval vote) cannot be distinguished in a comparative study where a common baseline for issue requirements is lacking, and that consequently either one must suffice for a coding of 1.

I will illustrate the argument using the examples of Hong Kong and Nigeria, coded as 1 and 0, respectively, in La Porta et al. 1998 and Djankov et al. 2005. The Hong Kong Companies Ordinance does not mention "preemptive rights", or any other "right" of shareholders to get first opportunity to buy new shares. Instead, s. 57B provides for (a) the requirement that any new issue of shares must be approved by shareholders, and (b) an exception to this requirement if shares are issued to existing shareholders pro-rata. This is logically identical to a rule which (a) allows management to issue shares without shareholder approval, but (b) grants preemptive rights subject to waiver by a shareholder vote. Hence, Hong Kong is correctly coded as 1.[18] Now compare Nigeria. In Nigeria, the law also provides that any new issue of shares must be approved by shareholders.[19] The difference to Hong Kong is that there is no exception for pro-rata issues to existing shareholders. Consequently, a differential coding of 1 for Hong Kong against 0 for Nigeria would be based entirely on the fact that the board has *more* powers, and the shareholders *less* rights, in Hong Kong than in Nigeria. In other words, the favorable evaluation of Hong Kong would not be based on added protection against dilution, but on added flexibility to issue shares without shareholder approval. The latter may be a good thing, but it is hardly what one would associate with the term "preemptive rights", or with the variable definition (whether the law grants shareholders the first opportunity to buy new issues of stock).

The broader point is that a requirement of a shareholder vote for share issues is really two things in one. Through their vote, shareholders determine (1) if shares will be issued, and (2) to whom. The law may not say the second part explicitly, but since the

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[18] Hong Kong lawyers would not, however, necessarily describe their law as providing preemptive rights; cf. Ho 15.2.2 (who explains that Hong Kong law does not grant preemptive rights, but does have s. 57B).

[19] s. 124 Companies and Allied Matters Act, 2004 (Nigeria).

shareholder resolution proposal can express a choice on (2) and shareholders can give or withhold their vote based on this choice, (2) is always there. Nothing substantive is gained by an express provision of "preemptive rights" as long as they can be waived in the shareholder resolution authorizing the issue (with identical majority and quorum requirements), as in Malaysia or Norway. The only difference is the interpretation of silence in, and consequently the drafting of, shareholder resolutions: with the express statutory grant, silence means preemptive rights attach (e.g., Malaysia, Norway); without the express statutory grant, silence means they do not attach (e.g., Nigeria).[20]

In light of this observation, and to avoid the absurd result that countries with more protection may receive lower values than others with less (e.g., Nigeria v. Hong Kong), I will treat explicit provisions of waivable preemptive rights and shareholder approval requirements for new issues the same in the variable variants `prevote` and `preright`. `Prevote` asks whether the law requires shareholder approval for any issue of shares other than pro rata to existing shareholders; `preright` asks whether there are additional requirements such as a supermajority or special quorum rules. Either variant can be satisfied by a shareholder approval requirement for any new share issue. However, to satisfy those who do not agree with my argument, I also form one variable variant `preexpl`, which asks whether the law explicitly mentions a requirement to issue new shares to existing shareholders.

C. Determining the Content of the Law

I now turn to the more basic problem of determining what the law is, or is deemed to be by a coding instruction, in even just one jurisdiction, including what rules should count as law in the first place.[21]

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[20] It is of key importance that the rules of the bargaining game are unaffected by this purely linguistic convention.

[21] As before, the discussion is limited to that which can and must be taken into account in the coding of binary variables. Reality is, of course, even more complex, see, e.g., Sacco 1991.

1. Distinguishing Law and Practice to Test the Former's Effect on the Latter

Law must be distinguished from practice for coding purposes, or else endogeneity problems will be pervasive. (By practice, I do not mean the practice of courts, but of actors outside of the judicial system.) For example, assume that countries A and B both permit "share-blocking" charter provisions. Such charter provisions require shareholders to abstain from trading their shares for a couple of days around the shareholders' meeting in order to be able to vote thereat. Assume further that such charter provisions are popular only in country A. Imagine that data were collected based on this practice, i.e., in these data country A has "share-blocking" but country B has not. These data might be useful for testing the effect of corporate governance mechanisms on financial outcomes. But they would be entirely useless for testing the effect of *law* on those financial outcomes (or, for that matter, on corporate governance mechanisms). Similarly, a study that attempted to show the influence of legal origin on the incidence of "share-blocking" would be much more plausible if it could point out differences in the law itself, rather than only in corporate governance practice of countries A and B.

This distinction of law and practice is obvious enough in the abstract, but more complex when the law itself is unclear. In this case, that an arrangement is common in practice would generally be a good if imperfect indicator that the arrangement is legal. The inverse, however, is not true: one cannot infer from the absence of a certain arrangement in practice that it is illegal. Hence collecting comparative legal data based on the presence or absence of a common practice, thought tempting, would be highly problematic, and I do not do this.

This observation points to the more general problem of interaction of law and practice. Law usually only develops when there is demand for it, i.e., in relation to problems that have arisen in practice (cf. Berkowitz et al. 2003). This is obvious for case law, but by and large also holds for statutory law. Repeat players, in particular if they have an institutional role such as stock exchanges, may anticipate and thereby preempt a

legal intervention.[22] Hence practice can be more influenced by legal considerations (i.e., the anticipation of legal intervention) than the existing law would suggest.[23] I cannot explore this issue further in this paper. Clearly, however, simply assuming that an arrangement is illegal in a given jurisdiction just because it is not found there in practice would result in obvious circularity in a study of the influence of law on practice. Hence, my coding is limited to the law "as is". I am not aware of any quantitative study that did otherwise.

2. Sources of Law – The Problem of Stock Exchange Rules

What to count as law in a given jurisdiction obviously depends on the jurisdiction's internal rules regarding sources of law, viewed through the lens of the variable definition. In particular, I read the variable definitions in La Porta et al. 1998 and Djankov et al. 2005 to include any rule of general application promulgated by a public authority that is backed by public enforcement authority (either through the courts or through administrative agencies); whether a given rule is backed by such authority in a given jurisdiction is for that jurisdiction to decide. Precedents (court decisions) must be taken into account even if they are not legally binding, because they are at least the best available indication of how courts are going to interpret (enforce) the law in the future.[24]

Stock exchange listing rules are a potentially problematic hybrid of private rule-making and state(-sponsored) regulation.[25] La Porta et al. 1998 explicitly excludes them

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[22] For example, I will explain below that current US law neither requires proxy solicitation by corporations nor prohibits "share blocking". The former is, however, required by US stock exchanges, and the latter is not a current problem because it is unknown in practice. It would not be unreasonable to assume that the US Congress or the SEC would intervene if US stock exchanges dropped the proxy solicitation requirement or permitted the introduction of "share blocking" by listed corporations. This in turn may prevent the stock exchanges from even considering such a move. But see below n 79.

[23] Cf. Roe 2003, 2005 for a similar phenomenon concerning US federal law's "shadow influence" on Delaware corporate law.

[24] For this reason, lawyers also in Civil Law jurisdictions work with precedents all the time and pretty much in the same way as their Common Law counterparts. This is emphasized even by those comparative lawyers who generally make much of the distinction between Common and Civil Law (e.g., David & Brierley 1985, Merryman 1985).

[25] For example, the UK Listing Rules remained essentially unchanged when rule-making authority passed from the London Stock Exchange (a private entity) to the UK Financial Services Authority in 2000. Generally, stock exchanges are often endowed with special powers by law, while being under the supervision of, and pressure from, regulators. On the (changing) status of stock exchanges, see generally, e.g., Fleckner 2006.

for coding.[26] Djankov et al. 2005 explicitly includes them in the "preemptive rights" variable definition[27], but the coding rule is not clear for other variables.[28] As far as I was able to ascertain, whether to include or exclude stock exchange listing rules for those other variables matters only for "vote by mail" in four countries (Australia, Ireland, South Africa, and, in 1997, the UK), and I code for both possibilities there. Stock exchange listing rules might also have a bearing on the "shares not deposited" variable, but for reasons that may become clear in the discussion of that variable in Part III.B below, their interpretation is so speculative in this regard that I simply ignore them there.

3. Interpreting the Law

a) Legal Uncertainty in General

While identifying the sources of law is generally easy, interpreting the law can be a difficult undertaking.[29] There is a reason, after all, why attorneys can charge hefty fees for telling their clients what the law is likely to be.

Sometimes the answer is easy. There may be a statute or established precedent right on point. The more detailed and/or current the question, however, the less likely it is that the statute or precedent is going to address explicitly all elements of the answer. To make the same point another way, there is rarely if ever a statute or precedent that does not need to be interpreted to be applied to a particular question or fact pattern. A broader analysis of decided cases and secondary sources (articles, treatises) is therefore often necessary. But even cases and secondary sources do not always hold an answer, either because they express opposing opinions, or because the question has never been

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[26] See La Porta et al. 1998, p. 1120. This exclusion matters for the for "one share – one vote" variable in Australia, in addition to the example mentioned in the main text.

[27] This matters (for certain variants of the variable) with respect to South Africa, see below n. 112.

[28] Cf. Djankov et al. 2005, p. 6 (listing rules as example of laws and regulations) on the one hand, and Table XI (listing rules are mentioned for "pre-emptive rights", but not for the other variables) on the other.

[29] Enriques 2004, n. 154 reports that one of the authors of La Porta et al. 1998 had told him that "so many lawyers had provided them with so many contrasting comments on what the law really was in this or that country, that they had quickly decided to disregard all of them."

addressed in that jurisdiction.[30] In my coding, I follow the majority opinion in secondary sources if neither a clear statute nor case law exist on a question.

An example, regarding proxy solicitation in Germany: The German share corporation act always explicitly allowed proxy voting.[31] Before 2001, it did not say explicitly, however, whether the corporation itself, or a fiduciary named and paid by it, could solicit and receive proxies. Most commentators considered such a practice illegal, on the grounds that it would shift shareholders' powers to control management to management itself.[32] However, when the first German corporation (Deutsche Telekom) tried it in 1997, the courts showed little hesitation to uphold the practice (under the condition that the fiduciary named and paid by the corporation would vote blank proxies in the best interests of shareholders, rather than blindly approve management's proposals; ballot-type forms had been used from the outset).[33] Likewise, a legislative amendment of 2001 clearly presumed the practice's legality.[34] On a theoretical level, proxy solicitation by a fiduciary named and paid by the corporation may have been legal all along. In practice, however, German corporations had to confront a prevailing opinion to the contrary until 1997. Deutsche Telekom's lawyers successfully second-guessed that prevailing opinion, but the price they charged for it was presumably orders of magnitudes higher than what a research project covering a large number of countries could afford. Hence the simple coding rule: Germany did not allow proxy solicitation by the corporation before 1997.[35]

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[30] In the latter case, there are obviously doubts whether the law is factually constraining on that point, cf. Black 1990.

[31] §§ 134 I, 128 II Share Corporation Act (1997) (Germany).

[32] See, e.g., Raiser 2001, § 16 ¶ 95, Hüffer 2004, § 134 ¶ 23.

[33] *Oberlandesgericht Karlsruhe*, Zeitschrift für Wirtschaftsrecht (ZIP) 1999, 750; *Landgericht Baden-Baden*, Zeitschrift für Wirtschaftsrecht (ZIP) 1998, 1308. Deutsche Telekom had gone public in 1996 with a large float. The fiduciary it had asked to solicit the proxies was its auditor. The plaintiff was a shareholders' association, whose suit was, revealingly, based primarily on the rules of unfair competition. While there is still disagreement on how the fiduciary has to treat blank votes, German legal opinion is unanimous that ballot-type forms must be used where shareholders can mark their choice for each agenda item (see, e.g., Volhard 2004, ¶¶ 39 and 40).

[34] § 134 III 3 Share Corporation Act (2001/06) (Germany).

[35] German Banks are allowed to solicit proxies from their clients using ballot-type ('two-way') proxy forms (§ 128 Share Corporation Act (Germany)), and traditionally did so. For the shareholder, it does not make a difference if her bank or the corporation's management votes her proxy as per her instructions. The identity of the proxy might make a difference, however, in the frequent case where the shareholder does not give any voting instructions and mails in a blank proxy. In particular, banks might use their voting power to extract private benefits from the corporation (although Gorton & Schmid 2000 find no evidence of this). More importantly, banks have different incentives to engage in proxy solicitation, and have largely ceased to do so in the last couple of years (Noack 2005, p. 17). Thus

The imperfection of this solution is another reminder of the difficulties of distinguishing law and practice (cf. above Subsection 1).

b) Distinguishing Mandatory and Replaceable Rules, and the Special Problem of (Endogenous) Specific Enabling Provisions

Fortunately, with the exception just illustrated (proxy voting by mail), all the components of the ADRI are so simple that most countries' relevant *default* rules can be found directly in the statute books. As discussed above, however, it may happen that the hypothesis to be tested calls for taking into account also optional rules or, inversely, only mandatory rules, and La Porta et al. 1998 did not provide clear guidance on this issue. In this case, one must determine whether the default rule is mandatory or replaceable. This is often rather difficult, unless there is a specific enabling provision on point. Conceivably, one could draw the coding line at such specific enabling provisions, counting default rules and specific enabling provisions but not general enabling standards. Djankov et al. 2005 does so for the "shares not deposited" variable.[36] There is some intuitive appeal to this line, because contracting costs are lower if the parties know for sure that their arrangement is allowed by a specific enabling provision. However, three considerations argue against this coding rule in comparative work. I outline them here because they will take on great relevance in the interpretation of the empirical results derived with the "shares not deposited" variable.

- First, the baseline is very different from jurisdiction to jurisdiction. Some countries' laws provide that every deviation not explicitly forbidden is allowed, while others provide that every deviation not explicitly allowed is forbidden. Delaware corporate law is an example of the former, German corporate law is an example of the latter.[37] Consequently, the difference in contracting cost for a "share deposit" charter provision under the German statute, which explicitly allows such provisions, and the

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there are substantive reasons – quite apart from the formal variable definition – why German bank proxy voting cannot simply be considered equivalent to US-style proxy voting, as in Braendle 2006.

[36] The value of zero is assigned if the law either allows deposit requirements as a default rule, or contains a specific enabling clause to that effect (Djankov et al. 2005, Table XI).

[37] See Delaware General Corporation Law § 102(b)(1) (Delaware), and § 23 V 1 Share Corporation Act (Germany).

Delaware statute, which is silent on this point, may be immaterial (again, not having regard to current corporate practice and imagining a "blank slate", that is – doing otherwise would lead to testing the influence of corporate governance tradition, rather than of law).

- Second, giving special weight to specific enabling provisions risks aggravating concerns about the direction of causality (endogeneity). This is because statutes usually specifically address only those points which for one reason or another have become an issue in the jurisdiction. For example, the first German statutory provision (of 1884) regarding "share deposit" charter clauses was designed to *limit* such charter clauses, which had proliferated in German corporations before the statute ever addressed the issue.[38] *Limiting* the permissible scope of application (only bearer shares) or duration (e.g., maximum 5 days before the meeting) of "share deposit" charter clauses still seems to be the more important contribution of most contemporary statutory provisions addressing such clauses, even if they are (partially) phrased as specific enabling provisions.[39] This insight has two important implications. First, the prevalence of "share deposit" charter clauses may be the cause of the statutory provision, rather than its effect (and corporate governance practice formed by some extra-legal influences may be the real driving force). Second, the legal rules relating to "share deposit" may actually be *stricter* in countries with specific enabling provisions, if and because these provisions also contain *limits* on the practice, which are missing in countries whose laws do not address the practice at all.

- Third, the neat dividing line promised by special enabling provisions may prove illusory. Enabling provisions can be more or less general – general enabling provisions and special enabling provisions allowing one particular mechanism are only the two extreme ends of the spectrum. Consider the aforementioned enabling provisions for cumulative voting. The Delaware statute expressly addresses cumulative voting. The

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[38] See Voelderndorff 1885 (Art. 238 ¶ I [p 658] and Art. 249d ¶ VIII [p 777]) and Ring 1886 (Art. 238 ¶ 2 [p. 533]) (explaining how the new statute from 1884 reacted to prior practice and abuses); cf. Auerbach 1861 p. 360, 367 (reporting the occurrence of "deposit" requirements in corporate charters, writing in 1861).

[39] See, e.g., Art. 136 Decree No. 67-236 (France); and § 123 Share Corporation Act (Germany) before its 2005 UMAG overhaul.

enabling provisions in other countries, in particular in Scandinavia, do not expressly address cumulative voting, but they expressly allow charter clauses that change the default procedure for electing directors.[40] The permissibility of cumulative voting is certainly marginally more uncertain in Scandinavia than in Delaware. But it would seem unreasonable to expect Delaware law to be more protective of shareholders because of this distinction.

For these reasons, and because it would add more complexity to the coding process (because I would have to distinguish two more variable variants), I generally do not distinguish between specific enabling provisions and otherwise replaceable rules, except where this is required by the explicit coding instruction in Djankov et al. 2005.

D. Collaboration with Foreign Lawyers: Benefits and Their Limits

An obvious solution to problems regarding the understanding of foreign law is collaboration with foreign lawyers to collect foreign legal information. But it is not a panacea.[41]

1. Centralized Coding Mechanism to Ensure Consistency

In particular, it does not solve the problem of *classifying* the foreign law, i.e., of providing a workable variable definition and ensuring its consistent application. In fact, it may make these matters worse. First of all, the introduction of an intermediary between the foreign law and the quantitative researcher creates the novel problem that the intermediary may misunderstand the *question*. Second, even if the question is understood correctly, there is the risk that each foreign lawyer will fill in gaps in the definitions of terms used in a question according to her own priors. For example, if asked whether the

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[40] §§ 49, 77 Public Company Law (Denmark), Chs. 8:1.2, 9:13.2 Companies Act (Finland), Art. 9-13(3) Public Stock Companies Act (Norway), and Art. 8:6 Companies Act (Sweden). The numbering of these provisions is given as of 2005; in all cases but Denmark, it has changed since 1997, but the content is the same.

[41] I do not dwell on problems related to the incentives of the foreign lawyers to spend sufficient time to answer the questions correctly and precisely. This is potentially a serious problem. The only solution – short of making every contributor a co-author (query whether many practicing attorneys would be interested in this) or paying them market rate for their services (presumably beyond any study's budget) – seems to be to make the data documentation publicly accessible to provide some reputation incentive to the lawyers and, more importantly, to enable checks by other knowledgeable people.

law of country X includes rule ρ, one researcher may count only a mandatory rule ρ, another will count a default rule ρ, and yet another might be content with an optional rule ρ.

Without some feedback loop that ensures that the many gap-filling needs will be addressed centrally and hence uniformly for all countries, inconsistent coding is almost certain to occur. This requires that one person, or a group of closely communicating persons, centralizes the coding process, as I did. It also requires that this/these person(s) re-contact correspondents to clarify their answers and to solicit additional information that becomes necessary once the original variable definition is amended in reaction to information received from some country. The data collection process for the ASDI in Djankov et al. 2005 incorporated such a process.[42] I also re-contacted correspondents several times. For example, I received information that Peru's "one share – one vote" rule did not ensure proportionality between cash-flow and voting rights in practice because shares could have differentiated cash flow rights until 1998. Hence, I re-contacted all correspondents in countries with "one share – one vote" rules to ask whether their law was equally permissive. I also re-solicited much information regarding the "proxy/vote by mail" variable after making the necessary alternative gap-filling assumptions.

2. Biasing Questions – The Limited Usefulness of Foreign Lawyers for Coding Checks

The danger of inconsistency is particularly acute if the understanding of the question is biased by some extraneous information received previously or simultaneously. (This echoes a standard topic in the survey questionnaire literature of question context altering responses, see, e.g., Martin 2005, p. 726.) This may have happened in Pagano & Volpin 2005a/b. That paper extended the ADRI in time from 1993 to 2002 with the help of a questionnaire distributed to local experts. The questionnaire showed the definitions of the ADRI components in the first column, the values assigned by La Porta et al. 1998 for 1993 for the particular country in the second column, and blank cells in the third column,

[42] Cf. the description of the coding protocol in Djankov et al. 2005, p. 6.

headed: "What is the answer to this question today in [country name]? If it differs from that in the previous column, when was the law changed and how?" The local experts did note 8 mistakes in La Porta et al. 1998, but not nearly as many as I find.[43] Presumably, most of the participating local experts interpreted the variable definitions in light of the values assigned to their own country for 1993 by La Porta et al. 1998. So their understanding was biased through the prior – often incorrect/inconsistent – answers.

For example, recall that both Norway and the US have cumulative voting only as an optional rule, but that La Porta et al. 1998 coded Norway as 0 and the US as 1 for that variable (see above Subsection C.3.b). Looking at the US coding for 1993, the US lawyer may have inferred that an optional rule is coded as 1 for the "cumulative voting" variable, while her Norwegian colleague, looking at Norway's 1993 coding, may have inferred that only mandatory or at least default rules qualify. Indeed, neither the American nor the Norwegian expert noticed a mistake in the coding in La Porta et al. 1998 / Pagano & Volpin 2005a/b. Only if they had been able to discuss the variable meaning and coding with each other could they have noticed the inconsistencies between different countries' treatment.

In light of this, foreign legal experts are probably not very helpful for verifying the accuracy of the coding, as opposed to furnishing the legal "raw materials". The foreign legal experts "know their law"[44], but they usually have neither the time nor the inclination to acquaint themselves with the intricacies of the coding rules ultimately adopted by the quantitative researcher. For the most part, their understanding of the coding rules will likely come from the quantitative researcher's suggested coding of their respective legal system.

I only supplied my correspondents with questions replicating more or less literally the variable definitions from La Porta et al. 1998, asking them to distinguish mandatory,

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[43] According to Pagano & Volpin 2005b, La Porta et al. 1998 overlooked the following correct answers in 1993: "preemptive rights" existed in Belgium, Brazil and Germany; "cumulative voting" was "allowed" in Brazil and Israel; "proxy by mail" was allowed in Belgium if provided for in the charter; an "oppressed minorities mechanism" existed in Egypt, and Brazil did not have a "one share – one vote" rule since it allowed preferred shares without voting rights. 5 out of these 8 match my data and coding; the other three match my data but their coding in La Porta et al. 1998 was probably correct, depending on the variable definition used.

[44] Subject to the caveats discussed above (Section II.C.3).

default, and optional rules, and I gave them model answers for the US and Germany for illustration.[45] To reduce the risk that a correspondent may consciously or subconsciously try to present his country in a favorable light[46], I said as little as possible about the purpose of my study (i.e., I did not even mention La Porta et al. 1998 or their hypotheses unless the correspondent would have recognized the questions anyway). Most importantly, I independently verified all the information personally (see immediately below).

III. THE LEGAL DATA

This Part presents my legal data and their coding for the individual components of the ADRI, and for the "one share – one vote" and "mandatory dividend" variables from La Porta et al. 1998. I present data for 1997 in comparison to, and coded as, the original ADRI (La Porta et al. 1998), and 2005 data in comparison to, and coded as, the revised ADRI (Djankov et al. 2005). While I separately code also for mandatory and optional rules, I discuss and report only default rules, unless otherwise indicated. I do not discuss all countries, but rather focus on the main divergences between my coding and that in La Porta et al. 1998 and Djankov et al. 2005, and I point out borderline cases. I report correlation coefficients for individual variables in 1997 and 2005 with the corresponding values in La Porta et al. 1998 and Djankov et al. 2005, respectively. An analysis of the direction of the divergences, and a comparison and evaluation of aggregate ADRI values, follows in Part IV.

My coding follows the general guidelines outlined in the previous Part, including the aforementioned coding rules in La Porta et al. 1998 and Djankov et al. 2005 (e.g., those for stock exchange rules in La Porta et al. 1998, and for default rules in Djankov et al. 2005). Like those articles, I consider only the law applicable to corporations listed on the country's biggest stock exchange. Formally, I go beyond La Porta et al. 1998 by taking

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[45] The questionnaire is reproduced in the data documentation.

