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Corporate boards in Europe: size, independence and gender diversity

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1. Introduction

The board of directors is one of the most important governance mechanisms in modern corporations. In principle, the board is responsible for approving major strategic and financial decisions. It has access to privileged and timely information about the firm, meets regularly to discuss this information and has a fiduciary duty towards the shareholders it represents. The role of the board is to advise and monitor management, and for that purpose the board is typically staffed with distinguished individuals who have the required skills to fulfil this role. As Adams and Ferreira (2007) point out, the degree to which a board can fulfil its function also depends on the quality of information provided by management.

Some observers believe that the board is the first line of defence in corporate governance. The importance of corporate boards is reflected in an ample academic literature on this topic and in the regulatory focus that they attract. For reasons of data availability and comparability, much of the academic literature on boards concentrates on US firms. This chapter provides comparable board data for many European countries.

It is the first study to provide a comprehensive analysis of the determinants of board structure variables in European countries. The chapter focuses on the determinants of board characteristics, rather than on the consequences of these characteristics for firm policies and performance. Thus, this study fits into the literature that shows that the composition of boards is related to a number of firm characteristics such as size, growth opportunities, leverage and proxies for information asymmetry, amongst others (Boone et al. 2007; Coles et al. 2008; Linck, Netter and

Yang 2008; Lehn et al. 2009; Ferreira et al. 2011). However, this literature focuses almost exclusively on the boards of US firms.

Understanding the variation in board structure across European countries is important, because many of the regulatory proposals that have emerged since the crisis aim at reforming European boards. The most ambitious proposals have been directed at reforming the boards of financial firms (Kirkpatrick 2009; Walker 2009; European Commission 2010). But there have also been more general trends toward the regulation of board composition in non-financial firms. In particular, proposals that aim to give women better representation on corporate boards have recently gained momentum. For example, the Davies Report recommends that all FTSE 100 boards should aim for a minimum of 25 per cent female representation by 2015, and also that the UK Corporate Governance Code should be amended to introduce an explicit policy concerning board diversity (Davies 2011). Recently, countries such as Spain and France have introduced legislation with explicit quotas for female directors on corporate boards.

This chapter examines some of the determinants of board size, director independence and board gender diversity in 28 European countries (22 of which are from the EU). Sample data include roughly 2,600 European firms from many different sectors in 2010. Part of the collected data date back to 2000, which allows us to provide a thorough description of the evolution of these variables in the pre-crisis and post-crisis periods. Similar data are available on 4,014 US firms, which allow us to compare the evolution of these variables in Europe with that of US firms. In sum, this study provides the most comprehensive analysis to date of these three board characteristics in European countries.

The chapter first describes the aggregate time trends in EU countries and then compares them to the trends in the US. The findings show that board size, on average, has been declining in both EU and US firms. The average board size in both the EU and the US was about 8.5 directors in 2010. Most of the reduction in the average board size is explained by composition effects: young firms enter the dataset more often than old firms, and the former tend to have smaller boards. Once this is taken into account, the change in board size from 2000 to 2010 is not very remarkable.

Quite a different situation is found when looking at the board independence data. Board independence (the proportion of directors who are classified as independent non-executive directors) has been increasing both in the EU and in the US, but the levels of independence are much higher in the US (74 per cent) than in the EU (34 per cent). Results also

show that although board gender diversity (the proportion of female directors on the board) has been on the rise everywhere, the average female representation in EU boards is still quite low (8 per cent) and not much different from that of US companies.

The chapter next analyses the cross-section of board characteristics in European firms after the crisis (our benchmark year is 2010). The analysis shows that variation in board size is reasonably well explained by basic firm characteristics, such as firm size and industry classification. In contrast, both board independence and board gender diversity are better explained by country characteristics, a finding that suggests an important role for regulation in shaping those variables. Governance regulation varies across Europe at the country level, whilst the various European countries vary considerably in terms of size, income and political and economic history. The economic differences are most prominent in the former communist countries towards the east, many of which joined the EU as recently as 2007.

The chapter further investigates the determinants of the changes in these board characteristics in the post-crisis period (2007 to 2010). The most interesting results are those that indicate that small and poorly-performing firms in 2007 tended to decrease both board size and board independence. Such changes are consistent with poorly performing firms changing their boards to increase focus and improve their expertise.

