THE EVOLUTION OF OWNERSHIP DISCLOSURE RULES ACROSS COUNTRIES

Centre for Business Research, University of Cambridge
Working Paper No. 393

by

Mathias M. Siems
Professor of Law
Norwich Law School
University of East Anglia
and
Research Associate
Centre for Business Research
University of Cambridge
Judge Business School Building
Cambridge, CB21AG
Email: siems@fulbrightmail.org

and
Michael C. Schouten
Graduate Research Fellow
Duisenberg School of Finance
Roetersstraat 33
1018 WB Amsterdam
The Netherlands
Email: michael.schouten@duisenbergschooloffinance.com

December 2009

This working paper forms part of the CBR Research Programme on Corporate Governance.

Abstract Over recent years, a number of regulators have launched proposals to expand the obligation to disclose major share ownership in listed companies. This article shows that these are not stand-alone developments. Using a unique dataset comprising data from 25 countries over 11 years (1995-2005) and collected by the Centre for Business Research of the University of Cambridge, we empirically study the evolution of ownership disclosure rules across countries. The analysis demonstrates that these rules have become more stringent over time, in the sense that disclosure thresholds have been lowered, and that there has been convergence. A breakdown of the results suggests that the degree of countries' economic development is a relevant factor in explaining the differences between countries. The analysis also suggests a positive correlation between ownership disclosure and other variables that protect minority shareholders, as well as a positive correlation between the stringency of countries' ownership disclosure rules and the degree of dispersed ownership. In the article, we offer various possible explanations for these results. Going forward, while it appears unlikely that disclosure thresholds will be lowered much further, ownership disclosure rules can be expected to continue to evolve in other dimensions. Regulators are likely to broaden the definition of the stake that triggers disclosure, so as to ensure that the ultimate owner is reached. In addition, regulators may require more information be disclosed when the notification is made, so as to enable other investors and issuers to adequately assess the implications of major share ownership.

Keywords: ownership disclosure, shareholder protection, comparative company law, law and finance, legal convergence

JEL Codes: G10, G30, G38, G30, G38, K22 K42, N20, N40, O16, P50

Acknowledgements

We are grateful for funding from the ESRC World Economy and Finance Programme (project 'Law, Finance and Development') and the EU Sixth Research and Development Framework Programme (Integrated Project 'Reflexive Governance in the Public Interest').

Further information about the Centre for Business Research can be found at the following address: www.cbr.cam.ac.uk

"One of the basic rights of investors is to be informed about the ownership structure of the enterprise" - OECD Principles of Corporate Governance[1]

A. INTRODUCTION

Over recent years, a number of regulators have launched proposals to expand the obligation to disclose major share ownership in listed companies. For example, in 2007 the UK Financial Services Authority proposed to amend its ownership disclosure rules to require investors to disclose all major long positions, including positions obtained through cash-settled equity derivates.[2] The UK rules have since been amended accordingly.[3] More recently, the European Commission proposed a Directive that would require extensive disclosures by managers of hedge and private equity funds acquiring controlling influence in listed companies.[4]

This article shows that these are not stand-alone developments, but developments that fit within an evolutionary chain towards increasing transparency requirements for investors. Using a unique dataset comprising data from 25 countries over 11 years (1995-2005) and collected by the Centre for Business Research (CBR) of the University of Cambridge, we empirically study the evolution of ownership disclosure rules across countries. The analysis demonstrates that ownership disclosure rules have become more stringent over time, and we argue that transparency requirements for investors are likely to continue to increase in the future.

The remainder of the article is structured as follows. Section B briefly describes the benefits of ownership disclosure rules. Accordingly, this Section discusses the various mechanisms through which ownership disclosure can fulfil two main functions: improving corporate governance and improving market efficiency. We draw from these insights later in the article, when we offer possible explanations for the results of our analysis.

Section C describes the dataset and explains the methodology used for coding ownership disclosure rules. Using descriptive statistics and tests of differences between means, this Section subsequently shows how countries' ownership disclosure rules have evolved over time. Our main finding is that ownership disclosure rules have become more stringent over time, in the sense that disclosure thresholds have, on average, been lowered. We also examine whether differences between certain types of countries can explain the variations that we observe. The data indicates that developed countries have, on average, had more stringent ownership disclosure rules, but developing countries are catching up. By 2005, there was a strong convergence towards a 5% threshold for disclosure.

Section D explores the relationship between ownership disclosure rules and other features of the corporate governance landscape. We observe a large positive correlation between the variable for ownership disclosure and other variables that protect minority shareholders against controlling shareholders. The data also indicates that the stringency of countries' ownership disclosure rules is positively correlated to the degree of dispersed ownership. We offer several possible explanations for these results.

Section E discusses the future of ownership disclosure rules. While there are signs that there may be convergence towards a 3% threshold, it appears unlikely that there will be many countries adopting an even lower threshold. However, we can expect ownership disclosure rules to continue to evolve in other dimensions. As the UK and EC examples illustrate, regulators may amend their ownership disclosure rules in two ways. First, they may broaden the definition of the stake that triggers disclosure, so as to ensure that the ultimate owner is reached. Second, they may require that more information be disclosed when the notification is made, so as to enable other investors and issuers to adequately assess the implications of major share ownership.

Section F concludes.

B. THE FUNCTION OF OWNERSHIP DISCLOSURE RULES

The basis for our analysis is the CBR shareholder protection index, which traces the development of legal rules over time.[5] This index includes several variables that are proxies for protection of shareholders against the board, such as a variable for director independence. Since in countries characterised by concentrated ownership the protection of minority shareholders against dominant shareholders is a key concern, the index also includes several variables that are proxies for protection against dominant shareholders.[6]

One of the variables that are proxies for protection against dominant shareholders relates to ownership disclosure.[7] The motivation to include this variable in the index was that ownership disclosure rules "tell us something about how shareholders are protected in the event of a change of corporate control".[8] For the purposes of this article, it is useful to discuss the function of ownership disclosure rules in more detail. In doing so, we draw on an earlier article by one of us, which distinguishes two main functions of ownership disclosure: improving market efficiency and improving corporate governance.[9]

1. Market Efficiency

Ownership disclosure can improve market efficiency through various mechanisms. At the time of a public offering, disclosure of the identity of large shareholders, and the number of voting rights they hold, enables investors to anticipate agency costs. Consider the presence of a controlling shareholder, for instance the founder. In some cases, such presence may signal an increase in agency costs due to a heightened risk of private benefit extraction. One way to extract private benefits is through tunnelling, as illustrated by the case of Italian dairy producer Parmalat.[10] In other cases, the presence of a controlling shareholder may signal a *decrease* in agency costs, because of active monitoring of management. By requiring issuers to disclose their ownership structure in the prospectus, investors are enabled to make an informed estimate of the implications for the value of the share.[11]

Once the shares are floating, disclosure of the entry or exit of large shareholders enables investors to continue to anticipate agency costs. The appearance of an activist hedge fund, for example, may signal an increase in monitoring. By requiring shareholders to disclose major acquisitions, again, investors are enabled to make an informed estimate of the implications for the value of the share – this is one of the objectives of the US disclosure regime.[12] Indeed, we often see share prices responding positively to the news that an activist hedge fund has acquired a stake.[13]

Ownership disclosure can improve market efficiency through several other mechanisms, namely by creating transparency of economic interests of major shareholders, of trading interest and of the size of the free float. We do not discuss these mechanisms here in detail.[14] The bottom line is that by promoting share price accuracy, ownership disclosure can contribute to market efficiency, and thus ultimately to an efficient allocation of resources in the economy.[15]

2. Corporate Governance

Transparency of major shareholdings not only enables anticipation of agency costs, but can also play an active role in *reducing* such costs – thereby improving corporate governance. There are two mechanisms through which ownership disclosure can do this.

First, ownership disclosure can enable enforcement. In firms with concentrated ownership, disclosure of major shareholdings may expose a potential for trading on inside information or other forms of market abuse. More importantly, disclosure of the identity of the person who ultimately controls the firm makes it easier to detect diversion of corporate assets, for instance by exposing opportunities for tunnelling.[16] Transparency may also prevent blockholders from engaging in abusive behaviour in the first place, consistent with the notion that sunlight is the best disinfectant.[17]

In firms with *dispersed ownership*, ownership disclosure may facilitate the market for corporate control, the mechanism through which management is disciplined by takeovers and the threat of takeovers. Transparency of the target's ownership structure helps bidders to estimate the likelihood that their bid will succeed, and to identify parties who could be approached for irrevocable undertakings. Ownership disclosure also enables *other* potential bidders to mount a competing offer, by alerting them that a third party is building a stake in the target.

On the other hand, ownership disclosure may negatively affect the market for corporate control. Mandatory disclosure of stakebuilding can discourage the initial bidder from making a bid in the first place, because his potential profits are reduced. Moreover, it functions as an early warning system to management of the target. This was originally one of the purposes of the UK ownership disclosure rules.[18] To the extent management responds to the warning signal by taking defensive measures in order to protect its own interests, disclosure may negatively affect the market for corporate control.[19] But to the extent management's response is aimed at strengthening its bargaining position so it can negotiate a higher offer price, the effects on the market for corporate control need not be negative. The same is true if management's response is aimed at gaining time, so it can solicit a superior bid by a third party.