[46] This risk is, of course, always present, and not only because local informants may consciously try to influence the perception of the foreign researcher. To a greater or lesser extent, the favorable construction of one's own normative system is probably a part of human nature, and reliance on the 'internal' account of a country's lawyers therefore problematic (cf. Whitman 2003, discussing the construction of the history and normative content of a system's existing rules by actors of that same system).

into account not only "the company law or commercial code" but the entire law of the country. However, the data in La Porta et al. 1998 suggest that this restriction was not observed in the paper's coding anyway (cf., e.g., the coding of the "proxy by mail" variable for the US, which must have included at least SEC proxy rules), and in any event it makes hardly any difference because with very few exceptions all relevant rules are, in fact, contained in the company or commercial codes.

The reference dates for my data are 1 January 1997 and 1 January 2005, respectively, as opposed to 1993/94 for La Porta et al. 1998[47], and May 2003 for Djankov et al. 2005[48]. The imperfect match is unlikely to explain the divergences in coded values because casual observation of my sources before 1997, a comparison of my data from 1997 and 2005 (not reported, available in the online dataset), and the study of ADRI changes 1993-2002 by Pagano & Volpin 2005b[49] suggest that the rate of change in the legal variables under consideration is extremely low over a period of only a couple of years.[50]

Legal data for each jurisdiction[51] was collected with the help of a local correspondent. I personally verified the information in each country's relevant primary and secondary legal sources when these were available in English, French, German, or Spanish (29 out of the 46 jurisdictions)[52], and otherwise with translations of primary sources and

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[47] La Porta et al. 1998, p. 1119 n. 2.

[48] Djankov et al. 2005, p. 28.

[49] Pagano & Volpin 2005b, Table A, only identifies 4 changes in the ADRI between 1993 and 1997: "oppressed minorities mechanism" introduced in Colombia, Greece, and Indonesia; and "proxy by mail" introduced in Colombia (all in 1995). The three changes regarding "oppressed minorities mechanism" are presumably immaterial for my coding because, as I will explain, "oppressed minorities mechanism" is defined so broadly in La Porta et al. 1998 that under a proper application of the definition, it should have been found in all countries all along. Pagano & Volpin 2005b also finds relatively little change (although more than I do) in the remaining period until 2002: an increase in the average ADRI from 3.17 to 3.6 in the entire period 1993-2002. Note that the skepticism as to the reliability of the data in Pagano & Volpin 2005 in cross-section discussed above does not apply with nearly the same force to longitudinal views of individual countries.

[50] By contrast, Franks et al. 2005a/b report significant change between 1900 and 2000 for the UK and Germany.

[51] Following La Porta et al. 1998 and Djankov et al. 2005, I used Delaware law for the US (for comparison, I also give references to the MBCA, which has identical rules for present purposes except regarding extraordinary shareholders' meetings), and Ontario law for Canada. Australian corporate law has been formally unified at the level of the Commonwealth only as of 2001, but the preexisting state laws were uniform.

[52] I also checked many references in other Germanic and Romance languages, but did not rely on my understanding of such sources.

secondary sources written by local authors in English or German.[53] In particular, I perused the information and references in Baums & Wymeersch 1999, Oxford Analytica 2005, and Pagano & Volpin 2005b. I could not find a suitable correspondent in Indonesia, Sri Lanka or Zimbabwe and omitted these countries from my dataset. I therefore have only 46 observations, as opposed to 49 in La Porta et al. 1998 and 72 in Djankov et al. 2005.

My complete dataset and referenced country-by-country documentation are available online.[54] Detailed results for all variables are presented in tables 2 and 3 for 1997 and 2005, respectively (generally reporting only default rules).

A. ADRI-Component 1: Proxy/Vote by Mail Allowed

1. Original ADRI

> Equals one if the company law or commercial code allows shareholders to mail their proxy vote to the firm, and zero otherwise. (La Porta et al. 1998, Table 1)

This variable captures whether shareholders are able to send their voting choice directly to the firm, rather than "show up in person or send an authorized representative to a shareholders' meeting to be able to vote."[55] There are two major ambiguities, however. The first one is management discretion – the law may allow shareholders to mail their vote, but is the corporation obliged to count it? (The discussion of the coding of US law will show that this is not a nonsense question.) The second ambiguity is whether the corporation must support mailing of proxy votes by providing appropriate forms.

The simplest and probably most natural understanding of the variable is that it is both necessary and sufficient for a coding of 1 that the corporation is obliged to count all votes sent in by shareholders (nothing more is required, in particular no active solicitation by

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[53] Usually the correspondent produced questionnaire answers first, which I then verified (I answered the questionnaires for the US and Germany myself). In some case (Denmark, Kenya, Hong Kong, Malaysia), the procedure was inverted: I produced draft answers and had them verified by the local correspondents. In the course of verification, I sometimes added new information or omitted information that seemed superfluous to me. None of my correspondents should be held responsible for any mistakes I may thereby have introduced into the answers.

[54] http://www.law.harvard.edu/academics/graduate/sjd_candidates/holgerspamann/

[55] La Porta et al. 1998, p. 1127.

the corporation, or the distribution of voting forms to shareholders). Under this definition, which I abbreviate as proxvote, the corporation's obligation to accept votes by mail is necessary and sufficient for a coding of 1. Recoding using proxvote yields a correlation coefficient of .55 between recoded and original values.

There are two troubles with proxvote. The first one is that such important countries as the US and the UK would be incorrectly coded as 1 in La Porta et al. 1998. Neither country's laws (as opposed to stock exchange rules) contain a proxvote rule, an issue to which I shall return momentarily. The other trouble is that simple though proxvote seems, it is a rather unnatural definition. In fact, the only country in the world which directly matches the definition is New Zealand[56], and perhaps also Australia and South Africa. All other countries (and stock exchanges) which require listed corporations to accept proxy votes also require that the corporation provides a voting form with space for the shareholders' choices to that effect (i.e., a "two-way" proxy form – whether this is a proxy form or a true ballot is immaterial) (I abbreviate the corresponding variable variant as proxball). Voting forms are important because the trouble of creating a suitable voting document may otherwise make mail voting illusory for small shareholders. However, with proxball the correlation of recoded and original values goes down to .24.

The correlation coefficient would rise to .59 if stock exchange rules were counted. This would also fit the coding of the US and the UK as 1 in La Porta et al. 1998. Neither country's laws contained an obligation to solicit proxies or hold ballots by mail in 1998.[57] However, both countries' major stock exchanges required proxy solicitation, and the use of two-way proxies was required by the London Stock Exchange's Listing Rules in the

[56] s. 124 Companies Act 1993 with Schedule 1 Art. 7 (New Zealand).

[57] Cf. in the UK s. 372(6) Companies Act 1985 (on proxy solicitation: "If …"). Likewise, neither Delaware law nor the MBCA *require* a corporation to solicit or accept proxies from its shareholders. The UK situation changed in May 2000 as a result of the transfer of rule-making authority for the Listing Rules to the Financial Services Authority.

UK, and by the SEC's proxy rules in the US.[58] (Australia, Ireland, and South Africa are similar to the UK on this point.)

As noted before, however, La Porta et al. 1998 did not count stock exchange rules. Consequently, the only way to arrive at the value of 1 at least for the US is to add the US-model to the variable definition, i.e., to consider it sufficient for a value of 1 if the law only requires that *if* the corporation solicits proxies (or ballots, for that matter[59]) from shareholders, two-way proxies must be used. Adding such a requirement as an alternative to `proxball` (I shall abbreviate this union as `proxcard`) does not increase the recoded/original correlation coefficient of .24 though. This is because some other countries (e.g., Malaysia and the Philippines) also have such a requirement but were coded as 0 by La Porta et al. 1998.[60]

I had to draw three other lines in coding. First, some countries have different rules depending on the type of vote or assembly. The test I adopt is whether shareholders' mail voting rights apply to the election of directors, perhaps the most important and often the only agenda item that shareholders are called upon to vote. In 1997, this only matters for the coding of `proxcard` for Hong Kong, and leads to a value of 0 (as opposed to 1 in La Porta et al. 1998).[61] Second, some countries require that the firm or its voting agent solicits voting instructions from shareholders but stop short of providing tick-the-box

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[58] In the UK, the current rule is LR 9.3.6 R (2005); the 1997 rule was Listing Rules paras. 9.26, 13.28 and 13.29 (June 1996) (by contrast, cf. ss. 60, 61 Table A of Companies (Tables A to F) Regulations 1985 (UK), which provide for both one-way and two-way proxies). In the US, see, e.g., NYSE Listed Company Manual § 402.04, and SEC Rule 14a-4(b) (US); cf. § 14(c) of the Securities and Exchange Act of 1934 (US).

[59] This addition makes a difference for India's coding after 2001. s. 176(4) Companies Act, 1956 (India) prohibits proxy solicitation at the company's expense. However, since the Companies (Amendment) Act, 2000 (India), s. 192(A) allows companies to hold, and pay for, a ballot by mail. Here, tick-the-box forms must be used, which leads to a coding of 1 under `proxcard`.

[60] See s. 149(5) Companies Act 1965 (Malaysia), and s. 9.2 of the former Philippine SEC proxy rules (see now rule 20-5 Securities Regulation Code (Philippines)).

[61] The Hong Kong law applicable to proxy solicitations by directors is s. 147C Companies Ordinance. There is no requirement for directors to solicit proxies, or to organize a ballot by mail. If they do solicit proxies, the proxy form must afford shareholders an opportunity to specify approval or disapproval for agenda items relating to "special business", which does not include the election of directors.

If optional rules were counted, the adopted test would matter also for Taiwan and lead to a value of 0 in all variable variants. In Taiwan, the representation of more than 3% of the shares by a special stock agent as proxy-holder is only allowed if the election of directors is not on the agenda (Art. 14 Proxy Rules for Listed Companies (Taiwan)).

In 2005, the test matters and leads to a value of 1 for Israel. Under s. 87 Companies Act 5759-1999 (Israel), companies must organize a ballot vote on certain matters, including the appointment and discharge of directors.

forms. The test I adopt is whether the corporation must at least provide special space on the proxy form for shareholder instructions. The test is relevant for `proxcard` in Switzerland (0) and `proxball` in Turkey (1) (La Porta et al. 1998: both 0).[62] Third, note a special problem for `proxball` in France. While French shareholders always have the right to a ballot by mail, a French corporation needs to send the necessary ballot form only upon shareholder's request if it does not solicit proxies. Nevertheless, I code France as 1 (as La Porta et al. 1998 did).

Other rules may be highly important in practice and may interact with mail voting rights, but are not captured by the variable. As La Porta et al. 1998 and Djankov et al. 2005 note, information provided with the voting form (proxy statement) is important to enable shareholders to make an informed vote. However, the variable definition does not address the information content of proxy statements. Similarly, the variable definition does not address timing questions. In Japan, for example, short notice periods (14 days) and the practice of holding all listed corporations' annual meetings on the same day make the exercise of voting rights notoriously difficult for investors (La Porta et al. 1998, Arnold 1999). Nevertheless, Japan must arguably be coded as 1 under all variable variants, and certainly not less than the US (compare La Porta et al. 1998: Japan 0, US 1): Japan requires that large corporations hold a ballot by mail and furnish ballot forms to their shareholders to that effect.[63] Even smaller Japanese corporations must use two-way proxy forms *if* they solicit proxies from their shareholders.[64] So in the aspects relevant here, the Japanese law is more shareholder-friendly than US law for large corporations, and identical for smaller corporations.

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[62] In Turkey, listed corporations need to use tick-the-box proxy forms only for partisan proxy solicitations, and can otherwise use simpler forms which merely provide space for instructions (such forms must always be sent with the meeting notice), see Art. 5, 6, 11(A)(1), and 13(1) and Annexes 1 and 2 of the Communiqué on Principles Regarding Proxy Voting At General Assembly Meetings of Publicly Held Joint Stock Companies, Serial IV, No. 8 (Turkey).

[63] This rule has been in effect since 1982. A large company here means one with at least (1) 1,000 shareholders entitled to vote at the shareholders' meeting, and (2) stated capital (*shihonkin*) of 500 million yen, or total liabilities of 20 billion yen (Law for Special Provisions for the Commercial Code Concerning Audits, etc., of Kabushiki Kaisha [Law No. 22 of 1974], art. 1-2, para. 1, and art. 21-3 with 21-2 para. 1 (Japan)). For an account in the English language of this and other changes in the Japanese law of shareholder meetings in 1982, see Takeuchi 1987.

[64] This is provided for in Art. 3 Rules Concerning Solicitation of Proxies for Voting with Respect to Shares of Stock of Listed Corporations, Securities and Exchange Commission Rule No. 13 of 10 July 1948, as amended (Japan). For an account in the English language of Japanese rules on proxy and ballot forms see Tatsuta 1983, Yazawa 1983 (p. 39-41).

2. *Revised ADRI*

> Equals one if the law explicitly mandates or sets as a default rule that: (a) proxy solicitations paid by the company include a form allowing shareholders to vote on the items on the agenda; (b) a proxy form to vote on the items on the agenda accompanies notice to the meeting; or (c) shareholders vote by mail on the items on the agenda (i.e., postal ballot); and zero otherwise. (Djankov et al. 2005, Table XI)

I interpret this revised variable definition to mean that two-way forms must be provided by the corporation to shareholders in all alternatives (a), (b), and (c). With this clarification, the definition is identical to my definition `proxcard`. If the provision of two-way forms by the corporation were not required in alternative (c), the coding of Portugal as 0 by Djankov et al. 2005 would be incorrect: Portuguese law allows voting by mail as a default rule in listed corporations, even though Portuguese corporations need not provide any ballot forms.[65]

The coding in Djankov et al. 2005 appears erroneous for a number of countries (note that none of the following hinges on the interpretation I adopted in the preceding paragraph). Neither Brazilian, nor Kenyan, nor Nigerian law requires corporations or their management to accept any proxy appointments (or ballots, for that matter) that depart from their own proposals, even if they solicit proxies.[66] Hence a coding of 1 is

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[65] Art. 22 Securities Market Act 1999 (Portugal).

[66] Nigerian law only contains a transplant of what is now s. 372(6) Companies Act 1985 (UK). s. 230(4) Companies and Allied Matters Act, 2004 (Nigeria) provides that officers of the company commit an offense if "for the purpose of any meeting of the Company, invitations to appoint as proxy a person or one of a number of persons specified in the invitations are issued at the Company's expense to some only of the members entitled to be sent notice of the meeting and to vote by proxy at the meeting". But an invitation to appoint the named person as proxy is just that – an invitation to confer voting power on that person. As in UK law, there is no requirement that the proxy form must be a two-way form (see Ola 2002 p. 268-9), or that the named person must accept returned proxy forms which contain any directions on how she should vote. The purpose of the provision is only to disclose management's tactics to all shareholders. See for UK law Farrar et al. 1991, p. 328 (invitation only to vote in favor of board policy permissible), Pennington 1995, p. 838 (disclosure function).

Kenyan law always requires listed corporations to send proxy forms with the meeting notice, but neither requires two-way forms nor imposes an obligation on the corporation or its directors to accept proxy appointments containing voting instructions. See Capital Markets (Securities) (Public Offers, Listing and Disclosures) Regulations 2002 rule 19 with Fifth Schedule rule E.03 (Kenya) (cf. Nairobi Stock Exchange Listing Manual 2002 Fifth Schedule E.03), and cf. Companies Act, Table A Art. 70 and 71 (Kenya) (both one- and two-way forms permissible).

Brazilian law only requires that public proxy solicitations employ a form which enables the solicited shareholder to vote against the resolution *by appointing another proxy holder* (i.e., the shareholder cannot simply send his disapproving vote to the soliciting party); the Brazilian SEC has never used the powers granted by the cited provision to promulgate further requirements. See Art. 126 § 2, b and c Share Corporation Act (Brazil).

incorrect. By contrast, Germany, Japan, the Philippines and Turkey at least require the use of two-way forms, and voting in accordance with shareholders' instructions, *if* the corporation actively solicits proxies (or charges a fiduciary to do so). They therefore fulfill alternative (a); however, they are coded as 0 in Djankov et al. 2005.[67] Hong Kong should be coded as 0 for the reasons discussed above. Certainly Ireland must be coded as 1 if and because stock exchange rules are counted in the revised ADRI – the Irish Stock Exchange requires proxy solicitation with two-way forms from all listed corporations.[68] But whether I count or do not count stock exchange rules, the correlation between my recoded values and those in Djankov et al. 2005 is only .54.

B. ADRI-Component 2: Shares Not Blocked/Deposited Before Meeting

> Equals one if the company law or commercial code does not allow firms to require that shareholders deposit their shares prior to a general shareholders meeting, thus preventing them from selling those shares for a number of days, and zero otherwise (La Porta et al. 1998, Table 1).
>
> Equals one if the law does not require, nor explicitly permits companies to require, shareholders to deposit with the company or another firm any of their shares prior to a general shareholders meeting. (Djankov et al. 2005, Table XI, emphasis added)

As mentioned in the Introduction, this variable will turn out to be the key driving force of the remaining strength of the recoded ADRI as a predictor of stock market outcomes. As this Section will demonstrate, however, it is also subject to severe endogeneity concerns. It may in fact measure differences in standard practice between jurisdictions (the choice of bearer over registered shares, or vice versa) rather than any differences in the law.

1. Preliminary Remarks on the Variable Definition and the Difficulties of Collecting Reliable Data

I start off with a preliminary remark on terminology and interpretation of the variable definition: "not allowing firms to require" and "neither requiring nor explicitly

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[67] On Germany, see above Part **Error! Reference source not found.** with n. 33. On Japan, see the discussion immediately above in Subsection III.A.1. For the Philippines, see rule 20-5 Securities Regulations Code 2000 (Philippines) and provision 1 d) of the Philippine SEC Memorandum Circular No. 4 of 2004 of 17 March 2004. On Turkey, see n 62 above.

[68] See Irish Stock Exchange Listing Rules 6.3.6 and 6.3.7.

permitting companies to require" might mean either of two things, besides the obvious that the law does not itself require deposit. One, it might mean that the law's *default* rules do not allow the corporation's *management* to require deposit.[69] Or, it could mean that a *mandatory* rule does not allow the corporation's *charter* to require deposit. A comparison with the other variable definitions indicates that Djankov et al. 2005 should be read in the second sense, but this is not clear for La Porta et al. 1998. I thus discuss both possibilities for the 1997 values, using the terminology of mandatory and default rules as in this paragraph.

While identifying the mandatory character of the rules relevant for this variable causes special problems (on which more below), even the default rules are surprisingly difficult to ascertain. This is particularly true with regard to the second part of the definition, the prevention of sales.[70] I therefore present data on the occurrence of share-blocking in practice (ISS 2005, ADP 2006) as a comparison to, and a form of validity check for, the legal data. The practice data also shows that canceling the deposit before the meeting in order to be able to trade, while legally possible in some jurisdictions, is at least factually impossible for at least 24 hours around the meeting in all jurisdictions, and so I do not take this possibility into account for the question whether deposit prevents selling.

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[69] An example for the type of rule that would be "caught" by this definition (i.e., coded as 0), even though it does not provide the deposit requirement as a default rule, is Art. 689a al. 2, second sentence Code of Obligations (Switzerland) (board can prescribe procedures for legitimating holders of bearer shares at the meeting).

[70] Winter 2003, who chaired a European committee on cross-border shareholder voting, writes (p. 413): "The exact consequences of this blocking of shares in the various countries are not entirely clear." Scholars from one and the same country often provide conflicting information, see, e.g., on Dutch law Winter 2003 on the one hand (deposit used to entail blocking, which is why the possibility of the record date was created), and Timmermann & Doorman 2004 (deposited shares can be traded on Euronext, even if the trade cannot be settled until after the meeting) on the other. With regard to Belgium, Wymeersch 1999, p. 25 frankly acknowledges: "There is little information available on this point."

2. The Meaning of "Deposit" in the Modern World of Dematerialized[71] Shares

The difficulties in ascertaining the applicable law are probably due to the antiquated nature of "deposit" requirements, and an ambiguity regarding what it means to be able to sell. In the modern world of dematerialized shares, no physical deposit takes place, nor could it. Instead, share-blocking is triggered simply by shareholders' notification of their intention to vote at the meeting, which is required for the exercise of their voting rights.[72] Share-blocking then consists of the suspension of executing and settling sales orders in the dematerialized trading system. Shareholders could still sell their "blocked" shares in an off-exchange transaction, but this is of course not a practical alternative – what matters in practice and in coding is whether shares continue to be tradable over the exchange.[73] Likewise, there may be other alternatives, such as forward sales, to circumvent a "blocking" requirement, but they create additional practical and perhaps legal problems.

Situating share-blocking in the contractual web between shareholder, depository (bank or broker), stock exchange, central depository / clearinghouse, and issuer reveals two points. First, it shows that share-blocking could potentially be practiced in any market, if only the contractual relations were adjusted accordingly (and if the law allowed it, of course). Share-blocking is not limited to markets using individual paper shares (no such markets exist anymore) or even to markets using bearer shares (even though most share-blocking occurs with bearer shares, more below). Second, statutory provisions explicitly addressing "deposit" bear only an indirect relationship to modern share-blocking. Read literally, the provisions are meaningless; they can influence the current

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[71] I use the expression "dematerialized" for two technically different but for present purposes equivalent alternatives. In the first alternative, shares are completely dematerialized (i.e., share certificates are not issued), in which case nothing can be deposited in the first place. In the second alternative, only one global share certificate is issued and permanently deposited at a central depository, in which case shareholders have nothing to deposit either (in some cases, a jumbo certificate is issued which represents most but not all shares, and some shareholders may hold individual certificates – such individual certificates are sufficiently rare, however [and in any event individual certificates could still be permanently deposited in the central depository], so that I can ignore this detail here). See, e.g., Merle 2001 ¶¶ 271-272 for France, Noack 2005 for Germany, and Winter 2003 generally.

[72] Equivalently, shareholders may have to request a "deposit certificate" from their depository (bank or broker), and this certificate will be required for the exercise of voting rights.

[73] See, e.g., Guyon 1999, p. 98 and 99 for France, and Noack & Zetsche 2004 for Germany.

law only through analogous application.[74] Hence, in practice, share-blocking occurs in Egypt, whose law mentions neither "deposit" nor blocking in relation to voting[75] (coded as 1 in La Porta et al. 1998), but not in Uruguay, where "deposit" is mandatory for voting purposes[76] (coded as 0 in La Porta et al. 1998 and Djankov et al. 2005) (ISS 2005, ADP 2006[77]).[78]

3. Charter Autonomy, and the Endogeneity of Specific Enabling Provisions

In fact, US law would not prohibit share-blocking charter provisions either. Such provisions are unheard of in US practice, but they are not illegal.[79] This is very important because share-blocking in other countries is mostly the result of standard charter provisions. Only seven countries had mandatory deposit/blocking provisions in 1997 (Argentina, Belgium, Greece, Italy, Portugal, Turkey, Uruguay), only one more had

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[74] I use the term "analogous application" in an untechnical sense here: it is not the physical deposit which prevents selling the shares, but something else. Legal concepts may be used to extend the notion of deposit to contemporary arrangements, in particular the notion of "indirect possession" (Noack 2005). However, legal concepts could also be used to circumvent the re-invented deposit, in particular by recasting stock exchange transactions around the meeting date as obligations for future transfer of, e.g., "indirect possession" (this is how Timmerman & Doorman 2004 explain the continued tradability of "deposited" shares on Euronext). Whether such extensions or re-inventions would be accepted in any given legal system would depend on the system's broader reading of the purpose of the deposit requirement – and this is what I mean by "analogous application".

[75] Art. 205 Executive Regulations for the Companies Act (Egypt) provides for a closure of the registry procedure. By contrast, genuine deposit/blocking is required for shareholders requesting an extraordinary shareholders' meeting (Art. 61, 70 Companies Act, Art. 215, 226 Executive Regulations (Egypt)).

[76] Art. 350 Commercial Companies Act 16.060 (Uruguay). The provision only applies to bearer shares, but bearer shares are standard in Uruguay.