Our findings are consistent with some of the existing evidence in the international corporate governance literature, such as the finding that most of the cross-sectional variation in governance variables is explained by country characteristics (Doidge et al. 2007; Aggarwal et al. 2009). Some recent papers have focused on the relation between board characteristics in financial firms and their performance during the crisis (examples include Minton et al. 2010; Beltratti and Stulz 2009; Erkens et al. 2010; Chesney et al. 2010; Adams 2012). One common theme across these papers is the finding that financial firms with pro-shareholder boards seemed to have performed worse during the crisis than firms with pro-management boards.

The structure of the chapter is as follows. Section 2 briefly discusses the sample and the data. Section 3 presents the main facts and trends related to EU corporate boards. Section 4 presents the main results concerning the cross-section distribution of board characteristics in Europe. Section 5 presents a series of robustness tests. Section 6 discusses the potential policy implications of this study and provides some brief concluding remarks.

2. Data

The sample consists of an unbalanced panel of 2,812 listed firms in 28 European countries, of which 2,661 are from the 22 EU countries covered. The panel data stretch over an eleven-year time period, from 2000 to 2010, and are complemented by a panel of 4,014 US-based firms. The panel has a strong bias towards UK and US data in its early years. Overall, the data contain 60,060 firm-year observations spanning the whole period. Only a subset of these data is used in this analysis, which depends on the availability of data.

The analysis is based on a copy of the entire BoardEx database drawn in September 2011. We exclude all non-European and non-US firms, as well as all non-listed firms, firms that were only traded in over-the-counter (OTC) markets and the so-called 'shell companies', which are not economically active. As the European coverage of BoardEx improved substantially over the course of the 2000s, the analysis is anchored on the years 2007 and 2010, covering 2,375 and 2,600 firms, respectively. The findings from Europe are compared with data from 4,014 US-based firms. The analysis does not exclude any industry or sector group, but includes controls for 44 sectors. The sector data also come from BoardEx.

The dataset is complemented with financial data, sourced from CapitalIQ. We were able to match 2,553 European firms to the BoardEx dataset and 3,939 firms that have their legal seat in the US. To make the data comparable, for those countries that are not part of the Eurozone all financial data are converted into EUR at market prices. Country level economic indicators, such as the size of the economically active population and the gross national income per capita, are sourced from Euromonitor.

As we obtain director level data from BoardEx, we aggregate the key variables (board size, board independence and board gender diversity) from individual director data. Board size is defined as the number of board members in a given year. In the case of two-tier boards, we combine both the management and the supervisory board. We calculate board independence as the proportion of self-declared independent directors over board size. Although the definition of director independence varies slightly across countries, a typical definition considers a director independent if he or she is not an employee, a former executive, a relative of a current corporate executive, or someone who has business relations with the company. Board gender diversity is measured as the

proportion of women on a board. We have a complete set of independence and gender data available.

3. European corporate boards: facts

This section presents an overview of the corporate board data for selected European countries.

Figure 4.1 plots the average board size, board independence and gender diversity (the proportion of women on boards) for twenty-two EU countries from 2000 to 2010. The equivalent figure including all of the European countries in the sample looks very similar, and is omitted for the sake of brevity.

The three time series in Figure 4.1 display clear, if not remarkable, patterns. Board size has declined significantly, from an average of 11.4 in 2000 to an average of 8.6 in 2010. The decline in the size of the board is monotonic, but it is most dramatic from 2000 to 2006, when the average board size fell by almost half a director per year. As can be observed from