The *second* mechanism through which ownership disclosure can reduce agency costs, albeit indirectly, is by enabling communication between the company and its shareholders, and among shareholders. Knowing fellow shareholders enables shareholders to exchange thoughts, to agree among themselves and to effectively assert their rights.[20] But it may not always be easy to identify fellow shareholders.[21] In many jurisdictions, shareholders will rely on ownership disclosure for this. Finally, in order for companies to effectively manage their investor relations, they need to have insight into their shareholder base.[22] This was one of the reasons for the European Commission extending the scope of the

European disclosure rules to holders of derivatives granting access to voting rights.[23]

3. Conclusion

The preceding account has shown that ownership disclosure rules can serve to improve, through various mechanisms, market efficiency as well as corporate governance. This is an important observation for our purposes, because it implies that lawmakers from different countries may have different motivations when setting the level of ownership disclosure. We will use this insight later in the article, when we explore the relationship between the stringency of ownership disclosure rules and other legal and economic variables, and when we discuss the future of ownership disclosure rules.[24]

C. THE EVOLUTION OF OWNERSHIP DISCLOSURE RULES

In this Part, we describe our dataset and methodology. Next, we show how in different countries ownership disclosure rules have evolved over time, and examine whether differences between certain types of countries can offer explanations for the variations that we observe.

1. Dataset and methodology

The CBR Index contains data for 25 countries over 11 years (1995-2005). The data on ownership disclosure rules thus consists of 275 observations. Explanations and references to the relevant provisions of law are available online.[25]

Earlier articles describe the coding methodology of the CBR Index in detail.[26] Here, we limit ourselves to describing the variable that codes the rules on ownership disclosure. It is defined as follows:

> "Disclosure of major share ownership: Equals 1 if shareholders who acquire at least 3% of the companies capital have to disclose it; equals 0.75 if this concerns 5% of the capital; equals 0.5 if this concerns 10%; equals 0.25 if this concerns 25%; equals 0 otherwise."[27]

This definition is preferable to the one used in La Porta et al.'s investor protection index.[28] This is because the definition of La Porta et al.'s variable does not provide a meaningful picture for the differences between countries: intermediate scores are not allowed, and a score of "1" is already attributed if a country requires disclosure by a 10% shareholder.[29] The result is that 19 out of the 20 countries, which are covered by both of the indices, get an optimal score (Table 1). By contrast, the CBR Index uses thresholds that are better able to capture the differences between the stringency of ownership disclosure rules across countries.[30]

Table 1: Comparison between CBR Index and La Porta et al. in 2000[31]

Countries	CBR Index	La Porta et al.
Argentina	0.75	1
Brazil	0.75	1
Canada	0.5	1
Chile	0.5	1
France	0.75	1
Germany	0.75	1
India	0.75	1
Italy	1	1
Japan	0.75	1
Mexico	0	1
Malaysia	0.75	1
Netherlands	0.75	1
Pakistan	0.5	0
South Africa	0.75	1
Spain	0.75	1
Sweden	0.75	1
Switzerland	0.75	1
Turkey	0.75	1
United Kingdom	1	1
United States	0.75	1

2. General Results

The CBR Index not only reports the coded variables[32] but also the actual minimum thresholds at which share ownership has to be disclosed.[33] This is summarised in Table 2 below, which shows the evolution of ownership disclosure rules across 25 countries over the period 1995-2005. Between 14 and 18 countries applied a 5% threshold, and between 5 and 7 countries applied other thresholds, such as 3% or 10%. While in 1995, there were 6 countries that did not require any disclosure of major share ownership, this number dropped to 1 (Mexico) in 2005 - and since 2006, Mexico also requires ownership disclosure.[34] Overall, we therefore observe a strengthening of disclosure obligations.

Table 2: Disclosure Thresholds across countries

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Italy	2	2	2	2	2	2	2	2	2	2	2
UK	3	3	3	3	3	3	3	3	3	3	3
Brazil	5	5	5	5	5	5	5	5	5	5	5
China	5	5	5	5	5	5	5	5	5	5	5
France	5	5	5	5	5	5	5	5	5	5	5
Germany	5	5	5	5	5	5	5	5	5	5	5
India	5	5	5	5	5	5	5	5	5	5	5
Japan	5	5	5	5	5	5	5	5	5	5	5
Malaysia	5	5	5	5	5	5	5	5	5	5	5
Netherlands	5	5	5	5	5	5	5	5	5	5	5
S. Africa	5	5	5	5	5	5	5	5	5	5	5
Spain	5	5	5	5	5	5	5	5	5	5	5
Sweden	5	5	5	5	5	5	5	5	5	5	5
Switzerland	5	5	5	5	5	5	5	5	5	5	5
Turkey	5	5	5	5	5	5	5	5	5	5	5
US	5	5	5	5	5	5	5	5	5	5	5
Slovenia	10	10	5	5	5	5	5	5	5	5	5
Argentina	no	no	5	5	5	5	5	5	5	5	5
Czech Rep.	no	10	10	10	10	10	5	5	5	5	5
Russia	no	25	25	5	5	5	5	5	25	25	25
Canada	10	10	10	10	10	10	10	10	10	10	10
Chile	10	10	10	10	10	10	10	10	10	10	10
Pakistan	no	no	no	no	no	10	10	10	10	10	10
Latvia	no	no	no	no	no	10	10	10	10	10	10
Mexico	no	no	no	no	no	no	no	no	no	no	no

This overall strengthening is also apparent from Table 3, which presents the results in a format that reflects our methodology for coding ownership rules. For the first row of Table 3, we have computed the mean score for the entire sample. The second row shows the standard deviation, which gives a sense of the extent to which scores of individual countries in the sample tend to vary from the mean score for the entire sample.

Table 3: Evolution of Ownership Disclosure Rules

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Mean	0.56	0.59	0.63	0.65	0.65	0.69	0.7	0.7	0.68	0.68	0.68
Stdev	0.34	0.31	0.28	0.27	0.27	0.19	0.19	0.19	0.21	0.21	0.21

In 1995, the mean score was 0.56, and by 2005 it was 0.68. Recall that a score of 0.5 is given if a country's disclosure threshold is set at 10%, and of 0.75 if it is set at 5%. On average, ownership disclosure rules thus became more stringent between 1995 and 2005.[35] The standard deviation generally is fairly low, because the majority of the countries had a disclosure threshold of 5% for the entire sample period. If we look at the development of the standard deviation over time, we see that in 1995, it was 0.34, and that by 2005 it had decreased to 0.21. This suggests that there has been a convergence of ownership disclosure rules.[36]

Surprisingly, the stringency of ownership disclosure rules peaked in the years 2001 and 2002, after which the mean score slightly declined (and the standard deviation slightly increased). On closer inspection, it becomes clear that the decline in 2003 was the result of a single observation, namely the remarkable relaxation of ownership disclosure rules in Russia, where the disclosure threshold was increased from 5% to 25% (*see* Table 2).[37]

3. Results for Different Groups of Countries

We now break down the results to obtain a more granular picture of how ownership disclosure rules have evolved over time. Specifically, we are interested in the question of whether ownership disclosure rules have evolved differently in countries that belong to the same group (such as developed countries, EU countries or common law countries) than in other countries.

(a) Differences between developed and developing countries

First, we examine the difference between developed countries and developing and transition economies. The category of developed countries is based on the World Bank's definition of High Income Economies.[38] This covers 13 countries in our sample (Canada, Czech Republic, France, Germany, Italy, Japan, the Netherlands, Slovenia, Spain, Sweden, Switzerland, the United Kingdom and the United States). Table 4 contrasts the evolution of ownership disclosure rules in these developed countries against the 12 other countries in our sample.

Table 4: Developed Countries vs. Rest of the World

Year	Developed countries		Rest of the world		Difference of means
	Mean	Standard deviation	Mean	Standard deviation	
1995	0.67	0.24	0.42	0.37	0.26*
1996	0.71	0.14	0.44	0.36	0.27**
1997	0.73	0.12	0.50	0.34	0.23*
1998	0.73	0.12	0.54	0.33	0.19*
1999	0.73	0.12	0.54	0.33	0.19*
2000	0.73	0.12	0.63	0.23	0.11
2001	0.75	0.10	0.63	0.23	0.13*
2002	0.75	0.10	0.63	0.23	0.13*
2003	0.75	0.10	0.58	0.25	0.17**
2004	0.75	0.10	0.58	0.25	0.17**
2005	0.75	0.10	0.58	0.25	0.17**
Mean	0.73	0.13	0.55	0.29	0.18*
Change 95-05	+0.06	-0.11	+0.13	-0.08	-0.08*
Tests of differences: *, **, and *** indicate whether we can reject the null hypothesis that the means are equal at a 10%, 5% and 1% significance level					

Table 4 shows that on average, developed countries have had more stringent ownership disclosure rules. The results are statistically significant. Notably, the difference between the two groups of countries decreased over time, as developing countries gradually lowered their disclosure thresholds towards 5%, the level at which most developed countries had their thresholds set throughout the entire sample period.[39] This finding is consistent with Armour et al.'s finding of "a degree of overall convergence in the legal protection of shareholders", based on time series analysis of the development of shareholder protection as proxied by all 10 variables of the CBR Index.[40]

(b) Differences between EU and non-EU countries

It is also interesting to see whether countries that form part of the EU display stronger convergence of ownership disclosure rules than the other countries in the sample. Table 5 contrasts the evolution of ownership disclosure rules in the 10 current EU Member States in our sample against the 15 other countries in the sample.