[77] The ISS and ADP data is from the end of 2005. I was advised informally that only one change had occurred since 1999, which did not entail share-blocking properly speaking. Share-blocking is still prevalent in 2005 in countries who enacted optional record-date procedures after 2000. I conclude that there is hardly any change in share blocking practice between 1997 and 2005, and treat the data as if it covered 1997.

[78] Likewise, Gomard 1999 reports deposit requirements in charters of Danish firms, even though Denmark has no statutory deposit rule and is not generally known as a "blocking jurisdiction".

[79] Voting rights are a matter of state law, and hence outside the ambit of federal securities regulation (the SEC proxy rules come in the guise of disclosure rules). Delaware law is notoriously unconstraining (cf. Delaware General Corporation Law § 102(b)(1)), and accommodates restrictions on voting rights far more severe than share-blocking. The statement in Klausner & Elfenbein 1999, p. 356 that "Delaware law prohibits a corporation from blocking the transferability of its shares before and during a shareholders' meeting" reflects Delaware's default rule, not its attitude to charter provisions. Presumably, the resistance of US investors, stock exchanges and regulators to the, for them, novel share-blocking scheme would be so hostile that courts and regulators might be expected to try to find reasons to censor the scheme, but this is speculative. In fact, if empty voting (i.e., exercise of voting rights without economic interest in the shares) became a more severe problem in the future (cf. Martin & Partnoy 2004, Hu & Black 2006), share-blocking might become palatable to a US audience as part of a broader effort to combat empty voting.

deposit/blocking as a default rule (Switzerland).[80] And by 2005, share-blocking had become optional in Italy (and replaceable in Belgium since 2002). The incidence of share-blocking in practice is twice as high – 12 countries in my 46-country sample were "share-blocking markets" in 2005 (ISS 2005, ADP 2006). This suggests that coding for legal default rules (noblockd) may not capture the essence of the legal rules on this point. Perhaps only mandatory prohibitions of share-blocking provide the necessary investor protection, and only such negative mandatory rules should then be counted for the variable (noblockm). However, if I do so, the correlation between my recoded values for 1997 and the absence of share-blocking in practice actually goes down from .64 to .43 – and the correlation with La Porta et al. 1998 decreases from .44 to .38 (note that the values in La Porta et al. 1998 correlate less strongly with practice than mine – the correlation coefficient is only .58). The reason is that few countries' laws would seem to prohibit share-blocking charter provisions, however unusual such provisions might be. This in turn suggests that the legal rules may be of secondary importance for the practice of share-blocking.

Admittedly, coding for mandatory anti-blocking rules is difficult. In countries in which share-blocking charter provisions do not occur, courts do not have an occasion to rule on, and lawyers do not have occasion to think and write about, their legality. Consequently, all conclusions (based on a survey of potentially applicable provisions) must be tentative. It is much easier to code only default rules and *explicit* (specific) enabling provisions under the modified variable definition in Djankov et al. 2005 (noblexplm). It also leads to fewer discrepancies between practice, my values, and those in Djankov et al. 2005. The correlation of practice with my recoded noblexplm 2005 is .79 (1997: same), slightly more than with Djankov et al. 2005 (.74; with La Porta et al. 1998: .58). The correlation of my recoded noblexplm 2005 with Djankov et al.

[80] Argentina: Art. 238 Corporations Law 19.550 (this does not apply to registered shares if the register is carried by the corporation as opposed to the central depository); Belgium: Art. 536 para. 2 Companies Code (formerly Art. 74 § 1 para. 2 Consolidated Companies Act); Greece: Art. 51 § 5 Stock Market Act 1806/1988; Italy: Art. 2370 Civil Code (1997); Portugal: Art. 72° a) Securities Code 1999 (formerly Art. 54°, n° 2 Securities Market Code 1991); Switzerland: Art. 689a al. 2, second sentence Code of Obligations; Turkey: Art. 18 Communiqué about Terms and Conditions Governing Book-Entry Recording of Dematerialized Capital-Market Instruments, Serial IV, No. 28; Uruguay: Art. 350 Commercial Companies Act 16.060. Some of these requirements only apply to the prevailing type of share in the particular country, more on this below.

2005 is .82 (of 1997 values with La Porta et al. 1998: .69). The countries responsible for the imperfect fit between the recoded `noblexplm` and practice are Brazil, Spain, and Uruguay, which have mandatory or enabling deposit provisions but no share-blocking in practice, and Egypt, where share-blocking occurs without a deposit provision in the law. In any event, it is open to question whether the improved fit signifies an improvement of the variable or a consequence of endogeneity. I already remarked on this problem above in Part II.C.3.b).

4. Coding's Dependence on the (Endogenous) Prevalence of Bearer v. Registered Shares

I have so far omitted one further complication, which also bears on the issue of endogeneity. In many countries, such as Switzerland, the deposit requirement, or an enabling provision to that effect, applies only to bearer shares, and not to registered shares.[81] Which rule should count for coding? For lack of a better alternative, and because I prefer to bias the results in the direction of those in Djankov et al. 2005, I code for the rule applicable to the type of share that is prevalent in the jurisdiction either *de facto* or, in some cases, because the law imposes restrictions on (bearer) shares. If a close match with practice is the benchmark, this approach works well for South Korea and Taiwan, which both restrict bearer shares and are hence coded as 1 (as opposed to 0 in Djankov et al. 2005).[82] However, in countries where bearer and registered shares are both equally permissible for a public listing and the use of bearer shares is thus a matter of choice (of those drafting the corporation's charter), as in the case of Switzerland[83], this coding rule highlights concerns about endogeneity again.

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[81] For example, this is explicit in the precited statutes of Belgium, France (n. 39), Italy, Switzerland, and Uruguay, as well in the statutes of South Korea (Art. 368(2), 354 Commercial Act), Spain (Art. 104.1 Share Corporation Act), and Taiwan (§§ 176, 165.2 Company Act), and implicit in the precited statute of Germany (n. 39).

[82] In South Korea, bearer shares can be issued only if expressly provided for in the articles of incorporation, and they can be converted into registered shares at any time at the request of the holder (Art. 357 Commercial Act (South Korea)). In Taiwan, bearer shares can be issued only if provided for in the charter, and only up to 50% of the share capital (§ 166.1 Company Act (Taiwan)). In both countries, registered shares are standard.

[83] Cf. Zobl & Kramer 2004, ¶ 549, and Forstmoser et al. 1996, § 43 ¶ 22 (historically, controlling family members held registered shares while bearer shares were listed; in recent years trend to list registered shares). Shareholders can exchange one type of share for the other only if this is expressly permitted by the corporation's charter, see Art. 622 para. 1-3 Code of Obligations (Switzerland).

In fact, the endogeneity problem may be much more serious than it first appears, hidden by terminology. In the sample, no Common Law jurisdiction is a "blocking market", and none is coded as 0 for the legal provisions applying to its prevalent type of shares. However, deposit provisions do exist in many Commonwealth jurisdictions for "share warrants".[84] "Share warrants" is a different term for bearer shares.[85] Hence, the reason for the lack of blocking in these Common Law jurisdictions is that their stock markets were organized with registered shares instead of share warrants. If there was no legal reason for this choice, the coding of 1 is entirely endogenous; if there was a legal reason unrelated to investor protection, it is fortuitous. Ascertaining the reasons for the unimportance of share warrants in Common Law countries would require a research project of its own.[86] At least one very distinguished legal commentator, however, suggests that the choice of bearer shares is indeed endogenous. Gower 1954 explains that the Continental taste for bearer securities is "[m]ainly accounted for by the different organisation and less widespread [sic] of the banking system on the Continent."[87]

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[84] See, e.g., in India ss. 114, 115(5) Companies Act, 1956 with regulations 40 to 43 of Table A; and in South Africa ss. 101, 103(4) Companies Act 61 of 1973 with regulations 24 and 27 of Table A. In the UK, ss. 188, 355 Companies Act 1985 authorize the issue of share warrants, details being left to the articles; Table A does not contain any provisions regarding share warrants. Delaware General Corporation Law § 158, last sentence prohibits bearer shares; the provision was inserted in 2002, and the law was uncertain before.

[85] Cf., e.g., Davies 2003, p. 640 (entitling the section on share warrants "Bearer shares"); Pennington 1995, p. 412 ("share warrants are better designated as share certificates in favour of bearer, in contrast to share certificates for registered shares"). Share warrants are negotiable instruments, and legal title is transferred by mere delivery of the warrant with the intention of passing title; entry in the share registry is not required (ibid). This is exactly the defining characteristic of bearer shares.

[86] A cursory look does not reveal legal reasons, or only legal reasons relating to tax law (but many continental countries also enacted limits on bearer securities to curb tax evasion in the second half of the 20th century). See Davies 2003, p. 640 (footnote omitted): "… bearer shares have never been popular with English investors or English companies and are rarely issued and hardly ever in respect of shares, as opposed to bearer bonds (…) which are sometimes issued to attract continental investors who have a traditional liking for securities in bearer form. It is fortunate that bearer shares are such a rarity for, if they became common, it would play havoc with many provisions of the [Companies] Act."; and Gower 1954, p. 380 (footnotes omitted): "… bearer shares have always been much in demand by Continental investors, and in the past some English companies issued share warrants to meet this demand. At present, however, the Exchange Control Act, 1947, forbids any issues of bearer securities or coupons without the consent of the Treasury, and consent is rarely granted (…) since they are extremely difficult to control and therefore afford a simple method of smuggling currency out of the country. …"

[87] At p. 380 n. 91. The citation continues: "Their quality of transferability greatly facilitated the task of refugees who wished to smuggle their wealth out of countries from which they were forced to flee."

C. ADRI-Component 3: Cumulative Voting or Proportional Representation

> Equals one if the company law or commercial code allows shareholders to cast all their votes for one candidate standing for election to the board of directors (cumulative voting) or if the company law or commercial code allows a mechanism of proportional representation in the board by which minority interests may name a proportional number of directors to the board, and zero otherwise. (La Porta et al. 1998, Table 1)
>
> Equals one if the law explicitly mandates or sets as a default rule that shareholders owning 10% or less of the capital may cast all their votes for one board of directors or supervisory board candidate (cumulative voting) or if the law explicitly mandates or sets as a default rule a mechanism of proportional representation in the board of directors or supervisory board by which shareholders owning 10% or less of the capital stock may name a proportional number of directors to the board, and zero otherwise. (Djankov et al. 2005, Table XI)

This variable only gives rise to three relatively minor problems.

The problematic coding of optional rules in Canada, India, and the US as 1 in La Porta et al. 1998 has already been alluded to above. Each of these countries has a specific enabling provision for cumulative voting, but none provides for it as the default rule.[88] If optional rules were counted, however, most countries in the world should have been coded as 1 (the correlation of recoded values for optional rules with La Porta et al. 1998 is only .35). Even if only specific enabling provisions were counted along with default rules, at least the Scandinavian countries should have been coded as 1 also (see above Part II.C.3.b). The revised variable definition in Djankov et al. 2005 expressly solves this issue in the sense argued here (only default rules count).

The revised variable definition in Djankov et al. 2005 also clarifies an ambiguity regarding threshold percentages. In some countries, cumulative voting is only available, or needs to be requested by, shareholders holding a certain minimum percentage of shares. Thresholds of up to 10% are acceptable under the revised definition, and the same should be true under the original definition in analogy to other variable definitions in La Porta et al. 1998. Consequently, even though it is only triggered by a request from

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[88] For Canada, see s. 120 Ontario Business Corporation Act (cf. s. 107 Canadian Business Corporation Act). For India, see s. 265 Companies Act, 1956. For the US, see Delaware General Corporation Law § 214 (cf. MBCA § 7.28 and above n. 13).

shareholders holding at least 10% of the shares 48 hours before the meeting, Brazil's mandatory cumulative voting rule must be coded as 1 (as in Djankov et al. 2005, but not in La Porta et al. 1998).[89]

A final question is how to treat mechanisms of minority board representation that are neither cumulative voting for the entire board, nor otherwise result in proportional representation. In particular, mandatory rules provide for the election of one board member by small shareholders in India, and by minority shareholders collectively holding at least 10% of the shares in Mexico and Portugal.[90] Depending on board size and the percentage of votes held by the minority, such provisions can be more or less favorable to minorities than proportional representation. But they are not the same, and their coding of 0 in La Porta et al. 1998 and Djankov et al. 2005 is therefore correct. By the same token, however, Argentina should be coded as 0 (La Porta et al. 1998 and Djankov et al. 2005: 1), because it only provides for cumulative voting for 1/3 of the board.[91]

Except for the treatment of Argentina, my recoded values for 2005 are identical to those in Djankov et al. 2005 (correlation .94). For 1997, the correlation with La Porta et al. 1998 is .72 (using default rules). Naturally, the coding of default rules means that the coded values are not necessarily reflective of corporate practice: for example, cumulative voting is routinely excluded in the charters of Japanese and South Korean corporations.[92]

D. ADRI-Component 4: Oppressed Minorities Mechanism

1. Original ADRI

Equals one if the company law or commercial code grants minority shareholders either a judicial venue to challenge the decisions of management or of the assembly or the right to step out of the

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[89] Art. 141 Law No. 6.404 of 1976, as amended (Brazil). By contrast, the 10% threshold excludes mechanisms like the Venezuelan one, which reserves a seat on the board to shareholders holding at least 20% of the shares, see Art. 125 of the Capital Markets Law (Venezuela) (or Art. 123 of the old, pre-1998 Capital Markets Law (Venezuela)).

[90] See for India s. 252 Companies Act, 1956, and the Companies (Appointment of the Small Shareholders' Director) Rules, 2001; for Mexico Art. 144 Corporation Law (*Ley General de Sociedades Mercantiles*); and for Portugal Art. 392 Companies Code (*Código das Sociedades Comerciais*).

[91] Art. 263 Corporations Law 19.550 (Argentina).

[92] This information was provided to me by practicing corporate lawyers from Japan and South Korea. Even in countries were cumulative voting is formally mandatory, it can often be easily circumvented, in particular by the use of a small board (e.g., in Spain, where the minimum board size is only 2, Art. 136 Corporations Act).

> 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. The variable equals zero otherwise. Minority shareholders are defined as those shareholders who own 10% of share capital or less. (La Porta et al. 1998, Table 1, emphasis added)

Taking the original variable definition seriously leads to strong divergences between recoded values and those in La Porta et al. 1998. Almost all (96%) countries in my sample of 46 countries have an "oppressed minority" mechanism of the sort described in the definition, as opposed to only 52% according to the coding in La Porta et al. 1998 (the correlation between the two is .22).[93]

The reason for the quasi-ubiquity is the extremely broad variable definition. Under the definition, it is sufficient if shareholders have a remedy in respect of decisions of *either* management *or* the assembly. Likewise, it is sufficient if the shareholders' remedy is *either* "a judicial venue to challenge the decisions" *or* "the right to step out of the company by requiring the company to purchase their shares" (appraisal rights).[94] Moreover, the remedy need only be granted in relation to "certain fundamental changes" (it is not even clear if it needs to be provided in *all* the three situations given as examples). In addition, there is no indication under what standard a court should evaluate a shareholder claim for a "judicial venue" remedy[95], or what price would have to be paid in an appraisal remedy, or what procedural barriers would still be acceptable – for lack of an indication in the definition or easily definable limits (see next Subsection), one must assume that any standard/price/procedure will do. Finally, the remedy can be restricted to shareholders who own 10% of the shares.

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[93] Similarly, Oxford Analytica 2005 finds an "oppressed minority" mechanism as defined in La Porta et al. 1996 in all except one (Hungary) of the countries in its sample of 27 transition economies in 2004, 19 of which are in my sample and many of which were coded as 0 in La Porta et al. 1996, 1998 (based, of course, on the law of ten years earlier).

[94] The use of the disjunctive 'or' is not a clerical error. Compare La Porta et al. 1998, p. 1128 (emphasis added): "These mechanisms may include the right to challenge the directors' decisions in court (as in the American derivative suit) or the right to force the company to repurchase shares of the minority shareholders who object to certain fundamental decisions of the management or of the assembly of shareholders, such as mergers or asset sales."

[95] La Porta et al. 1998, p. 1128 indicates that fraud would be too high a standard. But fraud is itself not clearly defined in international comparison. In any event there are many different standards more shareholder-friendly than fraud but still very hard to meet by plaintiffs; cf., e.g., the description of Milanese courts' practice by Enriques 2002.

The only two countries that do not have an "oppressed minority" mechanism thus defined are Ecuador and Mexico. Both countries restrict judicial venues to shareholders holding at least 25% (Ecuador) or 33% (Mexico) of the shares.[96] Mexico provides each individual shareholder with an appraisal remedy, but only in the extreme cases of a change of the corporation's nationality, object, or legal form.[97]

2. *Revised ADRI*

> Index of the difficulty faced by (minority) shareholders owning 10% or less of the capital stock in challenging (i.e. by either seeking damages or having the transaction rescinded) resolutions that benefit controlling shareholders and damage the company. Equals one if minority shareholders may challenge a resolution of both the shareholders and the board (of directors or, if available, of supervisors) if it is unfair, prejudicial, oppressive, or abusive; equals one-half if shareholders are able to challenge either a resolution of the shareholders or of the board (of directors or, if available, of supervisors) if it is unfair, prejudicial, or oppressive; equals zero otherwise. (Djankov et al. 2005, Table XI)

The revised variable definition is significantly sharper than the original. While thresholds of up to 10% of the shares are still permitted, appraisal rights are not an alternative anymore, and separate values are formed with respect to challenges of decisions of the board and of the shareholder assembly, respectively. The definition also announces a standard under which the challenge should be evaluated. A remedy (damages or rescission) should be available if the resolution is "unfair, prejudicial, oppressive, or abusive".[98] Unfortunately, this last part of the definition is so ambiguous that coding is arguably impossible.[99] The cited terms are not inter-jurisdictionally intelligible (in fact, the first three refer to different standards even in the one jurisdiction where they

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[96] Cf. for Ecuador Art. 228, 229, 291, 314 Corporations Law 1999 (*Ley de Compañías*) (the corresponding provisions in the old Corporations Law 1977 were Art. 215, 216, 249, 272); and for Mexico Art. 163, 201, 202 Corporations Law (*Ley General de Sociedades Mercantiles*) (in 2001, the necessary percentage in listed corporations was brought down to 15 or 20% by Art. 14 bis 3 VI d) and f) of the Capital Markets Law [*Ley del Mercado de Valores*]).

[97] Art. 206, 182 IV-VI Corporations Law (Mexico).

[98] I assume that the omission of "abusive" in the "one-half" part of the definition is a clerical error.

[99] Another potential problem is the lack of indication as to what would constitute an acceptable procedure. The variable could be limited to court proceedings, or also include proceedings before an administrative agency (as in Pakistan under s. 263 Companies Ordinance, 1984). It could be limited to adversarial proceedings, or also include special investigations by courts (as in Italy under Art. 2409 Civil Code, or in the Netherlands under Art. 2:344-359 Civil Code).

presumably originate). I will demonstrate this in the following paragraphs. In light of this, I will not attempt to code this revised variable fully. I will, however, show that the coding in Djankov et al. 2005 is almost certainly incorrect for some jurisdictions, to underline that there is no reason to think that that coding captures what it is supposed to capture. Consequently, the revised "oppressed minority" component must be dropped from the revised ADRI. This is highly unfortunate, because the key element of enforcement is not addressed by a reduced 5-component ADRI, but inevitable – the variable cannot be coded.[100]

My argument here is that open-ended legal standards such as "unfair, prejudicial, oppressive, or abusive" cannot be understood without reference to explanatory cases and/or literature even within one legal system (e.g., Llewellyn 1960, p. 2), let alone across jurisdictional and linguistic boundaries.[101] While all variable definitions contain some uncertainty at the fringes and risks of misunderstanding, open-ended legal standards carry the uncertainty at their very core. Consequently, it is impossible to code a variable defined in such terms only. One could perhaps create one interjurisdictionally intelligible *variant* of the variable definition by substituting one's *choice* of narrower components or illustrations (cases) for the broader generic definition. This variable variant could then be consistently coded by looking for the narrower components or parallel cases in other jurisdictions (akin to the derivation of the ASDI in Djankov et al. 2005). But it would be coding for one out of many possible understandings of the original generic definition. In

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[100] The world's corporate laws differ strongly with respect to enforcement (e.g., Grossfeld 1973, XII), and these differences can be expected to have a big impact on financial realities (Enriques 2004). Fortunately, Djankov et al. 2005 has not only shown this empirically but, in doing so, also provided a superior substitute for the ADRI's enforcement component in form of the ex-post enforcement index of the ASDI. In fact, the ideas of the two are so similar (cf. Djankov et al. 2005, p. 30 n. 7) that it may be preferable from an econometric point of view to purge the ADRI of the "oppressed minority" component when the ASDI is also used in the regression. Note that the latter measure has been derived by a procedure (analysis of the solution given to a particular fact-pattern in the various jurisdictions) that circumvents the problems described below (which spring from an attempt at comparison based only on abstract terms).

[101] In essence, I am only restating part of the basic methodological learnings (and warnings) of classical comparative law. Instead of simply citing the relevant literature, however, I illustrate these learnings to avoid confusion with another basic methodological element of classical comparative law that is *not* involved here, and not appropriate. This other element is the necessity (in case-studies of individual countries) to look for so-called "functional equivalents", i.e., different *mechanisms* in different countries that may or may not fulfill the same broader function (e.g., fiduciary duties instead of stringent majority requirements and voting rules). The discussion in the present part of the main text is about different *language* (both in the usual and legislative sense) used to express the *same* mechanism (here: censorship of certain resolutions through courts by means of awarding damages or rescission to complaining shareholders).

any event, the process would be extremely labor intensive, and so I refrain from attempting something of this sort here.

The complexities of the open-ended legal standards "unfair, prejudicial, oppressive, or abusive" – and, in fact, the internal contradictions of the variable definition – can be illustrated by reference to UK law, where the terminology of "unfair, prejudicial, or oppressive" seems to have been borrowed from (either directly, or from clones in other Commonwealth countries). The first so-called oppression remedy introduced in 1948 could only be applied in cases of "oppression".[102] The change of the statutory standard to "unfairly prejudicial" in 1980[103] was a conscious and significant broadening of the remedy's scope.[104] It follows that the meaning of "unfair, prejudicial, or oppressive" is rather obscure from the point of view of UK law: "oppressive" and "unfairly prejudicial" describe different standards, while "unfair or prejudicial" is not a familiar term in the first place (quite apart from the fact that the familiar term "unfairly prejudicial" harbors fundamental uncertainties of interpretation itself[105]). From the UK point of view, it would also be surprising if the conjunction of the three terms were synthesized as a broad grant of discretion to courts for the purpose of assuring fairness (and if it were, the coding of the UK as 1 would be incorrect): as one eminent commentator has pointed out, the UK oppression remedy "does not give the courts a general power to scrutinize the conduct of company controllers on the basis of 'unfairness'."[106] On the other hand, taking the disjunctive 'or' seriously and letting the weakest of the three terms ("oppressive") determine the minimum standard would make for a weak variable indeed in the context of listed companies: in the UK, even the stronger reformed oppression remedy "remains largely stultified in the case of large public companies."[107]

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[102] s. 210 Companies Act 1948 (UK).

[103] See now ss. 459-461 CA 1985 (UK).

[104] See Davies 2003, 516-517; Boyle 2002, 90-91, 94-95.

[105] See Davies 2003 and Boyle 2002. One example is the question of independent illegality (which may have been answered by now, but the point is that it took a long discussion and court cases to provide that answer).

[106] Davies 2003, p. 529. One reason for the limited reach of s. 459 CA 1985 may be the difficult articulation with the rather restrictive handling of the derivative action in England (and most of the Commonwealth) under the rule in *Foss v Harbottle* (cf. ibid).

[107] Boyle 2002, 102. The reasons described by Boyle are several, not least procedural (cost).