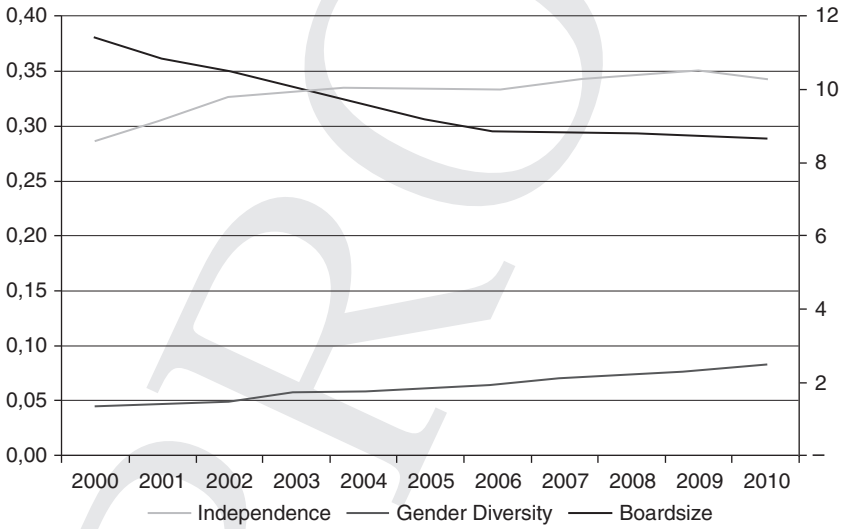

Figure 4.1: Time trends in board characteristics: European Union, 2000–10
Note: This figure shows the averages of board size (the number of directors), board independence (the proportion of independent directors on the board) and board gender diversity (the proportion of female directors on the board) for all EU firms in the sample.

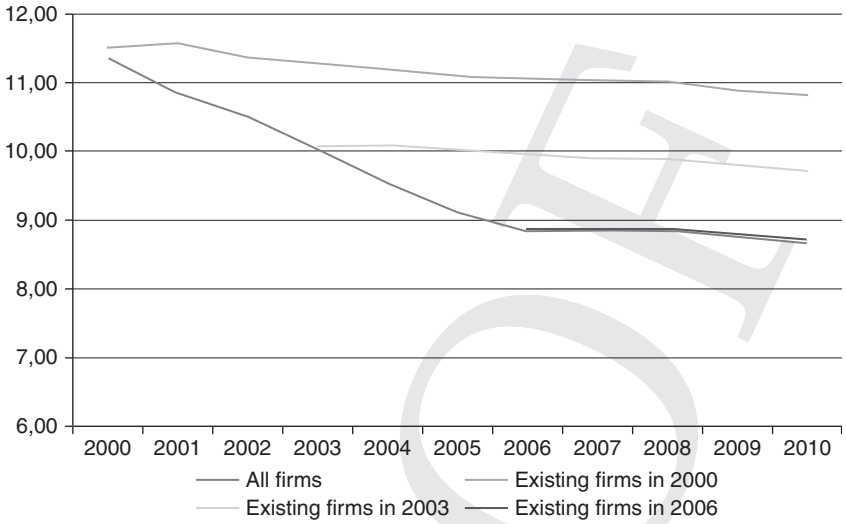

Figure 4.2: Time trends in board size: European Union, 2000–10, stable samples
Note: This figure shows the averages of board size (the number of directors) for all EU firms in the sample and for stable samples of EU firms from 2000, 2003 and 2006.

Figure 4.2, part of this trend is explained by composition effects, as the sample size in 2010 is three times larger than the sample size in 2000. Most of the newly added firms in the sample are small, and small firms have small boards. However, this trend looks similar if the sample is kept stable, although the fall in board size is less dramatic. In a stable sample of existing firms in 2000 (the top line in Figure 4.2), board size falls from an average of 11.5 directors to 10.8 directors in 2010. In a stable sample of existing firms in 2003, board size falls from an average of 10.1 directors to 9.7 directors in 2010.

Board independence has been on the rise since 2000, but the changes are not very impressive. The fraction of independent directors on the board has increased from 29 per cent in 2000 to 34 per cent in 2010. However, here the composition effect works in a different direction (see Figure 4.3). In a stable sample of existing firms in 2000, board independence increases from an average of 29 per cent to 42 per cent in 2010. In a stable sample of existing firms in 2003, board independence increases from an average of 33 per cent to 40 per cent in 2010. The new firms that enter the sample in each year have on average lower levels of board independence, which tends to attenuate the observed trend towards increasing board independence.