Table 5: EU Member States vs. Rest of the World

Year	Current EU Member States		Rest of the world		Difference of Means
	Mean	Standard Deviation	Mean	Standard deviation	
1995	0.63	0.36	0.52	0.33	0.11
1996	0.68	0.29	0.53	0.31	0.14
1997	0.70	0.28	0.58	0.28	0.12
1998	0.70	0.28	0.62	0.27	0.08
1999	0.70	0.28	0.62	0.27	0.08
2000	0.75	0.17	0.65	0.21	0.10
2001	0.78	0.14	0.65	0.21	0.13*
2002	0.78	0.14	0.65	0.21	0.13*
2003	0.78	0.14	0.62	0.23	0.16*
2004	0.78	0.14	0.62	0.23	0.16*
2005	0.78	0.14	0.62	0.23	0.16*
Mean	0.73	0.14	0.61	0.25	0.12
Change 95-05	+0.15	-0.22	+0.10	-0.10	-0.01
Tests of differences: *, **, and *** indicate whether we can reject the null hypothesis that the means are equal at a 10%, 5% and 1% significance level					

The decrease in standard deviation for EU Member States (-0.22) is considerably sharper than the decrease in standard deviation for non-EU Member States (-0.10). This confirms that countries forming part of the EU display stronger convergence of ownership disclosure during the sample period than the other countries in the sample.

Does this mean that changes in the ownership disclosure rules of EU Member States during the sample period were not exogenous, but merely reflected prevailing EU standards? Not necessarily. The 1988 Large Holdings Directive required EU Member States to set the disclosure threshold at 10%, while allowing Member States to set the threshold even lower (the Directive aimed at minimum harmonisation).[41] Table 5 shows that the mean score for EU Member States was 0.73. Coupled with the low standard deviation (0.14), this suggests that most EU Member States had their disclosure threshold set at 5% for most of the sample period. This can also be seen from Table 2. Thus, even though minimum EU standards applied during the sample period, many EU Member States exercised their discretionary power to set their threshold at a different (lower) level. From this perspective, changes in the ownership disclosure rules of EU Member States during the sample period were exogenous.

To be sure, the 2004 Transparency Directive, which superseded the Large Holdings Directive, required EU Member States to set the disclosure threshold at 5%. But the Transparency Directive needed to be implemented only in 2007. While it is possible that EU Member States anticipated the Transparency Directive by setting their disclosure threshold at 5% before 2007, the data indicates that this is unlikely. Table 2 shows that the bulk of EU Member States had their disclosure threshold set at 5% as early as 1995, almost a decade before the Transparency Directive was adopted.

This is different for the three EU countries (Latvia, Slovenia and the Czech Republic) that joined the EU only in 2004. In 1995, the beginning of the sample period, none of these had their disclosure threshold set at 5%. It is plausible that the subsequent lowering of the disclosure threshold by these countries was driven by a desire to conform to EU standards in preparation of their accession to the EU. This would be consistent with a study by Pistor et al. on the protection of shareholder rights in transition economies (including these three countries). They find that that "substantial efforts have been made to strengthen shareholder rights since the inception of economic reforms" and note that "European harmonization guidelines have unleashed what some commentators have called a tornado of legislative activities in the countries wishing to join the EU".[42]

(c) Differences between legal origins

Finally, it is interesting to see whether countries with a common law origin have, on average, more stringent ownership disclosure rules than countries with a civil law origin, as the legal origins theory proposed by La Porta et al. predicts they would.[43] A major problem of the common law/civil law divide is that in reality, most legal systems are hybrids. For instance, South African law derives from both civil law and common law traditions; Japanese company law used to be based on the German model, but since the 1950s has been heavily influenced by US law; Swiss company law is influenced by UK company law and, due to the influence of the EU, UK law itself has become more "continental".[44] Therefore, more precise, but related, criteria need to be used than the mere distinction between common law and civil law countries. The most obvious one is "language", because most English-speaking countries are common law countries.[45]

Table 6 shows the evolution of ownership disclosure rules for countries that have English as at least one of its official languages (Canada, India, Malaysia, Pakistan, South Africa, UK, US) and the rest of the world.

Table 6: English-Speaking Countries vs. Rest of the World

Year	English-speaking countries		Rest of the world		Difference of means
	Mean	Standard deviation	Mean	Standard deviation	
1995	0.64	0.32	0.53	0.35	0.12
1996	0.64	0.32	0.57	0.31	0.07
1997	0.64	0.32	0.63	0.27	0.02
1998	0.64	0.32	0.65	0.26	-0.01
1999	0.64	0.32	0.65	0.26	-0.01
2000	0.71	0.17	0.68	0.21	0.03
2001	0.71	0.17	0.69	0.20	0.02
2002	0.71	0.17	0.67	0.20	0.02
2003	0.71	0.17	0.67	0.23	0.05
2004	0.71	0.17	0.67	0.23	0.05
2005	0.71	0.17	0.67	0.23	0.05
Mean	0.68	0.25	0.64	0.24	0.04
Change 95-05	+ 0.07	-0.15	+0.15	-0.12	-0.07
Tests of differences: *, **, and *** indicate whether we can reject the null hypothesis that the means are equal at a 10%, 5% and 1% significance level					

Table 6 shows that on average, English-speaking countries have slightly more stringent ownership disclosure rules. But this was not consistently the case throughout the sample period, and over time the difference between the two groups appears to have become smaller. Be this as it may, the results are not statistically significant. This suggests that the common law/civil law divide is not helpful in explaining differences between countries' ownership disclosure rules.

4. Conclusion

This Section has used the CBR shareholder protection index in order to show how ownership disclosure rules have evolved over time. The general trend is that countries have lowered the threshold that triggers ownership disclosure. The results indicate that developed and EU countries provide stricter rules on ownership disclosure than the others countries of our sample. The results also indicate that by 2005, the end of the sample period, there was strong convergence towards the 5% level for initial ownership disclosure.

D. OWNERSHIP DISCLOSURE RULES IN CONTEXT

In this Part, we place the data in context by exploring the relationship between ownership disclosure rules and other features of the corporate governance landscape. Thus, we examine the relationship between ownership disclosure rules and other measures of shareholder protection. We also analyse the relationship between ownership disclosure rules and other legal and economic variables, such as ownership concentration.

1. Relation to Other Measures of Shareholder Protection

To explore the relationship between ownership disclosure rules and other measures of shareholder protection, we have computed the correlation between the variable for ownership disclosure and the other variables included in the CBR Index for 1995 and 2005. The coding for these variables is explained in the Appendix. Table 7 presents the results.

Table 7: Correlation with other variables

Variable	Correlation coefficient	
	1995	2005
1. Powers of the general meeting for de facto changes	0.286	-0.059
2. Agenda setting power	0.063	0.004
3. Anticipation of shareholder decision facilitated	0.433	-0.062
4. Prohibition of multiple voting rights (super voting rights)	0.090	-0.256
5. Independent board members	0.080	0.094
6. Feasibility of directors' dismissal	-0.065	0.141
7. Private enforcement of directors' duties (derivative suit)	0.414	0.084
8. Shareholder action against resolutions of the general meeting	0.414	0.489
9. Mandatory bid	0.545	0.390

One could imagine that different countries prefer different forms of shareholder protection. Thus, these different forms could be substitutes and one would expect a negative correlation coefficient. However, Table 7 shows the opposite result: the law on ownership disclosure is mostly positively related to each of the other forms of shareholder protection (shaded fields). Thus, we find that across countries, different ways of protecting shareholders generally complement each other.

Further, notice the relatively large correlation between the variables for ownership disclosure and mandatory bid. Possibly, this correlation is due to the fact that ownership disclosure, to some extent, supports enforcement of the mandatory bid by exposing stakebuilding.[46] More generally, one could argue that what ownership disclosure rules and the mandatory bid rule have in common is that they both provide a certain degree of protection for minority shareholders against large shareholders.[47] This is also a feature of the variable 'Shareholder action against resolutions of the general meeting', which is also strongly correlated with ownership disclosure.

2. Relation to Other Legal and Economic Variables

This section turns to the relationship between the stringency of ownership disclosure rules and other legal and economic variables. It is difficult to establish whether there is a causal link between the legal rules on ownership disclosure, ownership structure and economic development, since there are likely to be mutual interdependencies between these three factors.[48] Therefore, we do not use regression analyses to test for causality. Instead, we focus on correlations between legal and economic variables. Table 8 shows the descriptive data on the relevant variables, and Table 9 presents the correlation between these variables and ownership disclosure rules.

Table 8: Descriptive Data on Other Legal and Economic Variables

Countries	Ownership Structure			Other Variables		
	Widely held firms 1995[49]	Widely held firms 2002[50]	Foreign-owned firms 2005[51]	Rule of Law 2005[52]	Enforcement of securities law 2006[53]	Stock market cap. 2005[54]
Argentina	0.00	0.00	0.20	-0.55	$15,984	34
Brazil	n/a	n/a	0.14	-0.45	$35,260	54
Canada	0.60	0.50	0.15	1.75	$83,932	131
Chile	n/a	n/a	0.12	1.16	$67,137	115
China	n/a	n/a	0.14	-0.42	n/a	35
Czech Rep.	n/a	n/a	0.14	0.74	$41,685	31
France	0.60	0.30	0.09	1.33	$29,205	82
Germany	0.50	0.35	0.13	1.73	$22,196	44
India	n/a	n/a	0.09	0.13	n/a	68
Italy	0.20	0.15	0.11	0.52	$60,552	45
Japan	0.90	0.50	0.06	1.35	$15,905	104
Latvia	n/a	n/a	0.09	0.47	n/a	16
Mexico	0.00	0.00	0.04	-0.51	$52,494	28
Malaysia	n/a	0.01	0.07	0.56	n/a	131
Netherlands	0.30	0.30	0.06	1.72	$138,785	94
Pakistan	n/a	n/a	0.02	-0.87	n/a	42
Russia	n/a	n/a	0.07	-0.88	n/a	72
Slovenia	n/a	n/a	n/a	0.79	n/a	22
S. Africa	n/a	n/a	0.01	0.18	$118,453	233
Spain	0.35	0.15	0.11	1.10	$29,931	85
Sweden	0.25	0.00	0.03	1.79	$24,354	110
Switzerland	0.60	0.50	0.12	1.97	$31,418	252
Turkey	n/a	n/a	0.04	0.08	$45,417	33
UK	1.00	0.90	0.09	1.63	$65,507	136
US	0.80	0.80	0.03	1.52	$76,459	137