As the UK example illustrates, the variable is, as a matter of fact, hardly defined at all. Within the (English-speaking) Commonwealth world, one might think of circumventing the problem of illuminating the variable's precise meaning. One might simply code for the presence of a version of the oppression remedy that uses one of the three terms "unfair, prejudicial, or oppressive", in the hope that when these countries transplanted the oppression remedy from the UK, as they all did, they transplanted not only the words but also a certain understanding, however vague, of what they mean. In this sense, the coding of all[108] Commonwealth countries as 1 by Djankov et al. 2005 is not objectionable – even if one is not quite sure what exactly it means. Clearly though, this approach does not work outside of the English-speaking Commonwealth. Non-Commonwealth countries did not transplant the UK provision, and their provisions that potentially parallel the UK remedy are expressed in terms that translate only imperfectly into English, and perhaps not at all into legal English. For example, how should one rank standards which have been translated into English as "principles of reasonableness and fairness" (Netherlands), "remarkably unfair" (South Korea), or "principles of good faith" (Turkey) on the scale of "unfair, prejudicial, or oppressive"? [109] (Djankov et al. 2005 coded the first two as 1 and the third one as 0.)

All of this being said, there are at least two jurisdictions which should almost certainly be coded as 1 (in particular under the "literal" approach just described), but were coded as 0 in Djankov et al. 2005. These two jurisdictions are Belgium and France, where shareholders can challenge both board and shareholder assembly decisions under the "abus de majorité/égalité" doctrine (for damages or rescission).[110] The French terms "abus" or "abusif" are not identical with the English terms "abuse" or "abusive" used in the variable definition, but they are the closest one can get in a language other than

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[108] The only exception is Pakistan – correctly, because s. 290 Companies Ordinance, 1984 (Pakistan) makes the oppression remedy only available to shareholders holding at least 20% of the shares.

[109] Art. 2:15 para 1 lit b Civil Code (Netherlands) (as translated on www.nblonline.com, visited 12 February 2006); Art. 376(1) Commercial Code (South Korea) (as translated by Korean Legislation Research Institute 1997-); and Art. 381 Commercial Code (Turkey) (my translation from the German translation by Hirsch & Tekinalp 1993), respectively, apply these standards to actions seeking the annulment of resolutions.

[110] See for France, e.g., Cozian et al. 2005, ¶¶ 356 et seq., and for Belgium, e.g., Goffin & Collin 2000, ch. 2.

English. Hence it is hard to argue that the Belgian and French doctrines do not qualify under the definition.

E. ADRI-Component 5: Preemptive Rights to New Issues

> Equals one when the company law or commercial code grants shareholders the first opportunity to buy new issues of stock, and this right can be waived only by a shareholders' vote; equals zero otherwise. (La Porta et al. 1998, Table 1)
>
> Equals one when the law or listing rules explicitly mandate or set as a default rule that shareholders hold the first opportunity to buy new issues of stock; equals zero otherwise. (Djankov et al. 2005, Table XI, emphasis added)

(NB: The revised variable definition does not explicitly mention the possibility of a waiver by a shareholder vote anymore, but this continues to be the understanding in Djankov et al. 2005[111] and here. Otherwise, hardly any country could be coded as 1.)

I described my coding criteria for this variable above in Part II.B. Naturally, the coding results depend on the variable variant used. The correlation between the recoded values for 1997 and those reported in La Porta et al. 1998 is .76, .48, and .33 for `preexpl`, `prevote`, and `preright`, respectively. For 2005 and Djankov et al. 2005, those coefficients are slightly higher: .77, .71, and .51 (taking into account listing rules, which make a difference for South Africa[112]). (Recall though that `preexpl` is of dubious value because it partially tests for nomenclature.)

The list of countries responsible for the imperfect correlation also varies from one variable variant to the other. However, the coding in La Porta et al. 1998 was certainly incorrect for the following countries, all of which provide preemptive rights under all of the definitions (i.e., the provision of preemptive rights is explicit, and the conditions for a waiver vote go beyond a simple majority vote): Belgium, Denmark, Germany, and Taiwan[113]; and arguably also Brazil and Egypt.[114] Counting default rules, New Zealand,

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[111] See Djankov et al. 2005, p. 30.

[112] In South Africa, the Companies Act 61 of 1973 merely contains a general shareholder approval requirement for all new issues of shares (s. 221), while the Johannesburg Stock Exchange requires mandatory preemptive rights in listed companies (Securities Exchange Listing Rules 5.51(b), 5.51(g), 5.52(b), 5.52(e), and 5.58).

[113] Art. 592 et seq. Companies Code (formerly Art. 34*bis* §1 para. 1-2 Consolidated Companies Act) (Belgium); §§ 30(3), 78 Statute on Public Limited Liability Companies of 1973 (Denmark); § 186 Share Corporation Act (Germany)

the Philippines, and South Korea must also be coded as 1.[115] Many countries with weaker "preemptive rights" were coded as 1 in La Porta et al. 1998, such as Malaysia, Singapore, or South Africa.[116] In Djankov et al. 2005, most of the clear errors identified for La Porta et al. 1998 were corrected; however, the clarification that default rules are coded for means that the coding of New Zealand and South Korea is now clearly incorrect.

F. ADRI-Component 6: Percentage of Share Capital to Call an Extraordinary Shareholder Meeting

I first discuss the relevant percentage values under the original definition in 1997 (1.) and under the revised definition in 2005 (2.). Then I separately discuss the derivation of the binary index component from those percentages (3.). In the sections to follow, I will use a minimal modification of this derivation as a robustness check to derive some key results in the summary statistics and regressions.

1. Percentage Values 1997 – Original ADRI

> The minimum percentage of ownership of share capital that entitles a shareholder to call for an extraordinary shareholders' meeting (La Porta et al. 1998, Table 1).

My recoded percentage values for default rules and La Porta et al. 1998 match perfectly for this variable, with two exceptions.

(the provision is almost a verbatim twin of § 153 Share Corporation Act (Austria), coded as 1 in La Porta et al. 1998); § 267 Company Act (Taiwan).

[114] In Brazil and Egypt, preemptive rights can be excluded by simple majority vote only in a public offering. See for Brazil Art. 171, 172 Law No. 6.404 of 1976 (the simple waiver possibility only applies if included in the corporation's bylaws), and for Egypt Art. 96, 98 Companies Act Executive Regulations (in fact, these provisions do not technically themselves grant the preemptive rights, but they require the corporation's charter to grant them).

[115] s. 45 Companies Act 1993 (New Zealand); § 39 Corporation Code (Philippines); Art. 418 of the Commercial Act (South Korea) (the provision was amended by Act No. 6488 of 24 July 2001 and now allows charter exclusions only if necessary for the achievement of the company's operational objectives; because of this substantive requirement, I count the provision as mandatory from 2001).

[116] Malaysia and Singapore both have mandatory rules which require shareholder approval for new issues, and default rules which provide that the shares must be issued pro-rata to shareholders unless otherwise provided for in the resolution (s. 132D Companies Act 1965 (Malaysia), s. 161(1) Companies Act (Singapore), both with Table A Art. 40 and 41). In Malaysia, the Kuala Lumpur Stock Exchange's Main Board Listing Requirements 3.06(1) and 7.10 make the default arrangement mandatory for listed companies. On South Africa, see n 112 above.

In La Porta et al. 1998, the US are shown to require 10% of share capital for calling an extraordinary shareholder meeting. However, the default rules of Delaware law, which both I and La Porta et al. 1998 code for[117], do not give shareholders the opportunity to call an extraordinary meeting at all.[118] (If optional rules mattered, most countries in the world should be coded as setting a 0% threshold.) Hence, the US cannot be assigned a value for the required percentage (and must be coded as 0 for the binary variable).

The only other divergence is Jordan, where La Porta et al. 1998 reports the 25% required to requisition the board to call an extraordinary meeting, while I report the 15% required to request the convening of the meeting from the Controller of Companies, an administrative agency.[119] This difference is inconsequential, because both numbers are above the 10% cut-off for the binary coding anyway (see below). It is a reminder, however, of many details that lurk beneath the surface of the reported percentages: can/must minority shareholders call the meeting themselves or must/can they requisition management or a judge or administrative agency to do so (cf. the revised variable definition below); who bears the cost of the meeting; how quickly can/must the meeting be called; who has agenda control; etc. Also, in some jurisdictions the percentage requirement is less or even dropped for groups of shareholders of a certain size (e.g., 25 or 100 shareholders)[120], an alternative that I and apparently also La Porta et al. 1998 do not take into account (the revised definition in Djankov et al. 2005 states this explicitly).

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[117] La Porta et al. 1998 diverged from this coding rule only for this variable in favor of the rule supposedly found in "the majority of US states (27)" because of a misunderstanding of Delaware law on this point. That Delaware law "leaves up to corporations the percentage of shares needed to call an extraordinary shareholder meeting" (La Porta et al. 1998, p. 1128 n. 6) is true only in the sense that the charter of a Delaware corporation would determine the percentage if it granted shareholders the right to call an extraordinary meeting in the first place. If the charter does not address the issue, however, the right to call an extraordinary meeting simply does not exist.

[118] See Allen & Kraakman 2003 p. 181; cf. Delaware General Corporation Law § 211(d). Delaware's default rules do permit shareholders to initiate written consent procedures, but this does not create the forum of a meeting and requires higher voting thresholds, see Delaware General Corporation Law §§ 216, 228(a). Incidentally, the charters of almost half of US public corporations exclude or limit even the written consent procedure (Bebchuk et al. 2004).

[119] Cf. Art. 172 Companies Law 22/1997 (formerly Art. 200 Companies Law 1/1989) (Jordan). The Controller of Companies is obliged to call the meeting if the 15% threshold is met.

[120] Rules of this type exist in Australia (s. 249D Corporations Act, 2001 – 100 shareholders), South Africa (s. 181 Companies Act 61 of 1973 – 100 shareholders), and Thailand (s. 100 Public Limited Company Act B.E. 2535 – 25 shareholders collectively holding 10% of the share capital).

2. *Percentage Values 2005 – Revised ADRI*

> The minimum percentage of share capital [or voting power] that the law mandates or sets as a default rule as entitling a single shareholder to call a shareholders' meeting (directly or through the court). (Djankov et al. 2005, Table XI)

In Djankov et al. 2005, the US value has been corrected. Relatively recent amendments decreasing the required percentage from 10% to 5% in France (2001) and Hong Kong (2000) are not yet reflected in Djankov et al. 2005.[121] In Peru, a special provision decreasing the relevant percentage from the standard 20% to 5% for listed corporations (in force since 1998) seems to have been overlooked.[122]

3. *Derivation of the Binary Index Component – The Cut-Off Criterion Robustness Check*

> The minimum percentage of share capital that entitles a shareholder to call for an extraordinary shareholders' meeting is less than or equal to 10 percent (the sample median) (La Porta et al. 1998, Table 1).
>
> Define [variable] to equal one when capital to call a meeting is less than or equal to 10 percent and zero otherwise. (Djankov et al. 2005, Table XI)

For inclusion in the aggregate ADRI, the percentage values have to be converted into a binary variable. Both La Porta et al. 1998 and Djankov et al. 2005 define the sample median of 10% as the relevant cut-off. They assign a value of 1 to percentages less than *or equal to* 10%. For my recoded percentage values, this results in binary variables with means .74 and .80 in 1997 and 2005, respectively, and a correlation coefficient of .94 with La Porta et al. 1997 and Djankov et al. 2005, respectively.

In preparation of an important robustness check that I will frequently employ below, and stepping outside of mere recoding for a moment, I note that it would have been equally plausible to assign a value of 1 *only* to percentages *less than* 10%. This would

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[121] See for France Art. 225-103 para. 2 No. 2 Commercial Code (as amended by the NRE); for Hong Kong Amendment No. 46 of 2000. There is also a clerical error regarding Colombia, where the correct percentage is 25%, not 20% (Art. 182 para. 3 Commercial Code).

[122] Art. 255 Corporations Law (*Ley General de Sociedades* 26887-1997) (Peru). The provision applies to "open corporations" (*sociedades anónimas abiertas*), which includes all listed corporations (Art. 249-°1, 263 para. 2).

have resulted in binary variables with means .30 and .43 in 1997 and 2005, respectively. Neither La Porta et al. 1998 nor Djankov et al. 2005 give a theoretical reason why the benefits of requiring less shares to call extraordinary meetings would not increase further below the median, i.e., why 10% would have any special meaning.[123] In a listed corporation, even 5% of the shares is a very substantial block and a serious hurdle. Hence, it should not matter much which cut-off is used. The robustness checks below will test just that.

G. Additional Variable 1: One Share – One Vote

> Equals one if the company law or commercial code of the country requires that ordinary shares carry one vote per share, and zero otherwise. Equivalently, this variable equals one when the law prohibits the existence of both multiple-voting and nonvoting ordinary shares and does not allow firms to set a maximum number of votes per shareholder irrespective of the number of shares owned, and zero otherwise. (La Porta et al. 1998, Table 1, emphasis added)

This is the first of two additional legal shareholder protection variables outside the ADRI from La Porta et al. 1998. For this variable, it does not make sense to code for default rules, since – not surprisingly – all but one country in the sample provide equal rights for all shares as the default rule.[124]

The variable is only concerned with voting rights of "ordinary" shares. Clearly, "ordinary" shares cannot be understood as the opposite of non-voting, limited-voting or multiple-voting shares here, as they are in some jurisdictions[125], or else the variable definition would be tautological. "Ordinary" shares must be defined as the opposite of "preferred" shares here. In principle, this still leaves room for interpretation of what counts as a "preference". Since any further distinction that I could draw here would be arbitrary, however, I understand "ordinary" share to mean any share that does not have a

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[123] I do not mean to imply that definitions of other variables could not be extended or restricted for similar robustness checks (and the use of variable variants for "proxy by mail" and "preemptive rights" does in fact just that, with similar – but generally unreported – results) . I only pick this particular variable because it is particularly easy and, I hope, uncontroversial to do here.

[124] The odd exception in 1997 was Taiwan, which had a mandatory voting cap rule (3%) (§ 179.1 Company Act, now repealed). South Korea still has a similar rule only for the election of auditors (Art. 409(3) Commercial Act, and Art. 191-11 (1) Securities and Transactions Act).

[125] § 134(e) Companies Act, 1963 (Ireland). Cf. the discussion of "equity shares" in Malaysia and Singapore below n. 130.

dividend or liquidation preference of any kind, whether economically valuable or not. The limitation of the variable to "ordinary" shares is extremely important. With the exception of Jordan (and Pakistan until 1999), all the countries in the sample that impose a one share – one vote rule for "ordinary" shares allow departures from that principle for "preferred" shares. For practical purposes, "preferred" shares can be just the same as non-voting "ordinary" shares. In Germany, for example, where each "ordinary" share must generally carry one vote[126], non-voting "preferred" shares are often the only class of shares that is publicly traded.[127]

Even for "ordinary" shares as defined above, few countries in the sample (28%) impose the "one share – one vote" rule as strictly as required in the variable definition (in particular without allowing voting caps). La Porta et al. 1998 overlooks the rule in India, Israel, Italy, and Nigeria[128] (to repeat, voting rights in these countries may be restricted even very severely through the use of preferred shares), and incorrectly attributes it to Brazil, Malaysia and Singapore: Brazil allows decreasing voting rights for higher number of shares[129], and Malaysia and Singapore hide the possibility of non-voting shares in confusing terminology[130]. The correlation between the recoded values and La Porta et al. 1998 is .55.

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[126] See, e.g., Allen & Kraakman 2003, p. 205 n. 14, and cf. § 12 Share Corporation Act (1997/2005) (Germany). In fact, certain limited exceptions to this rule existed in 1997 (§§ 12 II 2 [golden shares could be authorized by ministerial permission], 134 I 2 [charter can contain voting caps] Share Corporation Act (1997) (Germany), § 5 I [grandfathering clause] Introductory Law to the Share Corporation Act (1997) (Germany)), so neither I nor La Porta et al. 1998 code Germany as 1 for this variable.

[127] Bradley & Sundaram 2003, p. 7. In addition, there are of course other ways to circumvent one share – one vote rules, such as pyramids (see Bebchuk et al. 2000).

[128] ss. 86-88 Companies Act, 1956 (1997) (India) (the rule was repealed in 2000); s. 46B Securities Act (Israel); Art. 2351 Commercial Code (1997) (Italy) (in 1997, this provision allowed variations of voting rights only for preferred shares); s. 116 Companies and Allied Matters Act 2004 (Nigeria) (which codifies pre-existing statutes). In 1997, Colombia also enforced a "one share – one vote" rule (Art. 379 °1, 381 Commercial Code), but until 1995, Art. 428 °1 Commercial Code (Colombia) contained a 25% voting cap, which explains why La Porta et al. 1998 would have coded Colombia as 0 for their 1993/94 reference date.

[129] Article 110, §1 Corporation Law (Brazil).

[130] Both Malaysia and Singapore impose one share – one vote rules for "equity shares" (s. 55(1) Companies Act 1965 [Malaysia], s. 64(1) Companies Act [Singapore]). But "equity shares" are merely those which are not "preference shares", and "preference shares" are defined, among other possibilities, as those which do not have voting rights (s. 4(1) [Malaysia and Singapore]). Hence, what I defined as "ordinary shares" (i.e., without a preference of any kind) can be issued without voting rights under the label of "preference shares" in Malaysia and Singapore. Cf. for Malaysia Chan & Koh 2000 ¶ 3.110, and see for Singapore Woon 1997, p. 221.

Moreover, some of the countries imposing one vote per "ordinary" share allow the attribution of unequal cash-flow rights per share. In this way, voting rights can be separated from cash-flow rights in spite of the formal "one share – one vote" rule. Obviously, this defeats the policy purpose of the "one share – one vote" principle, which is to ensure proportionality of voting and cash-flow rights (Grossmann & Hart 1988, Harris & Raviv 1988). In teleological, as opposed to literal, interpretation of the variable definition, countries allowing this should be excluded.[131] Only 17% of the sample countries qualify under this stricter definition, but the correlation with La Porta et al. 1998 is unchanged (.55).

[NB: In unreported regressions, I re-estimated the regressions from La Porta et al. 1997, which had found that "one share – one vote" significantly predicted two out of three measures of stock market size. The recoded "one share – one vote" variable (in both variants) reverses sign with two of the three measures (i.e., is associated with *smaller* stock markets), and is also insignificant in the third.]

H. Additional Variable 2: Mandatory Dividend

> Equals the percentage of net income that the company law or commercial code requires firms to distribute as dividends among ordinary stockholders. It takes a value of zero for countries without such a restriction. (La Porta et al. 1998, Table 1)

This second additional shareholder protection variable takes on a very different character depending on whether waivers by shareholder majority vote are allowed or not. In the latter case (which I abbreviate `mandivna`), the mandatory dividend mechanism may provide true minority protection (against "freeze-out" by the majority). In the former case (which I abbreviate `mandivwa`), it is just general shareholder protection against management.[132] The minority-protecting, non-waivable `mandivna` probably makes more sense – majorities already have the possibility of ousting management if they

[131] When it is unclear whether the law would allow it (e.g., for Japan), I assume that it is not allowed.

[132] The ADRI combines both true minority protections and dispersed shareholder protections (cf. Pistor et al. 2000): An oppressed minority mechanism that is open only to shareholders actively representing 10% of the votes helps only a concentrated group of shareholders, while the possibility to mail a proxy or a preemptive right waivable by majority vote is little use to a minority. This ambiguity of purpose makes the choice between the variable variants difficult.

dislike management's dividend policy, and the mandatory dividend does not provide much additional protection.[133] However, judging by the coding, La Porta et al. 1998 seems to have chosen the waivable `mandivwa`. For both default and mandatory rules (now in the general sense of *charter* [in-]flexibility), the correlation of recoded values with La Porta et al. 1998 is higher for `mandivwa` (.47 and .96, respectively) than for `mandivna` (.20 and .59, respectively). These numbers are biased upwards because they omit mandatory dividend provisions in Finland and Sweden, which cap a 50% mandatory-on-demand dividend at 5% of the legal capital, and, for `mandivwa`, the Philippines, where the obligation to pay dividends depends on the ratio of profits to paid-up capital; neither of these fit into the calculation scheme based only on profit percentages.[134]

IV. SUMMARY STATISTICS

I now present summary statistics for the individual variables and a variety of possible indices. In particular, I discuss the distribution of values between the different legal families[135], and compare this to the results obtained for the corresponding 46-country sample of values from La Porta et al. 1998 and Djankov et al. 2005. Generally speaking, consistent recoding leads to higher values for Civil Law jurisdictions and lower values for Common Law jurisdictions for all variables, and the remaining differences between aggregate ADRI values are no longer statistically significant, or not robust. Tables 2 and 3 present the data and statistical tests.

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[133] This argument is only a first approximation. Obviously, if the voting procedures and agenda setting rules are different for the dividend decision and the election of directors, a waivable mandatory dividend provision may have extra bite.

[134] Under both ch. 12:4 Companies Act 1978 (Finland) and ch. 12:3 para. 2 Companies Act 1975 (Sweden), a 10% shareholder must have demanded payment of this minimum dividend. In the Philippines, §43 Corporations Code requires payment of a dividend when surplus profits exceed 100% of the corporation's paid up capital, subject to certain business exceptions.

[135] I do not mean to imply agreement with that classification, which is questionable on multiple grounds (e.g., Siems 2006).

A. Individual Variables

I reported correlation coefficients for all discussed recoded values with La Porta et al. 1998 (between .24 and .94) and Djankov et al. 2005 (between .51 and .94) above. I now discuss the direction of the divergences. As before, I discuss primarily my results for default rules, and for optional or mandatory rules only when this is indicated by coding instructions or reported values in La Porta et al. 1998 or Djankov et al. 2005.

As Tables 2 and 3 show, the divergences of the recoded values from those in La Porta et al. 1998 or Djankov et al. 2005 are not random. Recoded values are generally higher for Civil Law jurisdictions, and lower for Common Law jurisdictions. Hence, where the Common Law jurisdictions have on average higher values than Civil Law jurisdictions in La Porta et al. 1998 and Djankov et al. 2005 ("proxy/vote by mail", "shares not blocked/deposited", and, for La Porta et al. 1998, "cumulative voting"), the differences are smaller for recoded values[136], sometimes to the point where the order of means is reversed.[137] (For coding according to La Porta et al. 1998, this includes the "oppressed minority" variable; for coding according to Djankov et al. 2005, the entire variable had to be taken out because of insufficient coding instructions, as discussed at length above.) Inversely, for "preemptive rights", the only variable where Civil Law values were higher than Common Law values in La Porta et al. 1998 and Djankov et al. 2005, the differences are bigger for recoded values. The differences are particularly stark compared to values from La Porta et al. 1998 – previously significantly higher means of Common Law jurisdictions for "proxy by mail" and "oppressed minority" are no longer so after recoding, while the previously insignificantly higher mean of Civil Law jurisdictions for "preemptive rights" is now significantly higher. Even for the "percentage of shares to call a meeting", the only mistake in La Porta et al. 1998 (US) and the only meaningful (above/below median) mistake in Djankov et al. 2005 (Peru) were in this direction. Incidentally, using the below-the-median cut-off for this variable instead of the below-or-equal-to-the-median cut-off (cf. above Part III.F.3) would have resulted in a higher mean

[136] Except when stock exchange rules are counted for "proxy by mail" in 1997 – but this was explicitly not done in La Porta et al. 1998.

[137] Note also that for "shares not blocked/deposited", coding for `noblexplm` overstates practical differences.

binary variable for Civil Law jurisdictions than for Common Law jurisdictions, instead of the other way around (as in La Porta et al. 1998 and Djankov et al. 2005).

Note that the aforesaid holds for all variable variants, e.g. different variants of "proxy/vote by mail" and "preemptive rights", default and mandatory rules for "shares not blocked/deposited", default and optional rules for "cumulative voting", and also the additional variable "mandatory dividend" (except for `mandinam`). The only exception is the additional variable "one share – one vote", where recoded values for Common Law jurisdictions are relatively higher.

B. Aggregate ADRIs

Aggregate recoded ADRI values obviously reflect the uniform direction of changes in the individual variables. How strongly they do so depends on which variable-variants the recoded ADRI is constructed from. In principle, I use my 2005 data to construct one recoded index based on the coding instructions in Djankov et al. 2005, and my 1997 data to construct various recoded indices based on the vaguer coding instructions in La Porta et al. 1998. For better comparison, however, I also form one index from 1997 data based on the coding instructions in Djankov et al. 2005.