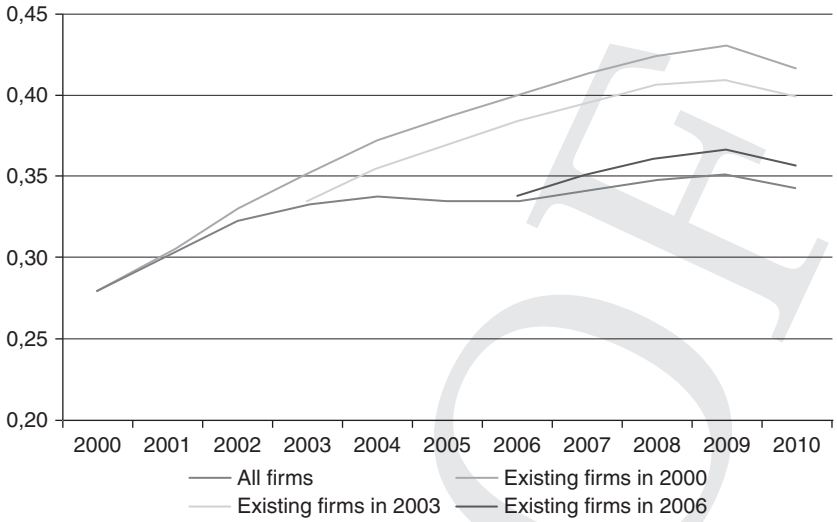

Figure 4.3: Time trends in board independence: European Union, 2000–10, stable samples

Note: This figure shows the averages of board independence (the proportion of independent directors on the board) for all EU firms in the sample and for stable samples of EU firms from 2000, 2003 and 2006.

The improvement in gender diversity has been relatively more pronounced, but the average levels of board gender diversity are still quite low. The fraction of female directors on the board has doubled from 2000 to 2010, but at an average of 8 per cent in 2010, such an increase is also not very impressive. Importantly, composition effects here appear to have little effect on this trend. Figure 4.4 shows that the newly added firms tended to have fewer women on their boards. However, the difference is not economically meaningful. The breakdown in Figure 4.4, however, has the advantage of making it clear that, on average, all firms have clearly been increasing female participation on their boards. In a stable sample of existing firms in 2000, female representation has increased from 4.5 per cent in 2000 to a little more than 10 per cent in 2010.

To provide a basis for comparison, Figure 4.5 plots the same averages for US firms. In the US, as in Europe, board size has been monotonically declining, from 9.8 in 2000 to 8.4 in 2010. In the US sample, however, this effect is almost fully explained by the addition of new firms to the sample (the corresponding figures are omitted here for brevity). Board

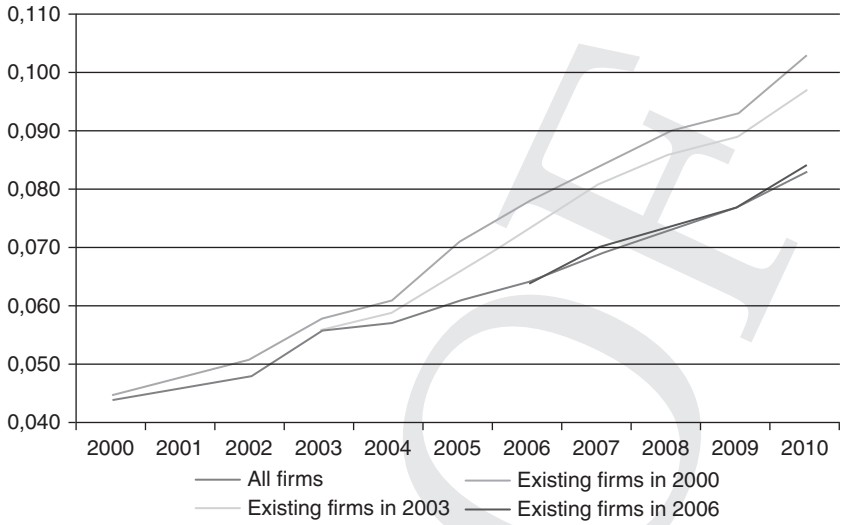

Figure 4.4: Time trends in board gender diversity: European Union, 2000–10, stable samples

Note: This figure shows the averages of board gender diversity (the proportion of female directors on the board) for all EU firms in the sample and for stable samples of EU firms from 2000, 2003 and 2006.

independence has increased more dramatically, from 53 per cent in 2000 to 74 per cent in 2010. Most of this increase occurs until 2003, probably reflecting the influence of the US governance reforms in 2001–03 (see also Ferreira et al. 2010). Composition effects are of little importance to explain the US trend towards more independent boards. Gender diversity has remained basically flat throughout this period at roughly 8 per cent–9 per cent, but it has increased for those firms that were in the sample since 2010, from 8 per cent to 13 per cent in 2010.

The evidence reveals that the average EU corporate board is currently very similar to the average US board on two dimensions: size and gender diversity. In both of these cases it is observed that EU firms have been catching up with US firms. However, US firms and EU firms remain very different in one dimension: board independence. The EU 'independence gap' with respect to the US was 19 percentage points in 2000. It then increased dramatically to 40 percentage points in 2010. This evidence makes it clear that, at least on average, the EU and the US appear strikingly different in terms of corporate board independence.