Table 9: Correlation between ownership disclosure rules and other variables

Variable	Correlation coefficient[55]
Ownership Structure	
Widely held firms 1995	0.41
Widely held firms 2002	0.13
Foreign-owned firms 2005	0.05
Other Variables	
Stock market capitalisation 2005	0.08
Enforcement of securities law 2006[56]	-0.09
Rule of law 2005	0.30

(a) Interpretation of correlation with ownership structure

Ownership disclosure can be a useful means to protect minority shareholders against controlling shareholders,[57] which is why we might expect ownership disclosure rules to be more stringent in countries with concentrated ownership than in countries with dispersed ownership. Indeed, a previous study using the CBR dataset found that in general, minority shareholder protection is stronger in countries with concentrated ownership than in countries with dispersed ownership.[58] Interestingly, though, Table 9 shows a positive correlation between countries' degree of dispersed ownership and the stringency of their ownership disclosure rules. This suggests that ownership disclosure rules are *not* more stringent in countries with concentrated ownership than in countries with dispersed ownership.[59]

One explanation could follow from the law and finance literature: ownership disclosure rules protect shareholders (and these rules are also positively correlated with other forms of shareholder protection[60]). Thus, in countries with better shareholder protection, more people may invest in companies, which subsequently may lead to more dispersed share ownership.[61] The evidence does not provide unanimous support for this theory, however, since it has not been found that the CBR Index matters for financial development.[62] It is therefore also worth considering the alternative causality story, namely that lawmakers react to particular ownership structures of firms.

One possibility, then, would be that the relative stringency of ownership disclosure rules in countries with dispersed share ownership could be explained by the fact that in addition to protecting minority shareholders, ownership disclosure can improve market efficiency.[63] Countries with dispersed ownership may be particularly concerned with improving market efficiency through stringent ownership disclosure rules, because on average, firms depend more on outside equity and market efficiency ultimately reduces the cost of capital.[64] Indeed, the recent suggestion by Mary Schapiro, chair of the US Securities and Exchange Commission (SEC), that US ownership disclosure rules may need to be tightened in order to create more transparency on equity derivatives, appears to have been based in large part on concerns about fair and orderly markets and capital formation.[65]

Another possibility is that the higher level of ownership disclosure in dispersed ownership countries can be explained by public choice theory. As noted by Bebchuk and Neeman, lobbying activities may play a key role in the legislative process that determines a country's level of investor protection, since voters usually pay little attention to investor protection issues.[66] Because ownership disclosure functions as an early warning system to management of the target, managers have an interest in lobbying for stringent ownership disclosure rules.[67] Indeed, it has been argued that narrow interest group concerns motivated the regulatory process that produced the US ownership disclosure rules back in the 1960s, and that incumbent management had a particularly strong influence.[68]

Conversely, in countries with concentrated ownership, controlling shareholders may lobby against stringent ownership disclosure rules, because "once companies have raised external equity, entrepreneurs have the incentive to weaken investor protection to increase their private benefits."[69] This is illustrated by a study of the implementation of the Takeover Directive in continental Europe, which notes that the resulting regulation "appears to favour the subjects more likely to exercise a significant political influence on the rulemaking process" – i.e., entrenched controlling shareholders.[70]

Table 9 also reports the relationship between ownership disclosure rules and the percentage of foreign-owned firms. On the one hand, one might expect a negative relationship because foreign investors may wish to remain anonymous. On the other hand, transparency might attract foreign investments and therefore one may expect a positive relationship. Indeed, a recent survey among institutional investors shows that they consider such transparency important for their investment decisions.[71] Our data show, however, neither a strong positive nor negative relationship. This suggests that the extent of foreign investment is related to other factors than ownership disclosure.

(b) Interpretation of correlation with other variables

Table 9 shows that there is hardly any correlation between the variable for ownership disclosure and the variable for stock market capitalisation. This is consistent with Armour et al.'s finding of no significant positive relationship between the CBR Index and various stock market indicators in the decade to 2005.[72]

If we were to assume that, as a general matter, shareholder protection *does* positively impact stock market capitalisation, as the law and finance literature suggests,[73] the question would arise as to why our results do not show a positive correlation between the variable for ownership disclosure and the variable for stock market capitalisation. One possible explanation is that in order for ownership disclosure rules to have such a positive impact on stock market capitalisation, they need to be vigorously enforced. Indeed, an empirical study by Pistor et al. on legal change in transition economies from 1992 through 1998 concludes that while transition economies may have high levels of investor protection (as proxied, inter alia, by ownership disclosure rules) on the books, the development of their financial market is constrained by the absence of effective legal institutions.[74] The fact that ownership disclosure rules are not always vigorously enforced is illustrated by an empirical study of corporate governance in Central and Eastern European countries: even as most of these countries had set their threshold for disclosure at 5% by 2002, the identity of the ultimate owner was still undisclosed due in part to the laxity in enforcement of disclosure.[75]

Consistent with these studies, Table 9 indicates that there is no correlation between the variable for ownership disclosure and the variable for enforcement of securities law. On this basis, one might conclude that countries that have relatively stringent ownership disclosure rules need not also have relatively intense enforcement. Our results do not provide unanimous support for this conclusion, however, because Table 9 also reveals a positive correlation between the stringency of countries' ownership disclosure rules and the rule of law. Given that there is a strong correlation between countries' rule of law and their level of development[76], this particular finding is consistent with our earlier finding that developed countries, on average, have more stringent ownership disclosure rules.[77]

3. Conclusion

The law on ownership disclosure is positively related to other measures of shareholder protection. In particular, we observe a strong positive relationship between ownership disclosure rules and variables that protect minority shareholders against large shareholders. Perhaps, surprisingly, there is also a positive relationship between the rules on ownership disclosure and widely held ownership. This could be interpreted as a confirmation of the law and finance literature, but not necessarily so. After all, politics or other factors could also explain why countries with dispersed shareholder ownership are more likely to provide strict rules on ownership disclosure. Indeed, non-quantitative research shows that various factors contribute to the dispersion of shareholder ownership, with shareholder protection playing a minor role.[78]

Finally, our results indicate that there is hardly any correlation between the variable for ownership disclosure and the variable for stock market capitalisation. The two might be unrelated, as previous studies using the CBR dataset suggest. By contrast, if we were to assume that ownership disclosure rules do have a positive impact on stock market capitalisation, one possible explanation for why our data does not show a positive correlation between the two variables is that in order for ownership disclosure rules to have such impact, they need to be vigorously enforced.

E. The Future of Ownership Disclosure Rules

Our analysis shows that by 2005, there was strong convergence around the 5% level for initial ownership disclosure.[79] In recent years, however, some countries have further lowered the disclosure threshold. A survey conducted among EU Member States shows that by 2008, six countries had their thresholds set at 3% or even 2%, while another recent survey shows that outside the EU, too, there are countries whose threshold is now below 5%.[80] Driven by concerns over hedge fund activism, others may soon follow suit.[81] Indeed, the European Securities Markets Expert Group has stated that “[i]mportant financial markets are converging to 3%”, and that “it is important that the others (…) follow as soon as possible”.[82]

Yet, while we may witness convergence toward the 3% level in the future, it appears unlikely that there will be many countries setting their disclosure threshold at an even lower level. A threshold of, say, 1%, may tip the scale and cause the benefits of disclosure to be exceeded by the costs (such as compliance costs and reduced incentives to search for information on the fundamental value of firms).[83] Indeed, more shareholder protection need not necessarily be better.[84] Ideally, the evolution of ownership disclosure rules ends not at a point where a “maximum” but an “optimum” has been found.[85]

It can be expected, though, that beyond this point, the evolution of ownership disclosure rules will continue in other dimensions. As will be explained below, besides the height of the disclosure threshold, there are two other aspects of ownership disclosure rules that particularly affect their stringency: the *definition* of the stake that triggers disclosure and the *scope* of the actual disclosure obligation.[86]

1. The Definition of the Stake that Triggers Disclosure

In its most straightforward form, a disclosure obligation is triggered upon acquiring a certain number of voting rights attached to shares. But as ownership disclosure rules become more sophisticated, the disclosure obligation will no longer be triggered only as the result of holding voting rights. Rather, it will be triggered as the result of obtaining *access* to voting rights, whether directly or indirectly. This is key to ensuring that the ultimate owner (i.e. the beneficial owner) can be identified.

Indeed, in the absence of ownership disclosure rules with a sufficiently broad definition of the stake that triggers disclosure, it can be quite challenging to identify the ultimate owner. This could be an explanation for why a 1997 study on transparency of ownership structures of EU listed firms found that "[t]he disclosed identity of the agent who has ultimate control over a significant voting block is not entirely reliable in any of the Member States that were surveyed."[87]

An example of an expanded definition is when a disclosure obligation is also triggered as a consequence of "acting in concert" with others who hold voting rights. The ambiguity of the term "acting in concert", and the resulting controversies, serve as a powerful reminder that while it is important to have a definition that is sufficiently broad, it is also key to avoid a definition that is overly broad. Otherwise, ownership disclosure rules risk stiffening communication between shareholders whose aim is merely to coordinate their monitoring efforts, not to gain control over the firm.[88] The same applies to mandatory bid rules, which typically can also be triggered by acting in concert.