1. Recoded Original ADRI (Based on La Porta et al. 1998)

Given the ambiguity in La Porta et al. 1998 regarding mandatory, default and/or optional rules, and taking into account that I have had to distinguish three variable variants for "proxy by mail" and "preemptive rights", there are 3^8 possible ways of creating the recoded ADRI. Obviously, I need to make some choices here.

a) Composition of Various Variants

My primary focus is on an index `adri97def` composed only of default rules, because La Porta et al. 1998 seems to have done the same.[138] I use `proxvote` and `prevote` for "proxy by mail" and "preemptive rights", respectively, because these variants present the

[138] See above n. 10.

most convincing interpretation of those variable definitions[139], correlate most strongly with the corresponding values in La Porta et al. 1998 (on preexpl, see immediately below), and have the highest relative values for Common Law jurisdictions. Similarly, I use default rules for "shares not blocked" because they are more correlated with La Porta et al. 1998 than mandatory rules, which were another possible interpretation of the variable definition. The idea is that I want to bias the results towards those in La Porta et al. 1998. I also analyzed the data, and ran all regressions, with all other permutations of proxvote, proxball, and proxcard on the one hand, and prevote and preright on the other, with essentially the same but even weaker results (not reported).

I do not use preexpl (which measures whether the law explicitly grants preemptive rights) in these indices because, as I argued above, it only measures nomenclature. Since it is, however, more strongly correlated with La Porta et al. 1998 than prevote, I also form one ADRI variant adri97bestcorrel, which is identical to adri97def except that preexpl replaces prevote, and which therefore unites all the variable variants most highly correlated with La Porta et al. 1998. Note, though, that preexpl is even more tilted towards the Civil Law than prevote.

I also form indices of mandatory and optional rules called adri97man and adri97opt, respectively, using proxvote and prevote as in the main default rule index. Furthermore, I recreate the US index of 5 from La Porta et al. 1998 by forming an index adri97 us using optional rules for "cumulative voting" and "percentage of shares to call a meeting" and default rules for the rest, with proxcard for "proxy by mail" and prevote for "preemptive rights".

b) Summary Statistics

Whatever combination I use, the results are striking (see Table 2b). The correlations between the recoded ADRIs and the original ADRI from La Porta et al. 1998 are rather low, ranging from .53 for adri97def and adri97bestcorrel down to .28 for

[139] See Parts II.B.2 and III.A.1 above.

adri97_us. Whereas the original ADRI from La Porta et al. 1998 is significantly higher for Common Law than for Civil Law jurisdictions at the 1% level, there are no significant differences between Common and Civil Law means of recoded values in any configuration. In fact, German or Scandinavian origin jurisdictions now have the highest mean, the Common Law mean being lower than both of them except for adri97opt, where the German family mean is lower. The French legal origin jurisdictions still have the lowest mean, but the difference to the Common Law jurisdictions is not statistically significant except for adri97opt at the 10% level. The adri97opt and adri97man indices reflect the higher flexibility, on average, of corporate law in Common Law countries, leading to relatively higher values for Common Law countries for the former, and lower values for the latter.

2. Recoded Revised ADRI (Based on Djankov et al. 2005)

a) 1997 Values

I come close to the results in La Porta et al. 1998 only if I depart from the coding rules given there, and form an index using the revised and, fortunately, more precise coding rules from Djankov et al. 2005 with my 1997 data, and including stock exchange rules in my coding for proxcard as the relevant "proxy by mail" variant. In particular, this means coding "shares not blocked" as 0 if a specific enabling provision allows deposit requirements, but not if the "good" default rule is otherwise replaceable (what I called noblexplm above). On the other hand, it also means that I have to drop the "oppressed minority" component for the reasons set out above (Part III.D.2; see next Subsection for the significance of this change).[140] For the rest, I use default rules for "preemptive rights" (prevote)[141], "cumulative voting" and "percentage of shares to call a meeting" as

[140] I also analyzed all data, and ran all regressions, with the "oppressed minority" mechanism as defined in La Porta et al. 1998 included in the index. The results were the same, because, as discussed above in Part III.D.1, only two countries did not have a value of 1 here (Ecuador and Mexico).

[141] Formally, there is a difference in the coding rules here, too, because the Djankov et al. 2005 variable definition for "pre-emptive rights" explicitly includes stock exchange rules. This does not make a difference, however, because South Africa, where the stock exchange rules give shareholders explicit preemptive rights, is already coded as 1 anyway under the prevote definition which I use here.

before and as indicated by Djankov et al. 2005. I shall simply call this the "recoded revised ADRI 1997".

These modifications increase the correlation with the original ADRI to .60. Also, the Common Law mean is highest again, and statistically different from the Civil Law mean at the 5% level (p = 0.04), and from the French family mean at the 1% level. This result does not survive the aforementioned robustness check, however. If I count only *below*-the-median "percentage[s] of shares to call a meeting", the differences between Common and Civil or French law systems are not statistically significant anymore. The differences to the German and Scandinavian families are not statistically significant in either case.

b) 2005 Values

Finally, I use the coding rules from Djankov et al. 2005 just reviewed to form the "recoded revised ADRI 2005" from my 2005 data.[142]

A major difference between my recoded revised ADRI 2005 and the revised ADRI presented in Djankov et al. 2005 is the elimination of the "oppressed minority" variable for the reasons described above (III.D.2). In the coding of Djankov et al. 2005, this variable was very significantly stronger for Common Law countries than for Civil Law countries. Nevertheless, eliminating only this component from the revised ADRI as reported in Djankov et al. 2005 does not materially affect the differences between legal families, except as between Scandinavian and Common Law jurisdictions: Even without the "oppressed minority" component, the reduced 5-component index formed from Djankov et al. 2005 values is still significantly higher for Common Law jurisdictions than for the French and German families and the Civil Law generally (at the 1% level). Also, the correlation between the full revised ADRI and this 5-component version is very high (.94).

[142] In this case, I also analyzed all data, and ran all regressions, with the alternative variants of "pre-emptive rights" (i.e., `preright` or `preexpl` instead of `prevote`), and with the `proxcard` variant of "vote by mail" not counting stock exchange rules. I report summary statistics for these in Table 3, but do not discuss them here. The regression results are unreported. In both cases – summary statistics and regressions – the results are even weaker with those other components.

By contrast, recoding the other components does materially affect the revised ADRI. The correlation of my recoded revised ADRI 2005 with the revised ADRI from Djankov et al. 2005 is only .69 (.75 with its 5-component derivative). German legal origin jurisdictions now have the highest mean (driven by Japan, South Korea, and Taiwan), followed by Common Law and Scandinavian jurisdictions. Although the Common Law mean is still significantly higher than the overall Civil Law mean (at the 10% level), the statistical significance disappears when I substitute the *below*-the-median "percentage of shares to call a meeting" measure in the index.

V. REGRESSION RESULTS

I now turn to the ultimate question: How does the recoded ADRI perform as a predictor of stock market outcomes (market size, ownership concentration, block and control premia)? More concretely, how does the recoding of the ADRI affect the results of the regressions in La Porta et al. 1997, 1998 and Djankov et al. 2005, leaving everything else (model specification, estimation method, data) unchanged?

In Section A, I describe the regressions in more detail (variables, model specification, etc.). The non-recoded ADRI (original or revised) had been significant in virtually all of the original regressions. While I cannot always exactly replicate these results with the non-recoded ADRI data (e.g., because of different sample sizes)[143], both the original and the revised non-recoded ADRI perform as strongly in my regressions as in the original regressions. Most of the results for the original ADRI (but not for the revised ADRI) are robust to substituting the below-the-median "percentage of shares to call a meeting" value.

Recoding completely changes the picture, at least for the original ADRI (i.e., the recoded indices modeled on La Porta et al. 1998). As I discuss in Section B, the recoded original ADRI predicts neither market size, nor ownership concentration, nor block or control premia. The various recoded original ADRI variants do not turn up a single significant result with block or control premia as dependent variables. Isolated

[143] Other possible reasons for minor divergences include recoded control variables ("one share – one vote" and "mandatory dividend"), or rounding error in data copied from La Porta et al. 2006.

significant results with ownership concentration as dependent variable turn insignificant when two additional observations are added to the sample. With measures of stock market size as dependent variables, two recoded original ADRI variants (those incorporating optional rules) are significant in one set of regressions (those based on La Porta et al. 1997), but not in another (those based on Djankov et al. 2005); the other recoded original ADRI variants are insignificant in both.

The picture is more complex for the recoded revised ADRIs 1997 and 2005 (i.e., the recoded indices built according to the coding instructions in Djankov et al. 2005 with 1997 and 2005 data, respectively). I draw this picture in Section C. The recoded revised ADRIs 1997 and 2005 do not robustly predict stock market size. The recoded revised ADRI 2005 is also not significant in the block premia regression, but the recoded revised ADRI 1997 is. Moreover, both recoded revised ADRIs 1997 and 2005 are highly and robustly significant in the ownership concentration regressions.

In Section D, I show that the remaining significant results are driven the "shares not blocked/deposited" variable. To do so, I use the ADRIs' components or sub-indices in the regressions, rather than the aggregate index. The interpretation of these results is left to the following Part VI.

A. Description of the Regressions

In this Section, I describe the regressions that I estimate. The order of exposition is identical to that of Tables 4 to 7, and based on the different papers whose regression specifications I imitate (La Porta et al. 1997, 1998, and Djankov et al. 2005, respectively). By contrast, in the following Sections B and C, I will use a different order of exposition, grouping together regressions with the same or similar dependent variables.

1. Ownership Concentration Regression from La Porta et al. 1998

a) Original Regression

First, I re-estimate the regression in La Porta et al. 1998 (see Table 4, Panel A). The dependent variable is ownership concentration, defined as the "[a]verage percentage of common shares not owned by the top three shareholders in the ten largest non-financial,

privately-owned domestic firms in a given country" (concentration).[144] The independent variables are the respective ADRI variant, the two additional (recoded) shareholder protection variables "one share – one vote" and "mandatory dividend", the creditor rights index (CRI), the percentage of legal reserve required, measures of rule of law and accounting strength, legal origin dummies, the Gini coefficient, and log of GNP and of GNP per capita (all as defined in La Porta et al. 1998; cf. Table 1). I have recoded legal data for all 39 countries that were included in the original regression. I only report regressions using those variants of the recoded "one share – one vote" and "mandatory dividend" variables most correlated with the corresponding values in La Porta et al. 1998, i.e., the literally interpreted "one share – one vote" variable and the mandatory but waivable "mandatory dividend" mandiwam (I also ran the regressions with the other variants with similar results).

b) Improvement 1: Adding Uruguay and Venezuela

In addition to the exact imitation, I also estimate an improved version perusing the expansion of the ownership concentration data set in La Porta et al. 2006a and the improvement and expansion of the CRI in Djankov et al. 2006. This gives me two additional observations (Uruguay and Venezuela) (and a better measured CRI) (see Table 4, Panel B).[145]

c) Improvement 2: Dropping Legal Control Variables

In another variation of the La Porta et al. 1998 regression (with the two additional two observations), I drop the other four independent legal variables "one share – one vote", "mandatory dividend", CRI, and legal reserve (see Table 4, Panel C). These independent variables are of dubious empirical and theoretical value, and may cause problems of overspecification. The "one share – one vote" and "mandatory dividend" variables (recoded) and the CRI do not produce any significant results in the previous

[144] La Porta et al. 1998, Table 1.

[145] For a better match with my legal data from 1997, I also estimated this improved specification using 1997 data where available, i.e., for log GNP per capita, log GNP, Gini coefficient, and the CRI. The results were essentially the same.

specifications.[146] Legal reserve does, but this is driven entirely by one outlier, Taiwan. The joint hypothesis of a zero coefficient for each of the four variables does not even come close to being rejected at any level of significance in a Wald test (F(4, 27) between .60 and 1.55).[147] The four variables are also at best weakly supported by theory: "one share – one vote" as defined here can be circumvented by preferred shares in all countries in the regression sample (see above Part III.G)[148]; mandatory dividends are not encountered in listed corporations in any developed financial market and may harm corporations by draining cash; and the link between creditor rights and equity investor protection is at best indirect.[149]

2. Stock Market Size Regressions from La Porta et al. 1997

Second, I re-estimate the regressions from La Porta et al. 1997, which relate the ADRI to various measures of stock market size (see Table 5). The dependent variables are the ratios of stock market capitalization held by minorities to GNP (`externalcap/GNP`), of the number of listed domestic firms to population in 1994 (`listfirms/pop`), and of the number of IPOs 1995:7-1996:6 to population (`IPOs/pop`). The independent variables are the ADRI, rule of law, log of GNP 1994, and the average GDP growth rate

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[146] The statement needs to be slightly qualified. In the original 39-country regressions with the standard version of the "mandatory dividend" variable `mandiwam`, the literally interpreted "one share – one vote" variable, and the original CRI, all are significant at 10% in the regression with the recoded revised ADRI 1997 (`mandiwam` and CRI with a *positive* sign), and only "one share – one vote" is significant in the regression with a recoded ADRI 1997 composed of default rules with `proxcard` instead of `proxvote`. These results disappear, however, when the sample is increased to 41 observations. The non-mandatory but non-waivable "mandatory dividend" variant `mandinad` is significantly negative at the 1% or 5% level in all regressions, but this result is only driven by the Netherlands, where the 100% mandatory dividend default rule is routinely excluded in the charter. The significant result for the mandatory non-waivable "mandatory dividend" variant `mandinam` (1% significance with the standard default rule recoded ADRI) is the result of discrete variable with the values 2 for Chile (50% mandatory dividend), 1 for Venezuela (25%), and 0 for all other countries (no mandatory non-waivable dividend).

[147] Again with the exceptions of `mandinad` and `mandinam`, as explained in the previous footnote. With the original data from La Porta et al. 1998, the joint hypothesis of a zero coefficient is rejected at the 10% level.

[148] Jordan and Pakistan are not included in the regression because a value of accounting practices is missing for them. Another empirical indication that the variable does not measure anything meaningful comes from unreported regressions where I use the stricter, purpose-oriented measure of "one share – one vote" (i.e., strict proportionality of voting and cash-flow rights, instead of just literally attributing one vote per share): the stricter measure has *weaker* results than the laxer one.

[149] Moreover, the legal reserve percentage is calculated on legal capital, which is itself a rather meaningless number in most jurisdictions not related to business / finance needs of the corporation, and a legal reserve of, e.g., 10%, is potentially dwarfed by rules prohibiting the distribution of issue premia, which are not covered by the variable definition and vary from country to country (cf. Rickford 2004).

1970-1993, with or without dummies for French, German and Scandinavian legal origin. While La Porta et al. 1997 had full data for 45, 49, and 41 observations for regressions with externalcap/GNP, listfirms/pop, and IPOs/pop, respectively, I have 42, 46, and 39.

3. Equity Market Size, Block Premia, and Ownership Concentration Regressions from Djankov et al. 2005

Third, I imitate the five regressions presented in Djankov et al. 2005 for both the original and the revised ADRI (see Table 6, Panels A and B, respectively).[150] The independent variables are the ADRI, a constant, the ln of GDP per capita 2003, and the number of days required to collect on a bounced check (from Djankov et al. 2003). The dependent variables are the 1999-2003 averages of the ratios of stock-market-capitalization to GDP (marketcap/gdp) and of domestic listed firms to population (ln) (lnlistfirms/pop), the 1996-2000 average of the ratio of equity issued by newly listed firms to GDP (IPOvalue/gdp), median block premia from Dyck & Zingales 2004 (blockpremia), and concentration. Djankov et al. 2005 could estimate these models for all 49 countries (37 with blockpremia) for which the original ADRI was available, and, with marketcap/gdp and lnlistfirms/pop, even for all 72 countries for which the revised ADRI was available, while I have only 46 recoded observations.

I also run horseraces of the recoded revised ADRI against the ASDI and indices of securities regulation from La Porta et al. 2006, with the same base specification as before (from Djankov et al. 2005) (see Table 7a/b). In the discussion, I do not focus on these horseraces because I can make my point without them, and relying on them would make my conclusions more dependent on the accuracy of the ASDI and the securities law indices. The results would be even stronger than what I discuss below, i.e., the recoded

[150] I obtained essentially identical results when I estimated regressions for blockpremia, marketcap/gdp, and IPOvalue/gdp (the latter two being measured for 1996-2000 instead of 1998-2003) as dependent variables with models otherwise similar or identical to those used in La Porta et al. 1997, 1998.

revised ADRI is insignificant in all horse-races except with `concentration`, the latter exception being driven entirely by the "shares not deposited" index-component.

4. Additional Test: Control Premia (Data from Nenova 2003)

Lastly, I also perform two exploratory tests with median control premia data from Nenova 2003 (`controlpremia`) (not reported). These data are available for only 18 countries, so I cannot estimate a fully specified model here. The first regression that I run is a minimalist caricature of that in La Porta et al. 1998, with only accounting, rule of law, and the ADRI as independent variables. The second regression I run is the specification from Djankov et al. 2005 discussed in the previous subsection. The original ADRI is significant at the 1% level in the former, and just above the 10% level in the latter.

5. Same Model Specifications, Estimation Technique [OLS], and Data as in the Original Regressions

Throughout, I estimate all models with the same estimation technique (OLS) as the original papers did. All my data come directly from La Porta et al. 1997, 1999b, 2006b and Djankov et al. 2005, except for GDP per capita 2003, market capitalization to GDP, and listed firms per capita data, which come from World Bank 2006, and Gini data, which come from World Bank 1997, 2001, 2006 and (for Taiwan) Deininger & Squire 1996. As in La Porta et al. 1998 and Djankov et al. 2005, the statistical tests I report for those regressions are based on robust standard errors (Huber/White/sandwich estimators). I do have a slightly different sample size in most regressions because my recoded ADRI is only available for 46 countries instead of 49 (72 for the revised ADRI). However, the results I obtain with the non-recoded ADRI values in the 46-country sample are essentially identical to those in La Porta et al. 1997, 1998 and Djankov et al. 2005.

6. Note on Statistical Tests and the Terminology of "Significance"

A final note on statistical tests and terminology: Given that I am purposefully trying various specifications of variables to see if I can "produce" a "significant" result, the conventional statistical tests for any one coefficient are obviously invalid. The use of the

term "significant" below refers merely to t-statistics that, *if* the other conditions for statistical tests *were* satisfied, would pass a significance test at the given level (two-tailed).

B. The Recoded Original ADRI …

This Section presents regression results for my recoded original ADRIs (i.e., based on La Porta et al. 1998), the composition of which I described above in Part IV.B.1.a).

1. …Does Not (Robustly) Predict Ownership Concentration.

None of the recoded original ADRI variants (robustly) predicts ownership concentration.

The recoded default rules ADRI (`adri97def`) and `adri97bestcorrel` are significant in the original La Porta et al. 1998 regression at the 5 and 10% level, respectively, but turn insignificant when the two additional observations (Uruguay, Venezuela) are added.[151] The other recoded original ADRI variants do not yield any significant results in the La Porta et al. 1998 regressions, with or without the two additional observations. Dropping the other four legal controls does not affect the results.

Similarly, in the Djankov et al. 2005 regression with `concentration` as dependent variable, only `adri97def` and `adri97man` come out significant at the 10 and 5% level, respectively, and `adri97def` turns insignificant when the below-the-median variant of the "percentage of shares to call a meeting" variable is substituted.

2. …Does Not (Robustly) Predict Stock Market Size.

None of the recoded original ADRI variants (robustly) predicts stock market size either. In the La Porta et al. 1997 regressions, most recoded original ADRI variants do not produce a single significant result, and even reverse sign in various specifications (e.g., `adri97def` with `IPOs/pop` and, without dummies, with `listfirms/pop` as

[151] The driving force are the two new observations, not the new CRI. I estimated the model with 41 countries using the old CRI except for Venezuela (for which the old CRI is not available), and got the same insignificant result.

dependent variable).[152] The only recoded original ADRIs that produce significant results in these regressions are the one composed of optional rules, adri97opt, and, to a lesser extent, the closely related adri97_us (adri97opt is significant in 5 of the 6 regressions, and adri97_US in 3). But neither adri97opt nor adri97_us is significant in any of the other regressions, in particular not in the other regressions with measures of stock market size as dependent variable. In fact, the only significant results in the Djankov et al. 2005 regressions with measures of stock market size as dependent variables are for adri97def and adri97man with lnlistfirms/pop as dependent variable. However, the adri97def result with lnlistfirms/pop does not survive the robustness check of substituting the below-the-median variant of the "percentage of shares to call a meeting" variable.

3. ...Does Not Predict Block Premia or Control Premia.

Finally, and importantly, the recoded original ADRI does not predict blockpremia or controlpremia. None of the recoded original ADRI variants turns up a significant result in the blockpremia / controlpremia regressions described above. This is remarkable because these are the dependent variables that arguably have the closest relationship to legal investor/minority protection.

C. The Recoded Revised ADRI …

I now turn to regressions using the recoded revised ADRIs 1997 and 2005, i.e., those re-coded according to the coding instructions in Djankov et al. 2005 with 1997 and 2005 data, respectively. I use only the first one in the regressions adapted from La Porta et al. 1997, 1998, and in the controlpremia tests. I use both in the regressions modeled on Djankov et al. 2005.

[152] Of the recoded ADRI variants that I do not generally report, the default rule variant using proxcard instead of proxvote is significant at the 5% level in the externalcap/GNP regression.

1. ... Does Predict Ownership Concentration.

The recoded revised ADRI is highly and robustly significant in all `concentration` regressions.

Both recoded revised ADRIs (1997 and 2005) work very well in the Djankov et al. 2005 regressions with `concentration` as dependent variable, at 1% significance, and still at 5% with the below-the-median robustness check.

Moreover, the recoded revised ADRI 1997 works even better than the original ADRI in the regression from La Porta et al. 1998. The coefficient is twice the size[153], and it is significant at the 1% level. The recoded revised ADRI 1997 is also significant in the improved regression (n = 41), both in its full and its parsimonious version, although now only at the 10 and 5% level, respectively. These results are quite robust to substituting the below-the-median "percentage of shares to call a meeting" measure – the result is still significant at the 10% level in the original and the parsimonious regression.

2. ... Does Not Robustly Predict Stock Market Size.

For stock market size measures as dependent variables, some significant results obtain, but they are not robust to alternative model specifications (La Porta et al. 1997 v. Djankov et al. 2005) and/or the substitution of the below-the-median variant of the "percentage of shares to call a meeting" variable.

The recoded revised ADRI (1997) does not work in most of the La Porta et al. 1997 regressions. It is not significant in the `listfirms/pop` and `IPOs/pop` regressions (in fact, the sign of the coefficient is *negative* in the `listfirms/pop` regression). It is, however, significant with `externalcap/GNP` as dependent variable at the 1% level (and stays significant even when I substitute the below-the-median variant of the "percentage of shares to call a meeting" variable).

[153] In part, the size increase is due to the fact that the recoded index has only 5 components and thus ranges from 0 to 5, instead of from 0 to 6. The standard deviation of the recoded index is only 2/3 of that of the original ADRI; their means are about equal.

The reverse occurs in the Djankov et al. 2005 regressions: there, the recoded revised ADRI (1997/2005) is significant at 5% with `lnlistfirms/pop` and `IPOvalue/gdp`, but insignificant with `marketcap/gdp` as dependent variable. However, only one of these results (recoded revised ADRI 2005 with `lnlistfirms/pop`) is robust to substituting the below-the-median variant of the "percentage of shares to call a meeting" measure.

3. ... Does Not Predict Block Premia With 2005 Data; Predicts Block Premia But Not Control Premia With 1997 Data.

The recoded revised ADRI 2005 is not significant in the `blockpremia` regression from Djankov et al. 2005 either. But the recoded revised ADRI 1997 is, even after the below-the-median "percentage of shares to call a meeting" robustness check. By contrast, the revised recoded ADRI 1997 does not come close to being significant in the two minimalist exploratory regressions with `controlpremia` (p-values .29 and .91).