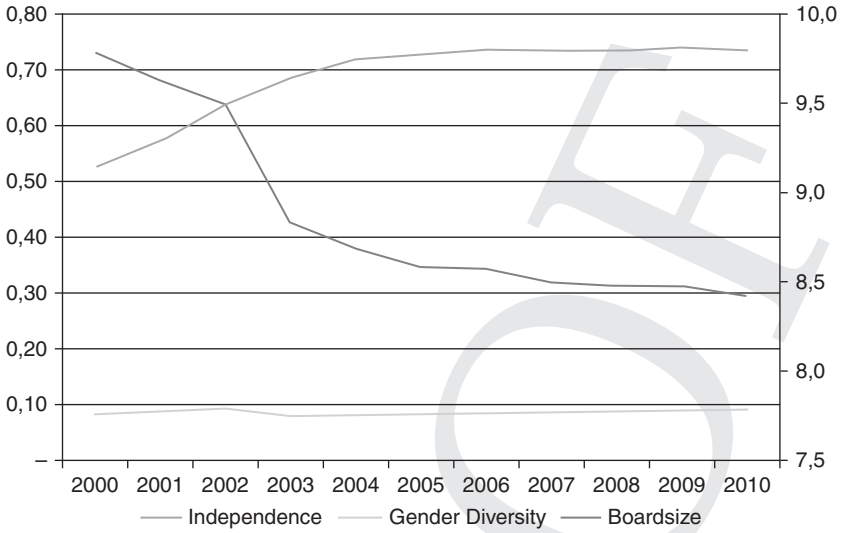

Figure 4.5: Time trends in board characteristics: United States, 2000–10
Note: This figure shows the averages of board size (the number of directors), board independence (the proportion of independent directors on the board) and board gender diversity (the proportion of female directors on the board) for all US firms in the sample.

The average picture for EU firms, somewhat misleading is however. There is much more heterogeneity across EU firms than across US firms. Table 4.1 reports the summary statistics of board size in 2010 for each country in the sample (which includes EU countries, some non-EU European countries and the US). The fact that UK firms have a very small average board size (6.5 directors) is the main reason that the average EU board size looks similar to the average US board size. Most of the other EU countries have significantly larger boards. The difference in board size is not simply due to countries with dual board structures: while Germany has an average board of 14 directors, the Netherlands has an average of 8.9 directors, which is not much higher than the US average. The next section discusses the determinants of the variation in board sizes amongst European countries.

Table 4.2 reports the summary statistics for board independence in 2010. Here the picture is different. Although there is much variation across countries, board independence levels are quite low everywhere, except in the US and Finland.

Table 4.1 *Board size across countries (2010)*

Country	Mean	SD	Min.	Max.	N
Austria	14.34	4.99	6	24	41
Belgium	9.46	3.57	5	23	65
Bulgaria	5.00		5	5	1
Croatia	14.50	0.71	14	15	2
Cyprus	8.33	4.44	4	18	9
Czech Republic	17.67	3.79	15	22	3
Denmark	11.41	3.43	6	20	34
Finland	7.87	1.26	6	12	31
France	10.76	4.25	3	27	247
Germany	13.99	6.83	3	30	183
Greece	9.63	3.52	5	19	52
Hungary	15.50	9.19	9	22	2
Iceland	6.67	1.53	5	8	3
Ireland	8.51	3.37	3	21	73
Italy	12.72	5.39	4	34	97
Liechtenstein	9.00	2.83	7	11	2
Luxembourg	8.67	2.78	5	17	21
Netherlands	8.88	2.96	3	16	90
Norway	7.43	2.33	3	12	63
Poland	13.43	3.41	7	20	21
Portugal	13.00	6.38	6	26	28
Romania	11.00		11	11	1
Russia	13.04	5.51	7	27	23
Slovenia	14.00		14	14	1
Spain	12.49	3.64	5	24	71
Switzerland	9.12	4.10	4	28	101
Turkey	9.20	1.99	7	14	10
United Kingdom	6.50	2.56	2	25	1,326
United States	8.42	2.51	2	33	3,799

Note: This table shows summary statistics of board size (the number of directors on the board) across countries in 2010.