Another example of an expanded definition is when a disclosure obligation is also triggered upon acquisition of equity derivatives that grant a right to acquire voting rights, such as physically settled options.[89] As mentioned in the Introduction, the FSA has recently taken this one step further. Under UK rules, a disclosure obligation is now also triggered upon acquisition of cash-settled equity derivatives such as contracts for difference (Cfd), merely because these imply the *possibility* of obtaining access to voting rights.[90] Access can potentially be obtained by instructing the Cfd-writer how to exercise the voting rights attached to the underlying shares held by the Cfd-writer as a hedge, or acquiring these shares once the contract expires and the Cfd-writer needs to unwind his position.[91] The European Securities Markets Expert Group has recently recommended that the Transparency Directive be amended along the same lines.[92]

The measure of ownership disclosure that we have used for our analysis has focused solely on the threshold percentage for disclosure. To measure the stringency of ownership disclosure rules more precisely, future empirical research will also have to take into account the breadth of the definition of the stake that triggers disclosure. The study by La Porta et al. of disclosures to be made when a firm goes public, referred to earlier, has made a first attempt at this. The study uses a variable that equals 1 if a country's ownership disclosure rules require disclosure by shareholders who directly *or indirectly* control 10% of the shares, and that equals 0.5 "if reporting requirements for the Issuer's 10% shareholders do not include indirect ownership or if only their aggregate ownership needs to be disclosed".[93]

Despite the reference to indirect share ownership, the variable appears insufficiently specific to capture relevant differences between countries in this respect. Ownership disclosure obligations in virtually every country are triggered by at least *some* form of indirect ownership. This becomes clear from the fact that not one of the 49 countries surveyed by La Porta et al. is attributed a score of one-half (and the vast majority are attributed a score of one).[94] It also becomes clear from the CBR dataset. Although only information on threshold percentages was requested, most country reporters have provided additional information on the relevant ownership disclosure rules. In nearly every instance where they have done so, the information refers to "direct or indirect" ownership or to the "beneficial owner".[95] The real question, therefore, is not whether ownership disclosure rules are also triggered by indirect ownership, but how effective these rules are at identifying the ultimate owner. The challenge for future empirical studies will be to define a variable that adequately measures this.

2. The Scope of the Actual Disclosure Obligation

The other major aspect of ownership disclosure rules that affects their stringency concerns the *scope* of the actual disclosure obligation. This refers to the amount of information that needs to be disclosed once the disclosure obligation is triggered and the notification needs to be made. The two primary disclosure items are the identity of the acquirer and the number of voting rights acquired, typically expressed as a percentage of the total number of voting rights. Some countries, however, also require disclosure of, for example, the number of shares held,[96] the purpose of acquisition,[97] or related financial arrangements.[98] Here too, concerns over hedge fund activism seem to be driving regulators towards expanding the scope of the actual disclosure obligation.[99]

The way in which countries can be expected to expand the scope of the actual disclosure obligation will depend on the specific functions of ownership disclosure they wish to reinforce. Suppose that a given country has a large population of firms that deviate from one share-one vote. If the regulator in that country is concerned with reinforcing the function of promoting market efficiency though accurate share prices,[100] it may make sense to require that shareholders disclose, in addition to the number of voting rights held, the number and class of shares held. This way, the market is enabled to more accurately assess the incentives of the relevant blockholder, the likely agency costs deriving from the ownership structure and hence the implications for the value of the share.

For the same reason, regulators in some countries may require that shareholders disclose, in addition to the number of voting rights held, related financial arrangements.[101] This could, at least to some extent, mitigate concerns about empty voting. Empty voting may occur for example when shareholders have hedged their economic exposure by way of equity derivatives.[102] By requiring such shareholders to disclose related financial arrangements, the market, the issuer and regulators are alerted of the potential of empty voting.[103] Of course, such disclosure requirements need to yield sufficiently specific information. In the case of Perry/Mylan, a famous (near-)instance of empty voting in the US, the disclosed information was opaque, and therefore of limited value in this respect.[104]

Alternatively, suppose that a regulator is concerned with reinforcing the function of promoting corporate governance by enabling communication between issuers and large shareholders.[105] For such country, it may make sense to require shareholders to disclose the purpose of their acquisition.[106] This way, issuers are enabled to reach out to dissenting blockholders at an early stage. Another way to facilitate communication between issuers and large shareholders is to enable issuers to identify such shareholders by granting them a statutory right to request extensive information from anyone the issuer believes to be interested in its shares, as exists in the UK.[107] The fact that issuers are keen on taking measures to obtain such information is illustrated by the fact that in the US, many issuers have amended their bylaws calling for proxy contest proponents to include, in their required advance notice of matters they propose to bring to a shareholder meeting, extensive information concerning their interest such as information on whether and to what extent equity and voting interests are decoupled.[108]

As a final example, regulators concerned with reinforcing the function of promoting corporate governance by enabling monitoring of controlling shareholders' behaviour may require such shareholders to disclose additional information. This is illustrated by the European Commission's proposal for a directive on alternative investment fund managers, referred to in the Introduction.[109] While it remains to be seen whether the proposal will be adopted, the opposition thus far has focused primarily on key issues such as restrictions on leverage and compensation.[110] It may therefore well be that the proposed disclosure rules will be adopted, and that fund managers will be obliged to disclose, for example, a policy for preventing and managing conflicts of interests.

We do not suggest that the benefits of these examples of expanded ownership disclosure rules outweigh the costs.[111] Rather, our point is that even though disclosure thresholds are unlikely to be lowered significantly in the future, as long as financial innovation and market practices continue to undermine transparency of major share ownership, we can expect ownership disclosure rules to evolve. This evolution is likely to take place along the lines set out in this section.

F. CONCLUSION

Ownership disclosure rules across countries have become more stringent between 1995 and 2005. A breakdown of the results suggests that the degree of countries' economic development is a relevant factor in explaining the differences between countries: developed countries tend to have more stringent ownership disclosure rules than transition and developing countries. The differences have become smaller over time, though, as most countries had settled for a 5% threshold for ownership disclosure by the end of the sample period. Convergence has also taken place within the European Union, where, interestingly, Member States have consistently set lower thresholds for disclosure than required by the European minimum rules in force during the sample period.

Furthermore, we have observed a large positive correlation between the variable for ownership disclosure and other variables that protect minority shareholders against controlling shareholders. The data also indicates that the stringency of countries' ownership disclosure rules is positively correlated to the degree of dispersed ownership. We have advanced two possible explanations for this. The first is that countries with dispersed ownership care more about ownership disclosure because such rules contribute to the efficiency of capital markets and thus lower the cost of outside equity. The second is based on public choice theory, and posits that in countries with dispersed ownership, incumbent management lobbies for stringent ownership disclosure rules because such rules can shield management from hostile takeover attempts by alerting them of stake-building.

While our data indicates that there was convergence around the 5% level for initial disclosure by 2005, more recent developments suggest that in the future, countries' ownership disclosure rules may converge around the 3% level. It appears likely that beyond that point, the evolution of ownership disclosure rules will shift entirely to other aspects affecting their stringency. In particular, we can expect regulators to respond to financial innovation by expanding the definition of the stake that triggers disclosure, so as to ensure that the ultimate owner can be identified. Regulators may also require that more information be disclosed when the notification is made, so as to enable other investors and issuers to adequately assess the implications of major share ownership. Accordingly, future empirical research of ownership disclosure rules will have to focus not only on the threshold for disclosure, but also on these two dimensions of ownership disclosure rules affecting their stringency.

APPENDIX

CBR EXTENDED SHAREHOLDER PROTECTION INDEX[112]

Variables	Description
1. Powers of the general meeting for de facto changes[113]	If the sale of more than 50 % of the company's assets requires approval of the general meeting it equals 1; if the sale of more than 80 % of the assets requires approval it equals 0.5; otherwise 0
2. Agenda setting power[114]	Equals 1 if shareholders who hold 1 % or less of the capital can put an item on the agenda; equals 0.75 if there is a hurdle of more than 1 % but not more than 3%; equals 0.5 if there is a hurdle of more than 3 % but not more than 5%; equals 0.25 if there is a hurdle of more than 5% but not more than 10 %; equals 0 otherwise. Please also indicate the exact percentage
3. Anticipation of shareholder decision facilitated[115]	Equals 1 if (1) postal voting is possible or (2) proxy solicitation with two-way voting proxy form[116] has to be provided by the company (i.e. the directors or managers); equals 0.5 if (1) postal voting is possible if provided in the articles or allowed by the directors, or (2) the company has to provide a two-way proxy form but not proxy solicitation; equals 0 otherwise.
4. Prohibition of multiple voting rights (super voting rights)[117]	Equals 1 if there is a prohibition of multiple voting rights; equals 2/3 if only companies which already have multiple voting rights can keep them; equals 1/3 if state approval is necessary; equals 0 otherwise.
5. Independent board members[118]	Equals 1 if at least one half of the board members[119] must be independent; equals 0.5 if 25 % of them must be independent;[120] equals 0 otherwise.
6. Feasibility of directors' dismissal	Equals 0 if good reason is required for the dismissal of directors;[121] equals 0.25 if directors can always be dismissed but are always compensated for dismissal without good reason;[122] equals 0.5 if directors are not always compensated for dismissal without good reason but they could have concluded a non-fixed-term contract with the company;[123] equals 0.75 if in cases of dismissal without good reason directors are only compensated if compensation is specifically

	contractually agreed; equals 1 if there are no special requirements for dismissal and no compensation has to be paid. Note: If there is a statutory limit on the amount of compensation, this can lead to a higher score.
7. Private enforcement of directors' duties (derivative suit)[124]	Equals 0 if this is typically excluded (e.g. because of strict subsidiarity requirement, hurdle which is at least 20 %); equals 0.5 if there are some restrictions (e.g. certain percentage of share capital;[125] demand requirement); equals 1 if private enforcement of directors' duties is readily possible.
8. Shareholder action against resolutions of the general meeting[21]	Equals 1 if every shareholder can file a claim against a resolution by the general meeting;[126] equals 0.5 if there is a threshold of 10 % voting rights;[127] equals 0 if this type of shareholder action does not exist.
9. Mandatory bid[128]	Equals 1 if there is a mandatory public bid for the entirety of shares in case of purchase of 30% or 1/3 of the shares; equals 0.5 if the mandatory bid is triggered at a higher percentage (such as 40 or 50 %); further, it equals 0.5 if there is a mandatory bid but the bidder is only required to buy part of the shares; equals 0 if there is no mandatory bid at all. Please also indicate the exact percentage.
10. Disclosure of major share ownership[129]	Equals 1 if shareholders who acquire at least 3 % of the companies capital have to disclose it; equals 0.75 if this concerns 5 % of the capital; equals 0.5 if this concerns 10 %; equals 0.25 if this concerns 25 %; equals 0 otherwise Please also indicate the exact percentage.