D. Opening the ADRI Black Box – "Shares Not Blocked/Deposited" as the Driving Force of Remaining Significant Results

I am interested to know what drives those significant results that do persist, in particular those of the recoded revised ADRI 1997/2005 in the `concentration` regressions. The superiority of the recoded revised ADRI as compared to the recoded original ADRI suggests that "shares not deposited" in its `noblexplm` variant, and "vote by mail" in its `proxcard` variant when stock exchange rules are counted, must be responsible, the two elements that change from `adri97def`. This is borne out by the results of disaggregating the ADRI into its components in the various regressions. "Shares not blocked/deposited" appears as the driving force of most results.

1. Recoded Revised ADRI 1997/2005

In all the regressions, I disaggregate the recoded revised ADRIs into their `noblexplm` and `proxcard` components, and a remainder-ADRI composed of the other three components ("cumulative voting", `prevote`, and the below-or-equal-to-the-median "percentage of shares to call a meeting" measure). These three elements are hardly

correlated (.13, -.12, and -.18 in 1997, and .05, -.10, and -.13 in 2005, see Table 8, Panels B and C, respectively). I have at least 29 degrees of freedom remaining in all regressions, using the parsimonious improved specification with 41 observations in the regression derived from La Porta et al. 1998. I report the results of these "disaggregated regressions" in Tables 4 to 7, along with the other regression results.

"Shares not deposited" emerges as the dominant element in these disaggregated regressions, in particular in those with `concentration` as dependent variable. "Vote by mail" yields at least some significant results, while the 3-component remainder is never significant except once (in the `externalcap/GNP` regression from La Porta et al. 1997 with legal origin dummies). In detail:

In the `concentration` regressions based on La Porta et al. 1998 and Djankov et al. 2005, "shares not deposited" is significant at the 1% level, with a coefficient at least twice as large as that for the aggregate index in the base regressions. By contrast, "vote by mail" is insignificant. In the `blockpremia` regressions based on Djankov et al. 2005, with 1997 ADRI data both "shares not deposited" and "vote by mail" come out significant at 10 and 5%, respectively, with coefficients slightly bigger than that on the aggregate index in the base regression, while neither is significant with 2005 ADRI data. In the stock market size regressions, the results are varied. "Shares not deposited" is significant at 1 or 5% in three of the four regressions with (`ln`)`listfirms/pop` as dependent variable, with coefficients between 2.5 and 4 times as large as that for the aggregate index in the base regressions, while "vote by mail" is always insignificant. Both "shares not deposited" and "vote by mail" are significant at 5% in the `externalcap/GNP` regression from La Porta et al. 1997 (only "vote by mail" remains significant when legal origin dummies are included), but not in the `marketcap/gdp` regressions from Djankov et al. 2005. "Shares not deposited" is significant in the `IPOs/pop` regression from La Porta et al. 1997, while "vote by mail" is significant in the `IPOvalue/gdp` regression from Djankov et al. 2005 with 1997 ADRI data; both results are significant at the 5% level, with a respective coefficient that is more than 2.5 times the size of that for the aggregate ADRI in the base regression.

2. Recoded Original ADRI

Similar or even stronger results emerge when I disaggregate the various recoded original ADRI variants into their 6 components in each La Porta et al. 1998 and Djankov et al. 2005 regression where the corresponding aggregate index was significant. "Shares not blocked" is significant in all but one of these regressions, mostly with coefficients over twice the size of the corresponding aggregate index in the base regression, and at the same or higher level of significance. The other components are insignificant, or even reverse their sign.[154] ("Oppressed minorities mechanism" is sometimes significant, but it is effectively a country dummy for Mexico and sometimes Ecuador, the only two countries with a value of zero for this variable.) I only report the disaggregation of the La Porta et al. 1998 regressions with `adri97def` and `adri97bestcorrel` (Table 4); the results are representative of those derived when disaggregating the relevant Djankov et al. 2005 regressions.

The disaggregation of `adri97opt` and `adri97us` in the La Porta et al. 1997 regressions (all unreported) yields no significant results with `IPOs/pop` as dependent variable, and only one significant result for "percentage of shares to call a meeting" and "cumulative voting" with `listfirms/pop` (in the regression with legal origin dummies and `adri97opt` components). "Cumulative voting" reverses sign, however, in the `externalcap/GNP` regressions. Hence, the only strong component here is "percentage of shares to call a meeting" (here in its optional rules variant), which is significant in all four `externalcap/GNP` regressions, with coefficients up to twice as large as those for the corresponding aggregate index. "Proxy by mail" in the `proxcard` variant is significant in the two regressions with `externalcap/GNP` derived from disaggregating `adri97us`.

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[154] Multicollinearity is unlikely to be responsible for these results: for example, the individual components of `adri97def` are only moderately correlated (for example, correlation coefficients with "shares not blocked" are .03, .24, -.10, -.19, and .12, see Table 8), and I cannot reject the joint hypothesis of a zero coefficient for "proxy by mail", "cumulative voting", "preemptive right", and "percentage of shares to call meeting" in the La Porta et al. 1998 regression at any level of significance with a Wald test ($F(4, 20) = .53$, $p = .72$).

VI. DISCUSSION

From the regressions, one result emerges very clearly: The correctly (re-)coded ADRI is a much weaker predictor of stock market outcomes than the original results from La Porta et al. 1997, 1998 made believe. In fact, it emerges quite clearly that the ADRI as defined in La Porta et al. 1998 is not a useful predictor of stock market outcomes at all.

For the revised ADRI as defined in Djankov et al. 2005, the interpretation is less straightforward. Aggregate regression results were mixed. As discussed in Part V.C, some robustly significant results remained after recoding, in particular with ownership `concentration` as dependent variable.

But the results of the disaggregated regressions in the immediately preceding Section V.D indicate that whatever apparent strength the recoded ADRI may have had in the aggregate regressions is either spurious or the cause of endogeneity. Of the six ADRI components, three played no role in the disaggregated regressions, while another one ("oppressed minority") acted as a country dummy or had to be omitted as uncodable. The two components that did the work, "shares not blocked/deposited" and, to a lesser extent, "vote by mail" in the `proxcard` variant, are subject to very serious endogeneity concerns.

"Shares not blocked/deposited" might be entirely endogenous if and in as far as the values for this variable are simply a consequence of the *choice* between bearer and registered shares, as explained above in Part III.B.4. The endogeneity concerns are exacerbated by the distinction of specific enabling provisions from other replaceable rules in the revised variable definition (from Djankov et al. 2005) – the countries that enacted such specific provisions might have been those where "share blocking" was prevalent before, and the specific regulation may have been an attempt to rein it in, rather than to encourage it (see Part II.C.3.b) above, in particular the German example). Similar concerns afflict "vote by mail" in the `proxcard` variant – at least in the US, the pertinent federal proxy rules were enacted long after, and probably as a consequence of, the Berle & Means corporation with dispersed ownership becoming the norm in the

US.[155] Future research might more closely scrutinize the comparative history of both types of provisions.

Future research might also expand the quantitative analysis both horizontally and longitudinally, adding more countries and years to the dataset.[156] This would give a clearer picture of the ADRI's empirical strength. However, the effort required to acquire such additional data would probably be better spent on more theory-guided variables such as the ASDI from Djankov et al. 2005, or the securities law indices from La Porta et al. 2006a. This is because there is now very little reason to think that the ADRI validly measures legal shareholder protection. There appeared to be strong empirical evidence, but this paper has shown that that evidence had only come about through inconsistent coding, i.e., measurement error. A combination of the empirical results and casual observation suggests that the six ADRI components are either endogenous, uncodable, or irrelevant. "Shares not deposited" and "vote by mail" are probably endogenous, as discussed in the previous paragraph. "Oppressed minorities" is uncodable, as discussed above in Part III.D. The other three components are presumably irrelevant:

– "percentage of shares to call a meeting" is troubling empirically because it works better with the below-*or-equal-to*-the-median (10%) cut-off than with the below-the-median cut-off, although there is no theoretical argument why 10% would be the magic number – the lower cut-off should create a stronger variable. And the only time "percentage of shares …" came up significant in the disaggregated regressions was in its optional rule variant, i.e., as a proxy for charter freedom rather than for substantive legal protection.[157]

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[155] In as far as stock exchange rules are relevant in the coding, it needs to be asked why some countries' stock exchanges adopt better rules than others'. In this regard, however, first work has already been done. Coffee 2001 has argued that France and Germany stifled their stock exchanges through overregulation, while the UK and the US gave their exchanges the necessary freedom for self-regulation.

[156] Pistor 2000 did so for a sample of 22 transition economies for the years 1992 to 1998, and Pistor et al. 2000 found no significant effect of the ADRI on stock market capitalization with these data. However, it is not clear to what extent the coding in Pistor 2000 avoids the pitfalls identified in the present paper (the appendices to Pistor 2000, Pistor et al. 2000 show some extra detail as compared to La Porta et al. 1998, but not nearly as much as I identify as being necessary).

[157] At least for the US, it is really only a proxy because as discussed above in Part III.F.1, US corporations do not usually include extraordinary meeting rules into their charter, even though they are legally permitted to do so.

– "cumulative voting" and "preemptive rights" are neither the default rule nor often used in either of the world's two most developed financial markets, the US, and, before the 2nd EC Company Law Directive forced the introduction of preemptive rights in 1980, the UK. In other developed financial markets where cumulative voting is the default rule, corporations routinely exclude it in their charter (e.g., Japan).

VII. IMPLICATIONS AND CONCLUSION

Whether or not the properly (re-)coded ADRI validly measures legal shareholder protection, this paper has shown that the non-recoded ADRI from La Porta et al. 1998 was systematically incorrectly measured. Hence, the numerous empirical studies of the last 10 years that have used the non-recoded ADRI as a measure of investor protection may have obtained erroneous results, and may have to be revisited. For example, La Porta et al. 1999a collected detailed data on share ownership of listed firms in 27 countries, and found that dispersed ownership was significantly more frequent in countries with "very good shareholder protection", as measured by the non-recoded ADRI. However, when I repeated their tests-of-means with the recoded ADRIs, I did not find significant differences between countries with high and low recoded ADRI values, respectively.[158] Naturally, this does not mean that shareholder protection does not matter for ownership dispersion. But it means that La Porta et al. 1999a's evidence for this connection was flawed.

By contrast, it would be incorrect to generalize from this paper and conclude that the legal data collected in other studies, such as Djankov et al. 2003, 2006, La Porta et al. 2006a, suffer from the same variable ambiguities and systematic measurement error as La Porta et al. 1998. This would obviously have to be judged on a case-by-case basis, keeping in mind that La Porta et al. 1996, 1998 was a pioneering study and therefore

[158] The only exception were the tests using the recoded *revised* ADRI 1997 when I separated the countries literally as in La Porta et al. 1999a, with countries above the ADRI median in one group, and countries at or below the ADRI median in another. In this case, the differences were still significant for three out of four groups of firms/cutoffs. However, in this scenario only 5 countries were in the high-ADRI group, and 22 in the other. When I separated the countries into one group above or at the median, and one group below the median, the group sizes were 15 and 12, respectively, and differences in means were insignificant.

more susceptible to the many pitfalls of comparative legal work than later, more refined studies.[159]

In this connection, one question remains: Why did most of the coding errors in La Porta et al. 1998 and Djankov et al. 2005 go in one direction, i.e., higher values in Common Law and lower values in Civil Law jurisdictions? The answer is necessarily speculative, but the most likely reason for the biased results is the use of English-language secondary sources (cf. the appendix of La Porta et al. 1996). The English-speaking (and, often, Common-Law-trained) lawyers writing these materials may have more trouble understanding and describing law from systems operating in a language other than English, which includes all the Civil Law jurisdictions (except the Philippines) and no Common Law jurisdiction. They may recognize familiar mechanisms in Common Law countries and report those, but not slightly different formulations of the same rule in countries with a (different tradition of) legal terminology. Such problems of translation and understanding are only too familiar to legal comparatists (e.g., Grossfeld 2005 [1996]). Consider the coding of the "percentage of shares to call a meeting" variable. This is a simple percentage for which language problems hardly arise, and the data in La Porta et al. 1998 and Djankov et al. 2005 matches mine almost perfectly. By contrast, elsewhere risks of misunderstandings abound. As an example, consider "preemptive rights", which are, in usual Anglo-American legal terminology, rights of current shareholders to participate pro-rata in any new issue of shares by the corporation.[160] In French legal terminology, however, "droits de préemption" mean the rights of first refusal to buy from current shareholders.[161] Preemptive rights in the usual Anglo-

[159] See above n. 8 and accompanying text.

[160] See Black's Law Dictionary 2004, p. 1216 ("preemptive right").

[161] See Cornu 2000, p. 659 ("Préemption (droit de)"). Actually, the term "rights of pre-emption" is used in the same way in some Common Law jurisdictions, too, cf. for Australia Ford et al. 2005, ¶ 21.400; for Ireland Forde 1999 ¶¶ 9-32, 9-40; for Kenya Kirika 1991, at 12. This is all the more confusing because some English authors also employ the term "pre-emption rights" for preemptive rights; cf, e.g., Edwards 1999, p. 84.

American sense are called "droit de préférence".[162] This might explain why La Porta et al. 1998 overlooked preemptive rights in Belgium[163] (Cools 2006).

It remains that La Porta et al. 1998 was a path-breaking study.[164] In the exiting field of research that it opened, better data gathering and coding techniques will hopefully avoid its shortcomings in the future. The coding guidelines developed in this paper may offer some help in that direction.

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[162] Cf. Art. L. 225-132 Commercial Code (France).

[163] Art. 34*bis* §1 para. 1-2 Consolidated Companies Act (1997) (Belgium).

[164] One of the most accomplished comparative corporate lawyers acknowledged this in the following words (Vagts 2002, p 604): "Orthodox comparative lawyers would have shrunk back from such an ambitious endeavor, and if they had attempted, it would have wound up with a tome of 2000 pages and 6000 footnotes filled with caveats and qualifications that would have rendered it unreadable."

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Table 1 – List of Variables

(Sources for values of recoded variables [defined in grey-shaded rows] are described in detail in the data documentation available at http://www.law.harvard.edu/academics/graduate/sjd_candidates/holgerspamann/)

a) ADRI components

Proxy/vote by mail	
proxfirm	"Equals one if the company law or commercial code allows shareholders to mail their proxy vote to the firm, and zero otherwise." Source: La Porta et al. 1998, 1999b
mailvote	"Equals one if the law explicitly mandates or sets as a default rule that: (a) proxy solicitations paid by the company include a form allowing shareholders to vote on the items on the agenda; (b) a proxy form to vote on the items on the agenda accompanies notice to the meeting; or (c) shareholders vote by mail on the items on the agenda (i.e., postal ballot); and zero otherwise." Source: Djankov et al. 2005
proxvote	Equals one if shareholders can either vote by mail ('ballot by mail'), or the firm is under an obligation to accept proxies with directions how to vote them (the assumption is that no such obligation exists unless it is explicitly stated in the statutes, the literature, or an opinion by a local lawyer).
proxball	Same as proxvote, but the firm must also provide a voting form on which the shareholder can mark his choices for each resolution to be voted.
proxcard	Same as proxball, or: If the firm (or its management as management) solicits proxies, the legal proxy rules require that they provide the shareholder with a ballot card that gives them the possibility to approve or disapprove.
SX rules	Same as proxcard, but counting also stock exchange rules.
Shares not blocked/deposited	
noblock	"Equals one if the company law or commercial code does not allow firms to require that shareholders deposit their shares prior to a general shareholders meeting, thus preventing them from selling those shares for a number of days, and zero otherwise." Source: La Porta et al. 1998, 1999b
noblockd	Same, with the clarification that the prohibition is addressed to the firm's management, i.e., a value of 1 is awarded even if the corporate charter can provide for a different rule.
noblexplm	"Equals one if the law does not require, nor explicitly permits companies to require, shareholders to deposit with the company or another firm any of their shares prior to a general shareholders meeting." Source: Djankov et al. 2005
(recoded)	Same.
practice	Data on occurrence of share-blocking in practice. Source: ADP 2006 and ISS 2005.

Cumulate, Cumulative voting	"Equals one if the company law or commercial code allows shareholders to cast all their votes for one candidate standing for election to the board of directors (cumulative voting) or if the company law or commercial code allows a mechanism of proportional representation in the board by which minority interests may name a proportional number of directors to the board, and zero otherwise." Source: La Porta et al. 1998, 1999b.
	"Equals one if the law explicitly mandates or sets as a default rule that shareholders owning 10% or less of the capital may cast all their votes for one board of directors or supervisory board candidate (cumulative voting) or if the law explicitly mandates or sets as a default rule a mechanism of proportional representation in the board of directors or supervisory board by which shareholders owning 10% or less of the capital stock may name a proportional number of directors to the board, and zero otherwise." Source: Djankov et al. 2005.
(recoded)	Same.
Oppmin, Oppressed minority	
(original, Table 2)	"Equals one if the company law or commercial code grants minority shareholders either a judicial venue to challenge the decisions of management or of the assembly 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. The variable equals zero otherwise. Minority shareholders are defined as those shareholders who own 10% of share capital or less." La Porta et al. 1998, 1999b (original values)
(recoded)	Same.
(revised, Table 3)	"Index of the difficulty faced by (minority) shareholders owning 10% or less of the capital stock in challenging (i.e. by either seeking damages or having the transaction rescinded) resolutions that benefit controlling shareholders and damage the company. Equals one if minority shareholders may challenge a resolution of both the shareholders and the board (of directors or, if available, of supervisors) if it is unfair, prejudicial, oppressive, or abusive; equals onehalf if shareholders are able to challenge either a resolution of the shareholders or of the board (of directors or, if available, of supervisors) if it is unfair, prejudicial, or oppressive; equals zero otherwise." Source: Djankov et al. 2005
Preemptive rights	
preempt	"Equals one when the company law or commercial code grants shareholders the first opportunity to buy new issues of stock, and this right can be waived only by a shareholders' vote; equals zero otherwise." Source: La Porta et al. 1998, 1999b. "Equals one when the law or listing rules explicitly mandate or set as a default rule that shareholders hold the first opportunity to buy new issues of stock; equals zero otherwise." Source: Djankov et al. 2005
prevote	Completes the preempt definition in the sense that it equals one even if preemptive rights can be waived by a simple majority vote, and includes rules that require that all new issues of shares be approved by a shareholder vote (by simple majority).
preright	Completes the preempt definition in the sense that it equals one only if the waiver is subject to special conditions, such as supermajority rules or substantive conditions.

	Also equals one if shares cannot be issued except with supermajority/-quorum approval in the first place.
preexpl	Completes LLSV's preright definition in the sense that it equals one if the law makes special mention of shareholders' first opportunity to buy shares, even if the waiver requirements are not special and not stricter than those for share issues; inversely, no points are awarded for rules that merely require shareholder approval for any issue of shares, regardless of the subscriber.
ESM%, percentage of shares to call a meeting	"The minimum percentage of ownership of share capital that entitles a shareholder to call for an extraordinary shareholders' meeting." Source: La Porta et al. 1998, 1999b. "The minimum percentage of share capital [or voting power] that the law mandates or sets as a default rule as entitling a single shareholder to call a shareholders' meeting (directly or through the court)." Source: Djankov et al. 2005.
(recoded)	Same.
<= median	Equals 1 if ESM% is below or equal to 10%.
< median	Equals 1 if ESM% is below 10%.

b) Aggregate ADRI values

ESM% < 10, < median, (below-the-median)	A modification of any ADRI variant whereby the binary "< median ESM%" component is substituted for the corresponding "<= median ESM%" component in the principal index.
Original ADRI	"An index aggregating the shareholder rights we labeled as ''antidirector rights.'' The index is formed by adding 1 when (1) the country allows shareholders to mail their proxy vote to the firm, (2) shareholders are not required to deposit their shares prior to the general shareholders' meeting, (3) cumulative voting or proportional representation of minorities in the board of directors is allowed, (4) an oppressed minorities mechanism is in place, (5) the minimum percentage of share capital that entitles a shareholder to call for an extraordinary shareholders' meeting is less than or equal to 10 percent (the sample median), or (6) shareholders have preemptive rights that can be waived only by a shareholders' vote. The index ranges from zero to six." Source: La Porta et al. 1998, 1999b.
Recoded Original ADRIs	Aggregates 1997 values as in the Original ADRI definition, with the following clarifications:
ADRI97bestcorr (adri97bc)	Aggregates the 1997 values coded from default rules according to variable definitions in La Porta et al. 1998 and most highly correlated with the values reported in that article. These components are proxvote, noblock, cumulate, oppmin, preexpl, <= median (all default rules).
ADRI97def	Aggregates 1997 values for default rules of proxvote, noblock, cumulate, oppmin, prevote, <= median.
ADRI97man	Aggregates 1997 values for mandatory rules of proxvote, noblock, cumulate, oppmin, prevote, <= median.
ADRI97opt	Aggregates 1997 values for optional rules of proxvote, noblock, cumulate, oppmin, prevote, <= median.