[1] Organisation for Economic Co-Operation and Development (OECD), *Principles of Corporate Governance* (2004), 51.

[2] FSA, *Disclosure of Contracts for Differences, Consultation and Draft Handbook Text (CP 07/20)* (2007).

[3] FSA Handbook, DTR 5.3.1.

[4] European Commission, *Proposal for a Directive on Alternative Investment Fund Managers* (2009). For other proposals, see eg, Irish Takeover Panel, *Consultation Paper Disclosure of Dealings and Interests in Derivatives and Options*

- *proposals to Amend the Takeover Rules* (2008) (proposing to expand the scope of the Irish takeover rules to include cash-settled equity derivatives); Dutch Ministry of Finance, *Wijziging van de Wet op het financieel toezicht, de Wet giraal effectenverkeer en het Burgerlijk Wetboek naar aanleiding van het advies van de Monitoring Commissie Corporate Governance Code van 30 mei 2007* (2009) (proposing that investors be required to disclose whether or not they agree with the company's strategy when they disclose the acquisition of a substantial interest).

[5] See *supra* Section A and *infra* Section C and Appendix.

[6] This risk of minority shareholder abuse by blockholders is exacerbated when blockholders have not only significant informal power over the board but also significant formal power, as is the case in many Continental European countries, especially when compared to the US. See S Cools, "The Real Difference in Corporate Law Between the United States and Continental Europe: Distribution of Powers" (2005) 30 *Delaware Journal of Corporate Law*, 679, 738-750.

[7] Two other empirical studies include variables for ownership disclosure in their indices. The first is a measure of investor protection through securities laws: R La Porta, F Lopez-De-Silanes and A Shleifer, "What Works in Securities Laws?" (2006) 61 *Journal of Finance* 1, 3 (for a critique, see M Siems, "What Does Not Work In Comparing Securities Laws: A Critique on La Porta et al's Methodology", (2005) 16 *International Company and Commercial Law Review* 300. In this study, La Porta et al focus on "the agency problem between prospective investors in an initial public offering and the 'promoter' who offers shares for sale". The second is a measure of shareholder protection from self-dealing by corporate insiders through corporate law: S Djankov, R La Porta, F Lopez-de-Silanes and A Shleifer, "The Law and Economics of Self-Dealing" (2008) 88 *Journal of Financial Economics* 430, 432.

[8] M Siems, "Shareholder Protection Around the World ('Leximetric II')" (2008) 33 *Delaware Journal of Corporate Law* 111, 119.

[9] M Schouten, "The Case for Mandatory Ownership Disclosure" (Working Paper 2009, available at http://ssrn.com/abstract=1327114), 34-43 (also forthcoming in (2009) *Stanford Journal of Law, Business and Finance*).

[10] G Ferrarini and P Giudici, "Financial Scandals and the Role of Private Enforcement: The Parmalat Case", in J Armour and J McCahery (eds), *After Enron* (Oxford, Hart Publishing 2006), 116 (noting that one of the causes of the demise of Parmalat was that funds were being diverted to Tanzi family members and their private companies).

[11] The importance of ownership disclosure for these purposes has recently been underlined by a high profile case in which Goldman Sachs and ABN AMRO were found liable in connection with the IPO of an internet company in 2000, because the prospectus failed to adequately disclose the particulars of a reduction of the CEO's ownership stake prior to the IPO. Dutch Supreme Court, 27 November 2009, LJN BH2162 (in this particular case, the court considered that the relevance of the information derived not from agency considerations but from the fact that the transaction conveyed information about the CEO's valuation of the company. This is what is referred to later in this section as ownership disclosure's function of providing information on trading interest).

[12] Schouten, *supra* n 9, at 10.

[13] See, eg, A Brav, W Jiang, RS Thomas and F Partnoy, "Hedge Fund Activism, Corporate Governance, and Firm Performance" (2006) 63 *Journal of Finance* 1729, 1755 (using a sample consisting of 1,059 hedge fund-target pairs for the period 2001-2006, the authors measure effects of Schedule 13D filings and document abnormal return of approx. 2.0% on the filing day and the following day; afterwards, the abnormal returns keep trending up to a total 7.2% in twenty days).

[14] For a discussion, see Schouten, *supra* n 9, 11-20.

[15] See MB Fox, "Civil Liability and Mandatory Disclosure" (2009) 109 *Columbia Law Review* 237, 252-69 (offering an explanation of how market efficiency can contribute to a more efficient allocation of resources in the economy).

[16] A Ferrell, "The Case for Mandatory Disclosure in Securities Regulation around the World" (2007) 2 *Brooklyn Journal of Corporate, Financial and Commercial Law* 81, 89. See also Djankov et al, *supra* n 7, 437 (building a self-dealing index that includes variables for ownership disclosure in periodic filings because "periodic disclosure obligations can facilitate the scrutiny of related-party transactions by outside shareholders" and can thus enable minority shareholders to prove wrongdoing).

[17] LD Brandeis, *Other People's Money and How the Bankers Use It* (New York, Frederick A Stokes Company, 1914), 92.

[18] PL Davies, *Gower's Principles of Modern Company Law* (London, Sweet & Maxwell, 6th edn, 1997), 485.

[19] Ownership disclosure also functions as an early warning system when a takeover is not imminent but corporate control may nevertheless be affected, such as when activist hedge funds appear. The initial threshold for disclosure is not all that matters in this regard; the definition of acting in concert may be as impor-

tant, given the tendency of hedge funds to operate in “wolf packs”. See *infra* note 88 and accompanying text.

[20] M Siems, *Convergence in Shareholder Law* (Cambridge University Press 2008), 135.

[21] *Ibid*, 135.

[22] *Ibid*, 132-147.

[23] Proposal for a Directive of the European Parliament and of the Council on the Harmonisation of Transparency Requirements with Regard to Information About Issuers Whose Securities are Admitted to Trading on a Regulated Market, at 19, 25 COM (2003) 138 final (March 26, 2003).

[24] See *infra* Section D 2 and Section E.

[25] http://www.cbr.cam.ac.uk/pdf/Extended-Shareholder-Protection-Index.pdf.

[26] P Lele and M Siems, “Shareholder Protection: A Leximetric Approach” (2007) 7 *Journal of Corporate Law Studies* 17, 25-30; Siems, *supra* n 8, 116-21; J Armour, S Deakin, P Lele and M Siems, “How Do Legal Rules Evolve? Evidence from a Cross-Country Comparison of Shareholder, Creditor, and Worker Protection” (2009) 57 *American Journal of Comparative Law* 579, 599-604.

[27] The full index is included in the Appendix.

[28] La Porta et al, *supra* n 7, 6.

[29] We also believe that for our purposes, the definition we use is also preferable to the one used in La Porta et al’s anti-self-dealing index. While this index consists of three sub-variables relating to disclosure of ownership in the issuer, these only refer to periodic disclosure obligations by the issuer, not ad hoc disclosure by the relevant shareholder. Djankov et al, *supra* n 7, 434.

[30] In fairness, the variable used in La Porta et al’s investor protection index does address the issue of whether indirect share ownership also triggers a disclosure obligation, whereas the variable used in the CBR Index does not. However, as will be argued below, La Porta et al’s variable is insufficiently specific to capture relevant differences between countries in this respect (see *infra* n 93 and accompanying text).

[31] Sources: CBR Index, *supra* n 25; La Porta et al, *supra* n 7, 6 (data available at http://www.economics.harvard.edu/faculty/shleifer/files/securities_data1.xls).

[32] See *supra* Section C 1.

[33] See CBR Index, *supra* n 25.

[34] See articles 109-111 of the 2005 Mexico Stock Markets Act (in force since June 2006).

[35] Regressing mean on year and a constant term produces the result that the mean is statistically significant at the 1% level (t-value 4.423).
[36] Regressing standard deviation on year and a constant term produces the result that the standard deviation is statistically significant at the 1% level (t-value -4.81).
[37] The Russian Securities Law introduced in 1996 set the initial disclosure at 25%, which rule remained in force until 2006. However, the rules adopted by the Federal Commission on Stock Markets in 1998 required disclosure upon acquisition of a 5% stake in certain major companies (this change is reflected in our data). Apparently, there was uncertainty as to whether the Federal Commission had the authority to impose more stringent requirements than stipulated by the Securities Law, which may explain why, in 2003, the stock exchange rules were amended so that the threshold was 25%, consistent with the Securities Law (this change is also reflected in our data). E-mail from Russian counsel dated 26 June 2009 (on file with authors).
[38] See http://www.uicc-community.org/templates/ccc/pdf/WBHighIncomeCountries.pdf.
[39] The decreasing difference between the two groups of countries can be seen from Table 4, which shows that in 1995, the difference between the means was 0.26, and that by 2005, the difference between the means had reduced to 0.17. Again, the results are skewed by one outlier, Russia, which increased the threshold from 5% to 25% in 2003. See *supra* n 37. Disregarding Russia, the difference between the means would be even smaller.
[40] J Armour, S Deakin, P Sarkar, M Siems and A Singh, "Shareholder Protection and Stock Market Development: An Empirical Test of the Legal Origins Hypothesis" (2009) 6 *Journal of Empirical Legal Studies* 359.
[41] Art. 4 (1) of Council Directive 88/627/EEC, On the Information to be Published when a Major Holding in a Listed Company is Acquired or Disposed Of, 1988 OJ (L 348) 62.
[42] K Pistor, M Raiser and S Gelfer, "Law and Finance in Transition Economies" (2000) 8 *Economics of Transition* 325, 340.
[43] See R La Porta, F Lopez-de-Silanes and A Shleifer, "The Economic Consequences of Legal Origins" (2008) 46 *Journal of Economic Literature* 285, 310 (noting that "the [legal origins theory] is (…) consistent with the evidence on finance. The better protection of both shareholders and creditors in common law countries than especially in the French civil law ones is consistent with the principal historical narrative of the greater security of private property and bet-

ter contract enforcement under common law"). With respect to disclosure obligations, albeit of a different nature (see *supra* n 16 and 29) see Djankov et al, *supra* n 7, 440-441 (finding that the listed buyer in their hypothetical conflicted transaction is required to make full ex-post disclosure (including with respect to share ownership) in periodic filings in 43% of common law countries, but only in 12% of civil law countries) and La Porta et al, *supra* n 7, 14-16 (finding that common law countries have more extensive mandatory disclosure requirements for the prospectus, including with respect to share ownership).

44 For a detailed discussion, see Mathias Siems, "Legal Origins: Reconciling Law & Finance and Comparative Law" (2007) 52 *McGill Law Journal* 55, 62-70.

45 Following Siems, *ibid*, 72-81.

46 This is true not only for the initial disclosure obligation but also for subsequent disclosure obligations. If, for example, the trigger for the mandatory bid is set at 30% of the voting rights, it makes sense to require disclosure upon crossing the 30% threshold. This does not necessarily mean, however, that both obligations are triggered under the exact same circumstances. In the EU, for example, the mandatory bid forms part of the takeover rules (contained in the Takeover Directive) while the disclosure obligation forms part of the rules concerning issuer disclosure requirements (contained in the Transparency Directive). Each provision has its own definition of "acting in concert", so the relevant provisions need not be triggered simultaneously.

47 Indeed, it is because of this feature that both were included as a variable in the CBR Index; see text accompanying n 5-8.

48 For the problem of endogeneity in law and finance research, see also Armour et al, *supra* n 40, 346-7, 368-9, 375-6.

49 Source: R La Porta, F Lopez-de-Silanes and A Shleifer, "Corporate Ownership Around the World" (1998) 54 *Journal of Finance* 471 (variable on widely held ownership large publicly traded firms: 20% cut-off point; data for 1995).

50 Source: RM Stulz, "The Limits of Financial Globalization" (2005) 60 *Journal of Finance* 1595, 1617 (variable on percentage of widely held firms).

51 Source: W Carlin, A Charlton and C Mayer, "Capital Markets, Ownership and Distance" (CEPR Discussion Paper No. 5764, July 2006, available at http://ssrn.com/abstract=931493), 34, 35 (percentage of firms).

52 Source: World Bank Data, available at http://info.worldbank.org/governance/wgi/index.asp: the "rule of law" index measures "the extent to which agents have confidence in and abide by the rules

of society, in particular the quality of contract enforcement, the police, and the courts, as well as the likelihood of crime and violence".

[53] Source: H Jackson and M Roe, "Public and Private Enforcement of Securities Law" (Harvard Public Law Working Paper No. 08-28, available at http://ssrn.com/abstract=1000086) (variable on Extrapolated Budget per Billion US Dollar of GDP 2006).

[54] Source: World Bank's World Development Indicators, available at http://www.worldbank.org/data/ (stock market capitalization as percentage of GDP).

[55] In order to address potential outliers we have also calculated the correlation coefficient between the rules on ownership disclosure and the log transformation of variables of Table 8. However, the results are almost identical to the ones of Table 9 (namely: 0.43, 0.09, 0.06 and 0.37, -0.07, 0.08).

[56] Since we do not have the data for 2006, we examined the relationship between this variable and the 2005 data on ownership disclosure.

[57] See *supra* section B 2.

[58] Lele and Siems, *supra* n 26, 35, 36.

[59] Indeed, the average "scores" of the countries with at least 50% widely held ownership are 0.75 (for both 1995 and 2002), whereas they are only 0.51 (in 1995) and 0.61 (in 2002) for the other countries.

[60] See *supra* section D 1.

[61] R La Porta, F Lopez-de-Silanes, A Shleifer and R Vishny, "Law and Finance" (1998) 106 *Journal of Political Econonomy* 1113, 1145 (hypothesising that companies in countries with poor investor protection have more concentrated ownership). See also Djankov et al, *supra* n 7, 449, 456 (finding that increasing the ex-post private control of self-dealing index (which includes variables for share ownership disclosure in periodic filings) by two standard deviations is associated with a reduction of nine percentage points in ownership concentration) and La Porta et al, *supra* n 7, 17, 19 (finding that their disclosure requirements index (which includes a variable for share ownership disclosure in the prospectus) is negatively correlated with a variable for ownership concentration).

[62] Armour et al, *supra* n 40, 364-371. See also *infra* n 72 and accompanying text.

[63] See *supra* section B 2.

[64] See Fox, *supra* n 15, 31-35.

[65] Testimony Concerning Regulation of Over-The-Counter Derivatives by

Chairman Mary L. Schapiro (U.S. Securities and Exchange Commission) before the Subcommittee on Securities, Insurance, and Investment Committee on Banking, Housing and Urban Affairs, United States Senate, June 22, 2009, available at http://www.sec.gov/news/testimony/2009/ts062209mls.htm.

[66] L Bebchuk and Z Neeman, "Investor Protection and Interest Group Politics" (Harvard Law and Economics Discussion Paper No. 603/2008, available at http://ssrn.com/abstract=1030355) (forthcoming in *Review of Financial Studies*). See also Siems, *supra* n 20, 234-239.

[67] Another reason why managers have an interest in lobbying for stringent ownership disclosure rules is because it enables the issuer to identify and communicate with its shareholders; see *supra* text accompanying n 22. See also Michael C. Schouten, "The Political Economy of Cross-Border Voting in Europe", *Columbia Journal of European L*aw (forthcoming 2009) (describing the lobbying efforts of issuers with respect to cross-border voting, which efforts are also driven, in part, by issuers' desire to communicate with their shareholders), also available at http://ssrn.com/abstract=1507633.

[68] JR Macey and JM Netter, "Regulation 13D and the Regulatory Process" (1987) 65 *Washington University Law Quarterly* 131, 157, 158. See also Dorothee Fischer-Appelt, "Implementation of the Transparency Directive - Room for Variations across the EEA" (2007) 2 *Capital Markets Law Journal* 133, 148 (suggesting that Germany's recent decision to lower its initial disclosure threshold from 5% to 3% was driven by the controversial approach of Deutsche Börse by hedge funds in 2005); CJ Milhaupt and K Pistor, *Law & Capitalism: What Corporate Crises Reveal about Legal Systems and Economic Development around the World* (The University of Chicago Press, 2008), 122, 124 (describing how ownership disclosure rules in South Korea were tightened as part of legal reforms aimed at strengthening legal defences available to incumbent management, which reforms apparently constituted a response to a perceived increased threat of foreign takeovers of Korean companies).

[69] M Pagano and P Volpin, "The Political Economy of Corporate Governance" (2005) 95 *American Economic Review* 1005, 1006.

[70] Marco Ventoruzzo, "Takeover Regulation as a Wolf in Sheep's Clothing: Taking U.K. Rules to Continental Europe" (2008) 11 *University of Pennsylvania Journal of Business Law* 135, 168.

[71] J McCahery, Z Sautner and L Starks, "Behind the Scenes: The Corporate Governance Preferences of Institutional Investors" (Working Paper 2009, available at http://ssrn.com/paper=1331390), 38, 50,

[72] Armour et al, *supra* n 40, at 366 (using as indicators (1) stock market capitalisation as a percentage of GDP, (2) the value of stock trading as a percentage of GDP, (3) the stock market turnover ratio, and (4) the number of domestic companies listed on the stock market per million of population).

[73] R La Porta, F Lopez-de-Silanes, A Shleifer and R Vishny, "Legal Determinants of External Finance" (1997) 53 *Journal of Finance* 1131, 1141. See also Djankov et al, *supra* n 7, 448 (finding that their variable on ex post private control of self-dealing (which includes sub-variables relating to ownership disclosure in periodic filings) is positively correlated to a variable for stock market capitalisation to GDP) and La Porta et al, *supra* n 7, 17, 19 (finding that their disclosure requirements index (which includes a variable for share ownership disclosure in the prospectus) is positively correlated to a variable for stock market capitalisation to GDP).