ADRI97_US	Aggregates 1997 values for optional rules of cumulate and <= median, and for default rules of proxcard, noblock, oppmin, and prevote.
Revised ADRI, Djankov et al. 2005	An index created as the Original ADRI, but with the revised definitions for individual variables in Djankov et al. 2005. Source: Djankov et al. 2005.
5-pt ADRI	As the revised ADRI by Djankov et al. 2005, but omitting the oppmin component.
< median	As 5-pt ADRI, but substituting < median for <= median.
Recoded Revised ADRIs 1997, 2005	An index composed of the 5 recoded components for 1997 and 2005, respectively: default rules for SX rules (except where proxcard is explicitly marked in the table), cumulate, prevote (except where preright or preexpl is explicitly marked in the table), and <= median, and the semi-mandatory component noblexplm.
3-component index	An index composed only of the 2005 default values for cumulate, prevote, and <= median, i.e., the recoded revised ADRI 2005 without SX rules and noblexplm.

c) Additional Shareholder Protection Variables

one share – one vote, 1Sh1Vote	"Equals one if the company law or commercial code of the country requires that ordinary shares carry one vote per share, and zero otherwise. Equivalently, this variable equals one when the law prohibits the existence of both multiple-voting and nonvoting ordinary shares and does not allow firms to set a maximum number of votes per shareholder irrespective of the number of shares owned, and zero otherwise." Source: La Porta et al. 1998, 1999b.
(recoded)	As La Porta et al. 1998, with the following clarifications: "Ordinary shares" means all shares that do not carry a preference of any kind, neither for dividends nor for liquidation. For voting rights, a literal interpretation is adopted, under which the equal number of votes, not the proportionality of votes and cash-flow rights is decisive.
proportional	As the previous definition, but strict proportionality between voting and cash-flow rights is required.
Mandatory dividend, mandivid	"Equals the percentage of net income that the company law or commercial code requires firms to distribute as dividends among ordinary stockholders. It takes a value of zero for countries without such a restriction." Source: La Porta et al. 1998, 1999b.
no waiver	Completes the cited definition in the sense that the shareholder assembly cannot waive the right to the dividend
waiver	Completes the cited definition in the sense that the shareholder assembly can waive the right to the dividend.

d) Dependent Variables

(ownership)	"Average percentage of common shares not owned by the top three shareholders in the ten largest non-financial, privately-owned domestic firms in a given country. A

concentraction	firm is considered privately-owned if the State is not a known shareholder in it. Source: La Porta et al. (1999), Hartland- Peel (1996) for Kenya, Bloomberg and various annual reports for Ecuador, Jordan, and Uruguay." Source: La Porta et al. 2006b
externalcap/gnp, external cap to GNP	"The ratio of the stock market capitalization held by minorities to gross national product for 1994." Source: La Porta et al. 1997.
listfirms/pop, listed firms per capita	Listed domestic companies per capita 1994. Source: World Bank 2006 and (Taiwan) La Porta et al. 1997.
IPOs/pop, IPOs per capita	"Ratio of the number of initial public offerings of equity in a given country to its population (in millions) in 1994". Source: La Porta et al. 1997
marketcap/gdp, stock market cap to GDP	Average of market capitalization of listed companies (% of GDP) for 1999 to 2003. Source: World Bank 2006 and (Taiwan) Djankov et al. 2005
lnlistfirms/pop, ln (listed firms per capita)	Ln of (average number of listed domestic companies per capita 1999-2003). Source: World Bank 2006 and (Taiwan) Djankov et al. 2005
IPOvalue/gdp, IPOs to GDP	"Average of the ratio of the equity issued by newly-listed firms in a given country (in thousands) to its gross domestic product (in millions) over the period 1996-2000. Source: Securities Data Corporation, World Bank (2001)." Source: La Porta et al. 2006b
block premia	"The block premia is computed taking the difference between the price per share paid for the control block and the exchange price two days after the announcement of the control transaction, dividing by the exchange price and multiplying by the ratio of the proportion of cash flow rights represented in the controlling block." Source: Dyck and Zingales (2004). I use the country's sample median.

e) Control Variables

Legal Origin, LegOrig	Legal origin of a country's legal system, as classified by La Porta et al. 1998 (Civil Law: French, German, Scandinavian; Common Law).
GNP per capita 1994 (log)	Logarithm of the Gross National Product per capita in 1994. Source: La Porta et al. 1999.
GNP 1994 (log)	"Logarithm of the Gross National Product in 1994." Source: La Porta et al. 1997.
Gini coefficient	Gini coefficient for income inequality in each country. Compiled from World Bank 1997, 2001, 2006; I use the measurement closest to 1994. Taiwan data from Deininger & Squire 1996 (average value for 1964-1993; the standard deviation for all measurements in this time period was 1.53).
Accounting	"Index created by examining and rating companies' 1990 annual reports on their inclusion or omission of 90 items. These items fall into seven categories (general information, income statements, balance sheets, funds flow statement, accounting standards, stock data, and special items). A minimum of three companies in each country were studied. The companies represent a cross section of various industry

	groups; industrial companies represented 70 percent, and financial companies represented the remaining 30 percent." Source: La Porta et al. 1998, 1999b.
Rule of Law	"Assessment of the law and order tradition in the country produced by the country risk rating agency International Country Risk (ICR). Average of the months of April and October of the monthly index between 1982 and 1995. Scale from zero to 10, with lower scores for less tradition for law and order (we changed the scale from its original range going from zero to six)." Source: La Porta et al. 1998, 1999b.
Creditor Rights Index (CRI)	"An index aggregating different creditor rights. The index is formed by adding 1 when (1) the country imposes restrictions, such as creditors' consent or minimum dividends to file for reorganization; (2) secured creditors are able to gain possession of their security once the reorganization petition has been approved (no automatic stay); (3) secured creditors are ranked first in the distribution of the proceeds that result from the disposition of the assets of a bankrupt firm; and (4) the debtor does not retain the administration of its property pending the resolution of the reorganization. The index ranges from zero to four." Source: La Porta et al. 1998, 1999b, and revised version from Djankov et al. 2005b (of which I use 1994 values).
Legal reserve	"The minimum percentage of total share capital mandated by corporate law to avoid the dissolution of an existing firm. It takes a value of zero for countries without such a restriction." Source: La Porta et al. 1998, 1999b.
GDP Growth	"Average annual percentage growth of per capita gross domestic product for the period 1970-1993." Source: La Porta et a. 1997.
GDP per capita 2003 (Log)	ln of (GDP per capita 2003) (2002 for Zimbabwe) (constant 2000 US$). Source: World Bank Development Indicators (Taiwan data from IMF 2005).
Duration to collect a check	in days, from Djankov et al. 2003
ASDI	Anti-self-dealing index. Source: Djankov et al. 2005.
Disclosure	Index of securities disclosure, from La Porta et al. 2006a/b
Burden of proof	Index of securities liability, from La Porta et al. 2006a/b

Table 2a - 1997 values (ADRI components). Values from La Porta et al. 1998 in white, recoded values in light blue [grey] (dark blue for definitions from Djankov et al. 2005 and <median). Default rules unless otherwise noted.

Country	LegOrig	proxfirm	proxvote	proxcard	proxball	SX rules	noblock	noblockd	(mandator	noblexplm	practice	cumulate	(optional)	opminmec	preempt	prevote	preright	preexpl	ESM%	<=median	<median
Argentina	F	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1	1	5	5	1
Australia	CL	1	1	0	0	1	1	1	0	1	1	0	0	1	1	0	0	0	5	5	1
Austria	Ger	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1	1	1	5	5	1
Belgium	F	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	1	1	20	20	0
Brazil	F	0	0	0	0	0	1	1	0	0	1	0	1	1	1	0	1	1	5	5	1
Canada	CL	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	0	0	5	5	1
Chile	F	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	10	10	1
Colombia	F	0	0	0	0	0	1	1	0	1	1	1	1	1	0	1	0	1	25	25	0
Denmark	Sc	0	0	0	0	0	1	1	0	1	1	0	0	1	0	1	1	1	10	10	1
Ecuador	F	0	0	0	0	0	1	1	1	1	1	0	0	1	0	0	1	1	25	25	0
Egypt	F	0	0	0	0	0	1	1	0	1	0	0	0	1	0	1	1	1	10	10	1
Finland	Sc	0	0	0	0	0	1	1	1	1	1	0	0	1	0	1	1	1	10	10	1
France	F	1	1	1	1	1	0	1	0	0	0	0	0	1	0	1	1	1	10	10	1
Germany	Ger	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	1	5	5	1
Greece	F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	5	5	1
Hong Kong	CL	1	0	0	0	0	1	1	0	1	1	0	0	1	1	1	1	0	10	10	1
India	CL	0	0	0	0	0	1	1	1	1	1	1	0	1	1	1	1	1	10	10	1
Ireland	CL	0	0	0	0	1	1	1	1	1	1	0	0	0	1	1	1	1	10	10	1
Israel	CL	0	0	0	0	0	1	1	0	1	1	0	0	1	1	1	0	0	10	10	1
Italy	F	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	20	20	0
Japan	Ger	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	3	3	1
Jordan	F	0	0	0	0	0	1	1	1	1	1	0	0	0	0	1	1	0	25	15	0
Kenya	CL	0	0	0	0	0	1	1	0	1	1	0	0	0	1	1	0	0	0	10	10	1
Malaysia	CL	0	0	1	0	0	1	1	0	1	1	0	0	1	1	1	1	0	1	10	10	1
Mexico	F	0	0	0	0	0	0	1	0	1	1	0	0	1	0	0	1	1	1	33	33	0
Netherlands	F	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	1	1	10	10	1
New Zealand	CL	1	1	0	0	0	1	1	0	1	1	0	0	1	1	1	0	1	1	5	5	1
Nigeria	CL	0	0	0	0	0	1	1	0	1	1	0	0	0	1	1	0	1	0	10	10	1
Norway	Sc	1	0	0	0	0	1	1	1	1	1	0	0	1	0	1	1	1	1	10	10	1
Pakistan	CL	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	10	10	1
Peru	F	0	0	0	0	0	1	1	1	1	1	1	1	1	0	1	1	1	1	20	20	0
Philippines	F	0	0	1	0	0	1	1	1	1	1	1	1	1	0	1	1	1	1	(open)	NA	0
Portugal	F	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	1	1	1	5	5	1
Singapore	CL	0	0	1	0	0	1	1	0	1	1	0	0	1	1	1	1	1	1	10	10	1
South Africa	CL	1	1	1	0	1	1	1	0	1	1	0	0	0	1	1	1	0	0	5	5	1
South Korea	Ger	0	0	1	0	0	0	1	1	1	1	0	0	1	1	1	0	1	1	5	5	1
Spain	F	0	0	0	0	0	0	1	0	0	1	1	1	1	1	1	1	1	1	5	5	1
Sweden	Sc	0	0	0	0	0	1	1	1	1	1	0	0	1	0	1	1	1	1	10	10	1
Switzerland	Ger	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1	10	10	1
Taiwan	Ger	0	0	0	0	0	0	1	0	1	1	1	1	1	1	0	1	1	1	3	3	1
Thailand	CL	0	0	0	0	0	1	1	1	1	1	1	1	1	0	1	0	1	1	0	20	20	0
Turkey	F	0	1	1	1	1	1	0	0	0	0	0	0	0	0	1	0	1	1	0	10	10	1
UK	CL	1	0	0	0	1	1	1	0	1	1	0	0	0	1	1	1	1	1	0	10	10	1
USA	CL	1	0	1	0	1	1	1	0	1	1	1	0	1	1	1	0	0	0	0	10	NA	0
Uruguay	F	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1	1	1	0	20	20	0
Venezuela	F	0	0	0	0	0	1	1	1	1	1	0	0	1	0	1	0	0	0	0	20	20	0
mean (median)	overall	0.20	0.15	0.24	0.09	0.20	0.70	0.83	0.35	0.70	0.74	0.28	0.22	0.76	0.52	0.96	0.57	0.85	0.72	0.76	(10)	(10)	0.74	0.30
	CL	0.44	0.25	0.31	0.06	0.38	1.00	1.00	0.31	1.00	1.00	0.31	0.13	0.69	0.94	1.00	0.50	0.69	0.44	0.50	(10)	(10)	0.88	0.25
	F	0.05	0.10	0.20	0.10	0.10	0.55	0.65	0.30	0.45	0.55	0.30	0.30	0.75	0.30	0.90	0.65	0.95	0.85	0.90	(12.5)	(12.5)	0.50	0.25
	Ger	0.00	0.17	0.33	0.17	0.17	0.17	0.83	0.33	0.50	0.50	0.33	0.33	0.83	0.50	1.00	0.33	0.83	0.83	0.83	(5)	(5)	1.00	0.83
	Sc	0.25	0.00	0.00	0.00	0.00	1.00	1.00	0.75	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.75	1.00	1.00	1.00	(10)	(10)	1.00	0.00
	Civil	0.07	0.10	0.20	0.10	0.10	0.53	0.73	0.37	0.53	0.60	0.27	0.27	0.80	0.30	0.93	0.60	0.93	0.87	0.90	(10)	(10)	0.67	0.33
correlation with original values			0.55	0.24	0.24	0.59		0.44	0.38	0.69			0.72	0.35		0.22		0.48	0.33	0.76		0.98	0.94	0.37
(correlation with practice / <=median)							0.58	0.64	0.43	0.79														0.39
Tests of means																								
	t-statistics																							
CL v. Civil		3.30	1.35	0.84	-0.42	2.32	3.66	2.36	-0.36	3.66	3.19	0.32	-1.10	-0.84	5.08	1.05	-0.64	-2.29	-3.38	-3.31	-1.32	-1.18	1.54	-0.57
CL v. F		3.05	1.19	0.76	-0.39	2.03	3.52	2.85	0.08	4.30	3.52	0.08	-1.25	-0.41	4.89	1.30	-0.89	-2.18	-2.82	-2.89	-2.36	-2.16	2.51	0.00
CL v. Ger		2.06	0.40	-0.09	-0.73	0.91	8.53	1.71	-0.09	3.81	3.81	-0.09	-1.11	-0.66	2.62	0.00	0.67	-0.66	-1.69	-1.42	2.61	2.50	-0.88	-2.78
CL v. Sc		0.66	1.10	1.28	0.49	1.47	0.00	0.00	-1.62	0.00	0.00	1.28	0.72	-1.28	7.35	0.00	-0.87	-1.28	-2.15	-1.90	-0.34	-0.35	-0.72	1.10
	significance level																							
CL v. Civil		1%	19%	41%	68%	3%	1%	3%	73%	1%	1%	75%	28%	41%	1%	31%	53%	3%	1%	1%	20%	25%	14%	57%
CL v. F		1%	25%	46%	70%	6%	1%	1%	94%	1%	1%	94%	23%	69%	1%	21%	38%	4%	1%	1%	3%	4%	2%	NA
CL v. Ger		6%	70%	93%	48%	38%	1%	11%	93%	1%	1%	93%	29%	52%	2%	NA	51%	52%	11%	18%	2%	3%	39%	2%
CL v. Sc		52%	29%	22%	64%	16%	NA	NA	13%	NA	NA	22%	49%	22%	1%	NA	40%	22%	5%	8%	74%	73%	49%	29%

Table 2b - 1997 values (aggreggate ADRIs and add'l shareholder protection variables). Values from La Porta et al. 1998 in white, recoded values in light blue [grey] (dark blue for definitions from Djankov et al. 2005 and <median). Default rules unless otherwise noted.

Country	LegOrig	original ADRI	(below-media	ADRI97bestcorr	ADRI97def			preright			ADRI97man	ADRI97opt	ADRI97_US	revised ADRI	(below-median)	1Sh1Vote		(proportion	mandivid	no waiver	(mandator	waiver	(mandator
Argentina	F	4	4	3	3	3	3	3	3	3	3	4	4	2	2	0	0	0	0	0	0	0	0
Australia	CL	4	4	4	4	3	3	4	3	3	3	6	4	3	3	0	0	0	0	0	0	0	0
Austria	Ger	2	2	4	4	4	4	4	4	4	3	5	5	2	2	0	0	0	0	0	0	0	0
Belgium	F	0	0	2	2	3	2	2	3	2	2	5	5	2	2	0	0	0	0	0	0	0	0
Brazil	F	3	3	5	5	5	5	5	5	5	4	5	4	3	3	1	0	0	0	50	0	50	0
Canada	CL	5	5	4	4	4	4	4	4	4	4	5	4	3	3	0	0	0	0	0	0	0	0
Chile	F	5	4	5	5	5	5	5	5	5	5	5	5	4	3	1	1	1	30	30	30	30	30
Colombia	F	3	3	4	4	4	4	3	3	3	2	5	5	3	3	0	1	0	50	0	0	50	50
Denmark	Sc	2	1	4	4	4	4	4	4	4	3	6	5	3	2	0	0	0	0	0	0	0	0
Ecuador	F	2	2	2	2	2	2	2	2	2	2	6	4	2	2	0	0	0	50	50	50	50	50
Egypt	F	2	1	4	4	4	4	4	4	4	3	4	4	3	2	0	0	0	0	0	0	0	0
Finland	Sc	3	2	4	4	4	4	4	4	4	4	6	5	3	2	0	0	0	0	(unspecified)		(unspecified)	
France	F	3	2	5	5	5	5	5	5	5	4	5	5	3	2	0	0	0	0	0	0	0	0
Germany	Ger	1	1	4	4	4	4	4	4	4	3	4	4	2	2	0	0	0	0	0	0	50	0
Greece	F	2	2	3	3	3	3	3	3	3	2	4	3	2	2	1	1	1	35	0	0	35	35
Hong Kong	CL	5	4	4	4	4	4	3	3	3	3	6	5	3	2	0	0	0	0	0	0	0	0
India	CL	5	4	4	4	4	4	4	4	4	4	5	4	3	2	0	1	1	0	0	0	0	0
Ireland	CL	4	3	4	4	4	4	4	4	4	3	5	4	4	3	0	0	0	0	0	0	0	0
Israel	CL	3	2	3	3	3	3	3	3	3	2	6	4	2	1	0	1	1	0	0	0	0	0
Italy	F	1	1	2	2	2	2	2	2	2	2	3	3	1	1	0	1	0	0	0	0	0	0
Japan	Ger	4	4	5	5	5	5	5	5	5	4	6	5	4	4	1	1	1	0	0	0	0	0
Jordan	F	1	1	2	3	3	3	3	3	3	3	4	4	2	2	1	1	1	0	0	0	0	0
Kenya	CL	3	2	3	3	3	3	3	3	3	2	5	3	2	1	0	0	0	0	0	0	0	0
Malaysia	CL	4	3	4	4	5	4	3	4	3	3	6	6	4	3	1	0	0	0	0	0	0	0
Mexico	F	1	1	2	2	2	2	2	2	2	1	5	4	2	2	0	0	0	0	0	0	0	0
Netherlands	F	2	1	4	4	4	4	4	4	4	3	5	4	2	1	0	0	0	0	100	0	100	0
New Zealand	CL	4	4	5	5	4	4	5	4	4	2	6	5	3	3	0	0	0	0	0	0	0	0
Nigeria	CL	3	2	3	4	4	4	3	3	3	2	4	3	3	2	0	1	0	0	0	0	0	0
Norway	Sc	4	3	4	4	4	4	4	4	4	4	6	5	3	2	0	0	0	0	0	0	0	0
Pakistan	CL	5	4	5	5	5	5	5	5	5	5	5	4	4	3	1	1	1	0	0	0	0	0
Peru	F	3	3	4	4	4	4	4	4	4	4	6	5	3	3	1	1	0	0	0	0	0	0
Philippines	F	3	3	4	4	5	4	4	5	4	3	6	6	4	4	0	0	0	0	0	0	(unspecified)	
Portugal	F	3	3	3	3	3	3	3	3	3	3	3	3	2	2	0	0	0	0	50	0	50	0
Singapore	CL	4	3	4	4	5	4	4	5	4	3	6	6	4	3	1	0	0	0	0	0	0	0
South Africa	CL	5	5	4	5	5	4	4	4	3	4	5	5	4	4	0	0	0	0	0	0	0	0
South Korea	Ger	2	2	4	4	5	4	4	5	4	3	5	5	4	4	1	1	0	0	0	0	0	0
Spain	F	4	4	5	5	5	5	5	5	5	4	6	5	3	3	0	0	0	0	0	0	0	0
Sweden	Sc	3	2	4	4	4	4	4	4	4	4	6	5	3	2	0	0	0	0	(unspecified)		(unspecified)	
Switzerland	Ger	2	1	3	3	3	3	3	3	3	3	6	4	2	1	0	0	0	0	0	0	0	0
Taiwan	Ger	3	3	5	5	5	5	5	5	5	4	4	4	4	4	0	0	0	0	0	0	0	0
Thailand	CL	2	2	3	4	4	4	4	4	4	3	4	4	3	3	0	0	0	0	0	0	0	0
Turkey	F	2	1	4	4	4	4	3	3	3	3	4	4	3	2	0	0	0	0	0	0	0	0
UK	CL	5	4	4	4	4	4	4	4	4	3	5	4	4	3	0	0	0	0	0	0	0	0
USA	CL	5	4	2	2	3	2	2	3	2	1	6	5	2	2	0	0	0	0	0	0	0	0
Uruguay	F	2	2	2	2	2	2	2	2	2	2	3	3	1	1	1	1	1	20	0	0	20	20
Venezuela	F	1	1	2	2	2	2	2	2	2	2	6	4	1	1	0	0	0	0	25	25	25	25
mean (median)	overall	3.02	2.57	3.65	3.74	3.83	3.67	3.61	3.70	3.54	3.02	5.07	4.37	2.80	2.37	0.24	0.28	0.17	4.02	6.93	2.39	10.70	4.88
	CL	4.13	3.44	3.75	3.94	4.00	3.75	3.69	3.75	3.50	2.94	5.31	4.38	3.19	2.56	0.19	0.25	0.19	0.00	0.00	0.00	0.00	0.00
	F	2.35	2.10	3.35	3.40	3.50	3.40	3.30	3.40	3.30	2.85	4.70	4.20	2.40	2.15	0.30	0.35	0.20	9.25	15.25	5.25	21.58	11.05
	Ger	2.33	2.17	4.17	4.17	4.33	4.17	4.17	4.33	4.17	3.33	5.00	4.50	3.00	2.83	0.33	0.33	0.17	0.00	0.00	0.00	8.33	0.00
	Sc	3.00	2.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	3.75	6.00	5.00	3.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Civil	2.43	2.10	3.60	3.63	3.73	3.63	3.57	3.67	3.57	3.07	4.93	4.37	2.60	2.27	0.27	0.30	0.17	6.17	10.89	3.75	17.04	7.78
correlation with original values			0.93	0.53	0.53	0.49	0.47	0.46	0.43	0.40	0.46	0.34	0.28	0.60	0.45		0.55	0.55		0.20	0.59	0.47	0.96
(correlation with practice / <=median)																							
Tests of means																							
	t-statistics																						
CL v. Civil		5.07	3.95	0.49	1.03	0.90	0.41	0.41	0.28	-0.23	-0.44	1.33	0.03	2.24	1.09	-0.59	-0.35	0.17	-1.65	-1.80	-1.33	-2.59	-2.04
CL v. F		4.74	3.52	1.17	1.61	1.51	1.08	1.16	1.08	0.61	0.26	2.03	0.61	2.84	1.51	-0.76	-0.63	-0.09	-2.11	-2.21	-1.55	-3.05	-2.49
CL v. Ger		3.83	2.49	-1.13	-0.62	-0.92	-1.24	-1.28	-1.70	-1.89	-0.92	0.86	-0.32	0.46	-0.58	-0.70	-0.37	0.11	0.00	0.00	0.00	-1.71	0.00
CL v. Sc		2.15	2.58	-0.63	-0.16	0.00	-0.72	-0.77	-0.72	-1.34	-1.56	-1.91	-1.38	0.49	1.35	0.91	1.10	0.91	0.00	0.00	0.00	0.00	0.00
	significance level																						
CL v. Civil		1%	1%	63%	31%	38%	69%	69%	78%	83%	66%	20%	98%	4%	29%	56%	73%	87%	11%	8%	20%	2%	5%
CL v. F		1%	1%	26%	12%	14%	29%	26%	29%	55%	80%	6%	55%	1%	14%	46%	54%	93%	5%	4%	14%	1%	2%
CL v. Ger		1%	3%	28%	54%	37%	23%	22%	11%	8%	38%	40%	76%	65%	57%	50%	72%	92%	NA	NA	NA	11%	NA
CL v. Sc		5%	2%	54%	88%	NA	49%	46%	49%	20%	14%	8%	19%	64%	20%	38%	29%	38%	NA	NA	NA	NA	NA

Table 3 - 2005 values. **Values from Djankov et al. 2005 in white (grey for uncodable "oppressed minority" values), recoded values in light blue [grey] (dark blue for <median).**