[74] Pistor et al, *supra* n 42, 356 (the authors use three variables to measure the effectiveness of legal institutions in transition economies: "(1) a rule of law rating provided by outside expert assessment; (2) an index of the effectiveness of corporate and bankruptcy law in transition economies constructed by the EBRD; and (3) survey data on the ability of the legal system to protect private property rights and enforce contracts").

[75] E Berglöf and A Pajuste, "Emerging Owners, Eclipsing Markets? Corporate Governance in Central and Eastern Europe", in PK Cornelius and B Kogut (eds.), *Corporate Governance and Capital Flows in a Global Economy* (Oxford University Press, 2003), 267, 286, 291.

[76] Armour et al, *supra* n 40, 373.

[77] See *supra* section C 3. Indeed, all of our 13 developed countries have a positive score in the World Bank's rule of law index.

[78] Brian Cheffins, *Corporate Ownership and Control: British Business Transformed* (Oxford University Press, 2008).

[79] See *supra* section C 2.

[80] CESR, *Summary of Responses to Questionnaire on Transposition of the Transparency Directive* (CESR/08-514b Annex II) (2008); IOSCO, *Protection of Minority Shareholders in Listed Issuers*, Appendix A (2009).

[81] Plans to lower the threshold to 3% currently exist in, for example, the Netherlands: see Dutch Ministry of Finance, *supra* n 4.

[82] European Securities Markets Expert Group (ESME), *First Report of ESME on the Transparency Directive* (2007), 5.

[83] For a discussion of the costs of ownership disclosure, see Schouten, *supra*

n 9.

[84] Lele and Siems, *supra* n 26, 34.

[85] Cf ibid.

[86] To be sure, there are many other aspects of ownership disclosure rules that affect their stringency, such as the maximum period between acquisition and disclosure. For an overview of such aspects, see IOSCO, *supra* n 80, Appendix A (2009)

[87] European Corporate Governance Network Executive Report (prepared by M Becht), *Strong Blockholders, Weak Owners and the Need for European Mandatory Disclosure* (1997), 33, 44, 90.

[88] For a useful discussion of issues arising in this respect, see OECD, *Shareholder cooperation or acting in concert? Issues for consideration* (2008). As noted *supra* n 45, the concept of acting in concert is applied not only in the context of disclosure obligations but also in the context of mandatory bid obligations. Interestingly, the UK Takeover Panel has recently offered detailed guidance with respect to the acting in concert provisions of the Takeover Code, based on its belief that these provisions neither have the intention or the effect of acting as a barrier to co-operative action by fund managers and institutional shareholders or of constraining normal collective shareholder action. Takeover Panel, Practice Statement nr. 26 (2009).

[89] This is true, for example, for all EU countries as a result of article 13 of Directive 2004/109/EC (the Transparency Directive).

[90] FSA Handbook, DTR 5.3.1.

[91] For a detailed explanation, see FSA, *supra* n 2.

[92] European Securities Markets Expert Group (ESME), *Views on the issue of transparency of holdings of cash settled derivatives* (2009) 7-12 (recommending separate disclosure of long positions and short positions in cash-settled derivatives, if these positions exceed a high enough threshold (5% or 10%). The reason for ESME to recommend separate disclosure, contrary to the UK where physically settled equity derivatives, cash-settled equity derivatives and shares should be aggregated, is related to the fact that present differences in implementation of the Directive lead to administrative costs for asset management companies operating on a cross-border scale. In order not to get caught in these complexities, ESME is pleading for a reporting obligation that is general and harmonised at EU level and therefore separate from reporting of normal shares).

[93] La Porta et al, *supra* n 7, 6. The full definition reads as follows: “An index of disclosure requirements regarding the Issuer’s equity ownership structure.

Equals one if the law or the listing rules require disclosing the name and ownership stake of each shareholder who, directly or indirectly, controls 10% or more of the Issuer' s voting securities; equals one half if reporting requirements for the Issuer's 10% shareholders do not include indirect ownership or if only their aggregate ownership needs to be disclosed; and equals zero when the law does not require disclosing the name and ownership stake of the Issuer's 10% shareholders. We combine large shareholder reporting requirements imposed on firms with those imposed on large shareholders themselves."

[94] See Table 1 and, for the countries not listed in Table, the underlying data referred to *supra* n 31.

[95] See *supra* n 25,

[96] See eg section 5.38 (1) of the Dutch Financial Markets Supervision Act.

[97] See eg the US Schedule 13-D, 17 CFR 240.13d-101.

[98] Ibid.

[99] The scope of French ownership disclosure rules, for example, has recently been expanded such that clarity on the purpose of acquisition needs to be provided more frequently, and that more information needs to be disclosed in this regard (Ordinance no 2009-105 of 30 January 2009). In the Netherlands, ownership disclosure rules are also likely to be amended such that shareholders need to indicate whether or not they agree with the company's strategy. See *supra* n 4.

[100] See *supra* section B 1.

[101] See eg the US Schedule 13-D, 17 CFR 240.13d-101.

[102] On the issue of empty voting, see, eg, HT Hu and B Black, "The New Vote Buying: Empty Voting and Hidden (Morphable) Ownership" (2006) 79 *Southern California Law Review* 811, 815, 816.

[103] Accordingly, expanded disclosure requirements would not only reinforce the mechanism through which ownership disclosure improves market efficiency, but also the mechanism through which ownership disclosure improves corporate governance; see Schouten, *supra* n 9, 50-1. This is the reason for which the Dutch government has recently proposed to require blockholders to also disclose gross short positions. Dutch Ministry of Finance, *Voorstel wijziging Wft uitbreiding meldingsplicht substantiële zeggenschap- en kapitaalbelangen met economische long posities* (2009), available at http://www.minfin.nl/Actueel/Consultaties/2009/09/Consultatie_Voorstel_wijziging_Wft_ter_uitbreiding_meldingsplicht_substantiële_zeggenschap_en_kapitaalbelangen_met_economische_long_posities.

[104] See Hu and Black, *supra* n 102, 870.
[105] See *supra* section B 2.
[106] Indeed, this is one of the reasons why the Dutch government has proposed that shareholders be required to indicate whether or not they agree with the company's strategy. See Dutch Ministry of Finance, *supra* n 4, 4, 10.
[107] See UK Companies Act 2006, art. 793.
[108] Charles M. Nathan, Second Generation Advance Notice Bylaws and Poison Pills (2009), available at http://blogs.law.harvard.edu/corpgov/2009/04/22/second-generation-advance-notice-bylaws-and-poisonpills/.
[109] See *supra* n 4.
[110] "Hedge funds threaten to quit UK over draft EU investment laws", The Financial Times, 4 June 2009; "Draft EU hedge fund rules to be revised", The Financial Times, 28 July 2009; "EU rules would see hedge funds go overseas" The Financial Times, 21 September 2009; "Investors welcome revised EU fund rules", The Financial Times, 13 November 2009.
[111] For a discussion of the costs of ownership disclosure, see Schouten, *supra* n 9.
[112] Source: M Siems, "Shareholder Protection Around the World ('Leximetric II')" (2008) 33 *Delaware Journal of Corporate Law* 111, 116-9; Armour et al, *supra* n 40, 354-5; M Siems, P Lele, P Iglesias-Rodriguez, V Mollica, T Klauberg and S Heidenhain CBR Extended Shareholder Protection Index, 2008, available at http://www.cbr.cam.ac.uk/pdf/Extended-Shareholder-Protection-Index.pdf.
[113] We have not included other powers of the general meeting (eg for amendments of the articles, mergers and division) because they usually do not differ between countries.
[114] If the law of a given country does not provide the right to put an item on the agenda of a general meeting (including annual general meeting), we coded the right to call an extraordinary general meeting provided the minority shareholders can utilise this right to discuss any agenda item.
[115] It is not enough that proxy voting is possible (which is the case in most countries).
[116] A two-way proxy form refers to a form which can be used in favour and against a proposed resolution.
[117] This may be regulated in securities law (including listing requirements).
[118] This may be regulated in a corporate governance code. If there is no "comply

or explain" requirement, this may, however, justify a lower score.

[119] It may be noted that (1) in a two-tier system this variable concerns only members of the supervisory board (not the management board); (2) if the law of a given country does not require that a certain percentage of the board be "independent", but if it provides that the members of some special committees of the board must be independent (eg compensation and audit committee), so that it indirectly prescribes that some of the board members be 'independent', a lower score was assigned here.

[120] Other intermediate scores are also possible. They are calculated in the same way, i.e. score = percentage of independent board members/2; If the law requires a fixed number of independent directors (eg always 2 independent directors), please use the (estimated) average size of boards in order to calculate the score.

[121] If the law of a given country follows a two-tier-system, this variable is addressed to both the management and the supervisory board.

[122] This variable can be based on a specific provision in statutory or case law. It can also be based on contract, for instance, if the company has to conclude an employment contract with the director and this contract cannot be terminated without good reason.

[123] This restricts dismissal because either (1) an immediate unilateral termination of this contract may not be possible or (2) the directors have to be compensated in case of immediate unilateral termination of this contract.

[124] Variables 7 and 8 only concern the law. We did not consider here the efficiency of courts in general while coding these variables.

[125] We have also given intermediate scores, eg 0.75 for a 1% hurdle, 0.25 for a 10 or 15% hurdle. A 5% hurdle led to the score 0.5.

[126] Please note that the substantive requirements for a lawful decision of the general meeting are not coded.

[127] We have also given intermediate scores, eg 0.25 for a 33% hurdle and 0.66 for a 20% hurdle.

[128] This variable may be regulated in securities law or takeover code/law.

[129] This variable may be regulated in securities law.