Country	LegOrig	mailvote	SX rules	Law only	noblock		practice	cumulate		oppmin	preempt	prevote	preright	preexpl	ESM%		<=median	<median	ADRI: Djankov et al. 2005 ADRI	5pt-ADRI	<median	ADRI: recoded revised ADRI 2005 (5-pt) using … *prevote*	*preright*	*preexpl*	*proxcard*	<median
Argentina	F	0	0	0	0	0	0	1	0	0	1	1	1	1	5	5	1	1	3	3	3	2	2	2	2	2
Australia	CL	1	1	0	1	1	1	0	0	1	0	0	0	0	5	5	1	1	4	3	3	3	3	3	2	3
Austria	Ger	0	0	0	0	0	0	0	0	0.5	1	1	1	1	5	5	1	1	2.5	2	2	2	2	2	2	2
Belgium	F	1	1	1	0	0	0	0	0	0	1	1	1	1	20	20	0	0	2	2	2	2	2	2	2	2
Brazil	F	1	0	0	0	0	1	1	1	1	1	1	1	1	5	5	1	1	5	4	4	3	3	3	3	3
Canada	CL	1	1	1	1	1	1	0	0	1	0	0	0	0	5	5	1	1	4	3	3	3	3	3	3	3
Chile	F	0	0	0	1	1	1	1	1	0	1	1	1	1	10	10	1	0	4	4	3	4	4	4	4	3
Colombia	F	0	0	0	1	1	1	1	1	0	1	1	0	1	20	25	0	0	3	3	3	3	2	3	3	3
Denmark	Sc	0	0	0	1	1	1	0	0	1	1	1	1	1	10	10	1	0	4	3	2	3	3	3	3	2
Ecuador	F	0	0	0	1	1	1	0	0	0	1	1	1	1	25	25	0	0	2	2	2	2	2	2	2	2
Egypt	F	0	0	0	0	1	0	0	0	1	0	1	1	1	10	10	1	0	2	1	0	3	3	3	3	2
Finland	Sc	0	0	0	1	1	1	0	0	0.5	1	1	1	1	10	10	1	0	3.5	3	2	3	3	3	3	2
France	F	1	1	1	0	0	0	0	0	0	1	1	1	1	10	5	1	1	3	3	2	3	3	3	3	3
Germany	Ger	0	1	1	0	0	0	0	0	0.5	1	1	1	1	5	5	1	1	2.5	2	2	3	3	3	3	3
Greece	F	0	0	0	0	0	0	0	0	0	1	1	1	1	5	5	1	1	2	2	2	2	2	2	2	2
Hong Kong	CL	1	0	0	1	1	1	0	0	1	1	1	0	1	10	5	1	1	5	4	3	3	2	3	3	3
India	CL	1	1	1	1	1	1	0	0	1	1	1	1	1	10	10	1	0	5	4	3	4	4	4	4	3
Ireland	CL	0	1	0	1	1	1	0	0	1	1	1	1	1	10	10	1	0	4	3	2	4	4	4	3	3
Israel	CL	1	1	1	1	1	1	0	0	1	0	0	0	0	5	5	1	1	4	3	3	3	3	3	3	3
Italy	F	0	0	0	0	0	0	0	0	0.5	1	1	1	1	10	10	1	0	2.5	2	1	2	2	2	2	1
Japan	Ger	0	1	1	1	1	1	1	1	0.5	0	0	0	0	3	3	1	1	3.5	3	3	4	4	4	4	4
Jordan	F	0	0	0	1	1	1	0	0	0	0	1	1	0	25	15	0	0	1	1	1	2	2	1	2	2
Kenya	CL	1	0	0	1	1	1	0	0	1	0	0	0	0	10	10	1	0	4	3	2	2	2	2	2	1
Malaysia	CL	1	1	1	1	1	1	0	0	1	1	1	0	1	10	10	1	0	5	4	3	4	3	4	4	3
Mexico	F	0	0	0	1	1	1	0	0	0	1	1	1	1	10	10	1	0	3	3	2	3	3	3	3	2
Netherlands	F	0	0	0	0	0	0	0	0	1	1	1	1	1	10	10	1	0	3	2	1	2	2	2	2	1
New Zealand	CL	1	0	0	1	1	1	0	0	1	0	1	1	1	5	5	1	1	4	3	3	3	3	3	3	3
Nigeria	CL	1	0	0	1	1	1	0	0	1	0	1	0	0	10	10	1	0	4	3	2	3	2	2	3	2
Norway	Sc	0	0	0	1	1	1	0	0	0.5	1	1	1	1	5	5	1	1	3.5	3	3	3	3	3	3	3
Pakistan	CL	0	0	0	1	1	1	1	1	0	1	1	1	1	10	10	1	0	4	4	3	4	4	4	4	3
Peru	F	0	0	0	1	1	1	1	1	0.5	1	1	1	1	20	5	1	1	3.5	3	3	4	4	4	4	4
Philippines	F	0	1	1	1	1	1	1	1	0	1	1	1	1	NA	NA	0	0	3	3	3	4	4	4	4	4
Portugal	F	0	0	0	0	0	0	0	0	0.5	1	1	1	1	5	5	1	1	2.5	2	2	2	2	2	2	2
Singapore	CL	1	1	1	1	1	1	0	0	1	1	1	0	1	10	10	1	0	5	4	3	4	3	4	4	3
South Africa	CL	1	1	1	1	1	1	0	0	1	1	1	1	1	5	5	1	1	5	4	4	4	4	4	4	4
South Korea	Ger	1	1	1	0	1	1	1	1	0.5	0	1	1	1	3	3	1	1	3.5	3	3	5	5	5	5	5
Spain	F	1	1	1	0	0	1	1	1	1	1	1	1	1	5	5	1	1	5	4	4	4	4	4	4	4
Sweden	Sc	0	0	0	1	1	1	0	0	0.5	1	1	1	1	10	10	1	0	3.5	3	2	3	3	3	3	2
Switzerland	Ger	0	0	0	0	0	0	0	0	0	1	1	1	1	10	10	1	0	3	2	1	2	2	2	2	1
Taiwan	Ger	0	0	0	0	1	1	1	1	0	1	1	1	1	3	3	1	1	3	3	3	4	4	4	4	4
Thailand	CL	0	0	0	1	1	1	1	1	1	1	1	1	0	20	20	0	0	4	3	3	3	3	2	3	3
Turkey	F	0	1	1	0	0	0	0	0	0	1	1	0	1	5	5	1	1	2	2	2	3	2	3	3	3
UK	CL	1	1	1	1	1	1	0	0	1	1	1	1	1	10	10	1	0	5	4	3	4	4	4	4	3
USA	CL	1	1	1	1	1	1	0	0	1	0	0	0	0	NA	NA	0	0	3	2	2	2	2	2	2	2
Uruguay	F	0	0	0	0	0	1	0	0	0	1	1	1	1	20	20	0	0	1	1	1	1	1	1	1	1
Venezuela	F	0	0	0	0	1	1	0	0	0	0	0	0	0	20	20	0	0	0	0	0	1	1	1	1	1
mean (median)	overall	0.39	0.39	0.35	0.61	0.70	0.74	0.26	0.24	0.57	0.74	0.85	0.72	0.78	(10)	(10)	0.80	0.43	3.35	2.78	2.37	2.98	2.85	2.91	2.93	2.61
	CL	0.81	0.63	0.50	1.00	1.00	1.00	0.13	0.13	0.94	0.56	0.69	0.44	0.56	(10)	(10)	0.88	0.38	4.31	3.38	2.81	3.31	3.06	3.19	3.19	2.81
	F	0.20	0.25	0.25	0.35	0.45	0.55	0.35	0.30	0.28	0.85	0.95	0.85	0.90	(10)	(10)	0.65	0.40	2.63	2.35	2.05	2.60	2.50	2.55	2.60	2.35
	Ger	0.17	0.50	0.50	0.17	0.50	0.50	0.50	0.50	0.50	0.67	0.83	0.83	0.83	(5)	(4)	1.00	0.83	3.00	2.50	2.33	3.33	3.33	3.33	3.33	3.17
	Sc	0.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00	0.63	1.00	1.00	1.00	1.00	(10)	(10)	1.00	0.25	3.63	3.00	2.25	3.00	3.00	3.00	3.00	2.25
	Civil	0.17	0.27	0.27	0.40	0.53	0.60	0.33	0.30	0.37	0.83	0.93	0.87	0.9	(10)	(10)	0.77	0.47	2.83	2.47	2.13	2.80	2.73	2.77	2.80	2.50
correlation with revised values from			0.54	0.54		0.82			0.94			0.71	0.51	0.77		0.87	0.94	0.87			0.86	0.75	0.66	0.74	0.74	0.60
(correlation with practice / <=median)					0.74	0.79												0.43		0.94	0.77	0.69	0.60	0.67	0.66	0.50
Tests of means																										
	t-statistics																									
CL v. Civil		5.38	2.48	1.59	4.79	3.66	3.19	-1.54	-1.32	5.26	-2.04	-2.29	-3.38	-2.81	-0.08	-0.52	0.87	-0.59	5.07	3.48	2.50	1.88	1.16	1.43	1.40	1.06
CL v. F		4.48	2.38	1.56	5.30	4.30	3.52	-1.56	-1.25	5.64	-1.96	-2.18	-2.82	-2.45	-1.73	-1.27	1.56	-0.15	5.00	3.35	2.45	2.52	1.92	2.04	2.03	1.61
CL v. Ger		3.34	0.51	0.00	8.53	3.81	3.81	-1.94	-1.94	3.41	-0.42	-0.66	-1.69	-1.16	2.39	2.14	-0.88	-2.00	4.83	3.04	1.61	-0.05	-0.63	-0.32	-0.34	-0.80
CL v. Sc		3.95	2.45	1.90	0.00	0.00	0.00	0.72	0.72	2.24	-1.67	-1.28	-2.15	-1.67	0.12	-0.04	-0.72	0.45	2.20	1.19	1.87	0.87	0.16	0.44	0.49	1.59
	significance levels																									
CL v. Civil		1%	2%	12%	1%	1%	1%	14%	20%	1%	5%	3%	1%	1%	94%	61%	39%	57%	1%	1%	2%	7%	26%	16%	17%	30%
CL v. F		1%	3%	13%	1%	1%	1%	13%	23%	1%	6%	4%	1%	2%	10%	22%	13%	89%	1%	1%	2%	2%	7%	5%	5%	12%
CL v. Ger		1%	62%	NA	1%	1%	1%	7%	7%	1%	68%	52%	11%	27%	3%	5%	39%	6%	1%	1%	13%	97%	54%	75%	74%	44%
CL v. Sc		1%	3%	8%	NA	NA	NA	49%	49%	4%	12%	22%	5%	12%	91%	97%	49%	67%	5%	26%	8%	40%	88%	67%	64%	13%

Table 4 – ADRI (Component) Coefficients in Re-runs of La Porta et al. 1998 Regression

Dependent Variable: Ownership Concentration

	Original ADRI (La Porta et al. 1998)		Recoded Original ADRIs 1997					Recoded Rev'd ADRI 1997		
		ESM% < 10	Best correlation		Default rules	Mandatory~	Optional ~	US mimick		ESM% < 10
Panel A: Original specification from La Porta et al. 1998 (n = 39)										
ADRI components:	-.04[b]	-.03[c]	-.04[c]		-.04[b]	-.03	-.02	-.02	-.08[a]	-.04[c]
	(.02)	(.02)	(.02)		(.02)	(.02)	(.03)	(.03)	(.02)	(.02)
Proxy by mail (proxvote)				.03		.02				
				(.04)		(.04)				
Shares not blocked (noblockd)				-.09[c]		-.09[c]				
				(.05)		(.05)				
Cumulative voting				.03		.03				
				(.06)		(.06)				
Oppressed minority				-.20[b]		-.20[c]				
				(.09)		(.10)				
Preemptive rights (preexpl/-vote)				.05		.03				
				(.05)		(.08)				
% of shares to call a meeting				-.05		-.05				
				(.07)		(.07)				
Panel B: Improved specification (adding Uruguay and Venezuela, and using the new Creditor Rights Index from Djankov et al. 2006) (n = 41)										
	-.04[b]	-.03[c]	-.02		-.02	-.03	-.03	-.02	-.05[c]	-.03
	(.02)	(.02)	(.02)		(.02)	(.02)	(.02)	(.02)	(.03)	(.02)
Panel C: Parsimonious version (as Panel B, but without controls for one share – one vote, mandatory dividend, Creditor Rights Index, and legal reserve) (n = 41)										
ADRI components:	-.04[b]	-.03[c]	-.02		-.03	-.03	-.02	-.00	-.06[b]	-.04[c]
	(.01)	(.01)	(.02)		(.02)	(.02)	(.02)	(.02)	(.02)	(.02)
3-component index										
									-.04	-.01
									(.03)	(.02)
Vote by mail (proxcard, SX)									-.04	-.03
									(.04)	(.04)
Shares not deposited (noblexplm)									-.14[a]	-.13[b]
									(.05)	(.05)

From OLS regressions with a constant and controls for log (GNP per capita 1994), log (GNP 1994), Gini coefficient, rule of law, accounting, and legal origin dummies, plus in Panels A and B one share – one vote, mandatory dividend, Creditor Rights Index (from La Porta et al. 1999b in Panel A, from Djankov et al. 2005 in Panel B), and legal reserve. One share – one vote and mandatory dividend values come from La Porta et al. 1999b for the regressions from which the first two columns are drawn; the regressions from which the other columns are drawn use recoded values for one share – one vote (literal interpretation) and mandatory dividend (mandatory but waivable).

Robust standard errors (Huber/White/sandwich estimators) in parentheses.

[a, b, c] denote significance at the 1, 5 and 10% level, respectively.

Table 5 – ADRI (Component) Coefficients in Re-runs of La Porta et al. 1997 Regressions

Dependent Variable:	Original ADRI (La Porta et al. 1998)		Recoded Original ADRIs 1997					Recoded Revised ADRI 1997				
		ESM% <10	Most correlated	Default rules	Mandatory ~	Optional ~	US mimick		*Components:* *3-part index*	*proxcard (SX)*	*noblexplm*	ESM% <10
External Market Cap to GNP (n=42)	.13[a]	.11[a]	.04	.07	.04	.16[a]	.20[a]	.21[a]				.13[c]
	.04)	(.04)	(.06)	(.06)	(.06)	(.06)	(.06)	(.06)				(.06)
									.12	*.28[b]*	*.27[b]*	
									(.08)	*(.11)*	*(.12)*	
(regression with legal origin dummies)	.09[b]	.06	.05	.06	.07	.14[b]	.21[a]	.18[a]				.11[c]
	.05)	(.05)	(.06)	(.06)	(.06)	(.06)	(.06)	(.06)				(.06)
									.16[c]	*.20[c]*	*.25*	
									(.08)	*(.11)*	*(.16)*	
Listed firms per capita (n = 46)	5.72[b]	4.70[c]	1.23	.82	-2.61	9.78[a]	5.17	3.88				-.26
	(2.50)	(2.76)	(3.81)	(3.87)	(3.82)	(3.58)	(4.36)	(4.28)				(4.45)
									-2.05	*2.46*	*16.82[b]*	
									(5.27)	*(7.98)*	*(8.22)*	
(regression with legal origin dummies)	1.02	.23	.59	-.80	-1.86	7.67[b]	4.92	-.17				-1.81
	(3.13)	(.30)	(3.55)	(3.65)	(3.65)	(3.65)	(4.08)	(4.29)				(4.10)
									-.98	*-3.05*	*9.33*	
									(5.29)	*(8.13)*	*(10.42)*	
IPOs per capita (n = 39)	.59[a]	.50[b]	.01	-.01	.03	.59[b]	.61[c]	.45				.07
	(.16)	(.19)	(.27)	(.27)	(.28)	(.25)	(.30)	(.29)				(.32)
									-.12	*.53*	*1.37[b]*	
									(.35)	*(.51)*	*(.52)*	
(regression with legal origin dummies)	.24	.17	-.01	-.12	.06	.27	.39	.10				-.03
	(.18)	(.19)	(.22)	(.22)	(.23)	(.24)	(.26)	(.26)				(.27)
									-.05	*.23*	*.44*	
									(.33)	*(.48)*	*(.64)*	

From OLS regressions with a constant and controls for GDP growth (average 1970-1993), log (GNP 1994), and rule of law. Standard errors in parentheses.
[a, b, c] denote significance at the 1, 5 and 10% level, respectively.

Table 6 – ADRI (Component) Coefficients in Re-runs of Djankov et al. 2005 ADRI Regressions

Panel A – Original ADRI (La Porta et al. 1998) v. Recoded ADRIs 1997

Dependent Variable:	Original ADRI (La Porta et al. 1998)	*ESM% < 10*	Recoded Original ADRIs 1997: Most correl.	Default rules	Mandatory ~	*ESM% < 10*	*ESM% < 10*	Optional ~	US mimick	Recoded Rev'd ADRI 1997 (5 components)	*ESM% < 10*
Stock market cap to GDP	14.61[b]	10.90	-.25	2.16	-3.68	7.62	-1.13	10.04	7.20	9.89	-2.11
	(6.14)	(6.81)	(5.95)	(6.39)	(7.24)	(5.59)	(7.19)	(7.55)	(7.97)	(7.55)	(9.81)
Ln (listed firms per capita)	.24[b]	.21[b]	.21	.25[c]	.19	.26[b]	.14	.24[c]	.23	.37[b]	.18
	(.10)	(.10)	(.15)	(.13)	(.12)	(.12)	(.15)	(.14)	(.15)	(.15)	(.14)
IPOs / GDP	.59[b]	.51	.21	.15	-.16	.16	-.08	-.20	-.60	1.24[b]	.77
	(.26)	(.30)	(.39)	(.41)	(.41)	(.40)	(.45)	(.46)	(.61)	(.48)	(.50)
Block premia	-.04[b]	-.03[b]	-.03	-.03	-.02	-.03	-.02	.00	-.03	-.06[a]	-.03[c]
	(.01)	(.01)	(.03)	(.03)	(.03)	(.03)	(.03)	(.01)	(.03)	(.02)	(.02)
Ownership concentration	-.04[a]	-.03[a]	-.04	-.04[c]	-.03	-.05[b]	-.04[c]	-.02	.00	-.07[a]	-.05[b]
	(.01)	(.01)	(.02)	(.02)	(.02)	(.02)	(.02)	(.02)	(.02)	(.02)	(.02)

Panel B – Revised ADRI (Djankov et al. 2005) v. Recoded Revised ADRI 2005

Dependent Variable:	Revised ADRI (Djankov et al. 2005) *5 components*	*5 components ESM% < 10*	Recoded Revised ADRI 2005 (5 components)	*ESM% < 10*
Stock market cap to GDP	16.93[b]	18.10[b]	4.99	3.06	-4.20
	(7.00)	(8.55)	(7.97)	(7.79)	(8.12)
Ln (listed firms per capita)	.25[c]	.23	.20	.33[b]	.27[b]
	(.15)	(.17)	(.17)	(.12)	(.11)
IPOs / GDP	.61[c]	.64[c]	.21	.87[b]	.38
	(.32)	(.36)	(.37)	(.42)	(.41)
Block premia	-.01	-.01	.00	-.03	-.02
	(.02)	(.02)	(.02)	(.02)	(.02)
Ownership concentration	-.02	-.03	-.02	-.06[a]	-.04[b]
	(.02)	(.02)	(.02)	(.02)	(.02)

Panel C – Components of Recoded Revised ADRI 1997/2005

(1997 values were used together in one regression set, 2005 values in another)

Dependent Variable:	3-component index *1997*	3-component index *2005*	Vote by Mail (proxcard, SX) *1997*	Vote by Mail (proxcard, SX) *2005*	Shares not Deposited (noblexplm) *1997*	Shares not Deposited (noblexplm) *2005*
Stock market cap to GDP	9.07	3.06	1.38	-10.88	18.89	17.08
	(6.00)	(6.32)	(26.31)	(26.69)	(18.77)	(17.59)
Ln (listed firms per capita)	.25	.16	.02	.27	.89[a]	.84[a]
	(.19)	(.17)	(.29)	(.27)	(.23)	(.24)
IPOs / GDP	.78	.48	2.16[b]	1.28	1.40	1.51
	(.54)	(.48)	(.95)	(.98)	(.92)	(.92)
Block premia	-.04	-.01	-.08[b]	-.05	-.07[c]	-.07
	(.03)	(.03)	(.04)	(.04)	(.04)	(.05)
Ownership concentration	-.05	-.04	-.06	-.05	-.13[a]	-.13[a]
	(.03)	(.03)	(.04)	(.04)	(.03)	(.03)

From OLS regressions with constant and controls for ln(GDP per capita) and the time to collect on a bounced check; n = 46 (block premia: n = 36). Robust standard errors (Huber/White/sandwich estimators) in parentheses.

[a, b, c] denote significance at the 1, 5 and 10% level, respectively.

Table 7a – Horseraces of Recoded Revised ADRI 2005 v. ASDI v. Securities Law Indices, pt. 1

	Dependent Variable														
	Stock market capitalization to GDP					Ln (listed firms per capita)					IPOs / GDP				
ASDI	96[c]		46	50	55	1.47[a]		1.22	1.22	1.07[c]	3.1		.6	1.0	.7
	(55)		(59)	(53)	(59)	(.52)		(.75)	(.78)	(.80)	(2.1)		(2.2)	(2.2)	(2.3)
Disclosure		112[b]	84[c]	72[c]	107[b]		.91	.16	.21	.08		4.5[a]	4.1[b]	4.2[b]	4.3[b]
		(44)	(46)	(42)	(53)		(.67)	(.96)	(.88)	(.91)		(1.6)	(1.8)	(1.8)	(2.0)
Burden of proof		43[c]	45[c]	50[b]	62[b]		.78	.83	.82	.82		2.5[c]	2.5[c]	2.7[c]	2.6[c]
		(24)	(23)	(21)	(25)		(.64)	(.58)	(.58)	(.59)		(1.3)	(1.4)	(1.4)	(1.5)
Recoded ADRI	-9	-14	-17			.14	.15	.07			.5	.1	.1		
	(11)	(10)	(11)			(.13)	(.17)	(.16)			(.5)	(.4)	(.4)		
Recoded ADRI, ESM% < 10				-18[b]					.07					-.2	
				(8)					(.11)					(.4)	
3-component index					-8					.05					.1
					(7)					(.19)					(.5)
Vote by mail (proxcard SX)					-52[c]					-.07					-.2
					(30)					(.28)					(1.1)
Shares not blocked (noblexplm)					-32					.42					-.1
					(20)					(.29)					(1.0)

OLS with constant and controls for ln(GDP per capita 2003) and the time to collect on a bounced check (in days); n = 46. Robust standard errors (Huber/White/sandwich estimators) in parentheses.
[a, b, c] denote significance at the 1, 5 and 10% level, respectively.

Table 7b – Horseraces of Recoded Revised ADRI 2005 v. ASDI v. Securities Law Indices, pt. 2

	Dependent Variable									
	Block Premia					Ownership concentration				
ASDI	-.18[b]		-.08	-.09	-.08	.02		.14	.13	.17
	(.08)		(.11)	(.11)	(.14)	(.09)		(.10)	(.11)	(.11)
Disclosure		-.23[b]	-.17	-.17	-.17		-.13	-.21[b]	-.25[b]	-.19[c]
		(.11)	(.17)	(.17)	(.17)		(.08)	(.10)	(.10)	(.10)
Burden of proof		-.07	-.07	-.07	-.07		-.06	-.05	-.05	-.04
		(.08)	(.08)	(.08)	(.09)		(.06)	(.07)	(.07)	(.08)
Recoded ADRI	-.01	.00	.00			-.06[b]	-.04[c]	-.05[b]		
	(.02)	(.02)	(.02)			(.03)	(.02)	(.02)		
Recoded ADRI, ESM% < 10				.00					-.03	
				(.02)					(.02)	
3-component index					.00					-.04
					(.02)					(.02)
Vote by mail (proxcard SX)					.00					-.04
					(.03)					(.04)
Shares not blocked (noblexplm)					.00					-.12[a]
					(.06)					(.04)

OLS with constant and controls for ln(GDP per capita 2003) and the time to collect on a bounced check; n = 36 in block premia regressions and n = 46 in ownership concentration regressions. Robust standard errors (Huber/White/sandwich estimators) in parentheses.

[a, b, c] denote significance at the 1, 5 and 10% level, respectively.

Table 8 – Correlation Matrices

Correlation matrix A – recoded original ADRI components 1997, default rules (cf. Table 4)

(recoded 1997 values, original definitions, default rules)	proxy by mail	shares not blocked	cumulative voting	oppressed minority	ESM % <= 10%	preemptive rights (preexpl)	preemptive rights (prevote)
proxy by mail (proxvote)	1.00						
shares not blockd (noblockd)	.03	1.00					
cumulative voting	-.08	.24	1.00				
oppressed minority	.09	-.10	.11	1.00			
ESM % <= 10%	.25	.12	-.17	.36	1.00		
preemptive rights (preexpl) (used in ADRI97bestcorr)	-.33	-.26	.05	-.12	.13	1.00	
preemptive rights (prevote) (used in ADRI97def)	-.33	-.19	.08	-.09	.02	.76	1.00

Correlation matrix B – recoded revised ADRI components 1997 (cf. Tables 4 and 6)

(recoded 1997 values, revised definitions, default rules except for shares not deposited)	3-component index	vote by mail	shares not deposited
3-component index	1.00		
vote by mail (proxcard SX)	-.18	1.00	
shares not deposited (noblexplm)	-.12	.13	1.00

Correlation matrix C – recoded revised ADRI components 2005, and other control variables from Djankov et al. 2005 regressions (cf. Tables 6 and 7)

(ADRI and components: recoded 2005 values, revised definitions, default rules except for shares not deposited)	ln (GDP 2003)	time to collect a check	ASDI	disclosure	burden of proof	ADRI	ADRI, < median	3-component index	vote by mail	shares not deposited
ln (GDP 2003)	1.00									
time to collect a check	-.20	1.00								
ASDI	.22	-.34	1.00							
Disclosure	.16	-.45	.69	1.00						
burden of proof	.21	-.33	.39	.57	1.00					
ADRI	-.05	-.38	.50	.54	.38	1.00				
ADRI, < median	.01	-.32	.43	.41	.35	.86	1.00			
3-component index	-.06	-.09	.10	.06	-.01	.66	.53	1.00		
vote by mail (proxcard SX)	.23	-.40	.39	.49	.44	.47	.52	-.13	1.00	
shares not deposited (noblexplm)	-.24	-.19	.41	.43	.28	.46	.33	-.10	.05	1.00

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