Table 4.3 reports the facts on corporate board gender diversity. There are a few outliers, such as Norway (38 per cent), Finland (26 per cent), Iceland (29 per cent) and Slovenia (43 per cent). Without exception, explicit regulation can explain the higher proportions of female directors on corporate boards in these countries. Norway has had a binding female

Table 4.2 *Board Independence across countries (2010)*

Country	Mean	SD	Min	Max	N
Austria	0.39	0.26	0.00	0.83	41
Belgium	0.43	0.16	0.00	0.83	65
Bulgaria	0.00		0.00	0.00	1
Croatia	0.03	0.05	0.00	0.07	2
Cyprus	0.33	0.25	0.00	0.67	9
Czech Republic	0.11	0.09	0.00	0.18	3
Denmark	0.29	0.23	0.00	0.89	34
Finland	0.78	0.19	0.38	1.00	31
France	0.35	0.22	0.00	1.00	247
Germany	0.05	0.16	0.00	0.86	183
Greece	0.38	0.19	0.00	0.80	52
Hungary	0.30	0.04	0.27	0.33	2
Iceland	0.33	0.58	0.00	1.00	3
Ireland	0.46	0.28	0.00	0.91	73
Italy	0.43	0.17	0.00	0.84	97
Liechtenstein	0.49	0.08	0.43	0.55	2
Luxembourg	0.51	0.29	0.00	1.00	21
Netherlands	0.52	0.22	0.00	0.88	90
Norway	0.36	0.34	0.00	1.00	63
Poland	0.17	0.18	0.00	0.56	21
Portugal	0.25	0.17	0.00	0.57	28
Romania	0.00		0.00	0.00	1
Russia	0.31	0.25	0.00	1.00	23
Slovenia	0.00		0.00	0.00	1
Spain	0.38	0.18	0.00	0.88	71
Switzerland	0.42	0.38	0.00	1.00	101
Turkey	0.18	0.23	0.00	0.63	10
United Kingdom	0.34	0.25	0.00	1.00	1,326
United States	0.74	0.17	0.00	1.00	3,799

Note: This table shows summary statistics of board independence (the proportion of independent directors on the board) across countries in 2010.

director quota of 40 per cent since 2008. Iceland has passed a similar law, which will become binding in 2013. Finland requires boards to have at least one man and one woman. Slovenia, from which we have only one observation, has rules governing the gender balance of state-owned companies. Interestingly, Spain has passed a quota of 40 per cent that

Table 4.3 *Board gender diversity across countries (2010)*

Country	Mean	SD	Min	Max	N
Austria	0.05	0.06	0.00	0.22	41
Belgium	0.10	0.12	0.00	0.50	65
Bulgaria	0.00		0.00	0.00	1
Croatia	0.14	0.09	0.07	0.20	2
Cyprus	0.12	0.11	0.00	0.29	9
Czech Republic	0.05	0.05	0.00	0.09	3
Denmark	0.11	0.08	0.00	0.30	34
Finland	0.26	0.12	0.00	0.43	31
France	0.12	0.11	0.00	0.75	247
Germany	0.06	0.08	0.00	0.38	183
Greece	0.08	0.12	0.00	0.43	52
Hungary	0.02	0.03	0.00	0.05	2
Iceland	0.29	0.12	0.20	0.43	3
Ireland	0.07	0.09	0.00	0.36	73
Italy	0.06	0.08	0.00	0.40	97
Liechtenstein	0.05	0.06	0.00	0.09	2
Luxembourg	0.05	0.11	0.00	0.38	21
Netherlands	0.08	0.10	0.00	0.38	90
Norway	0.38	0.10	0.00	0.63	63
Poland	0.08	0.06	0.00	0.17	21
Portugal	0.05	0.08	0.00	0.27	28
Romania	0.09		0.09	0.09	1
Russia	0.07	0.09	0.00	0.33	23
Slovenia	0.43		0.43	0.43	1
Spain	0.10	0.08	0.00	0.27	71
Switzerland	0.07	0.08	0.00	0.29	101
Turkey	0.11	0.14	0.00	0.38	10
United Kingdom	0.06	0.10	0.00	0.60	1,326
United States	0.09	0.10	0.00	0.67	3,799

Note: This table shows summary statistics of board gender diversity (the proportion of female directors on the board) across countries in 2010.

will become binding in 2015, but the fraction of female directors is still only 10 per cent.

The facts presented in this section raise the question of what explains the variation in corporate board characteristics amongst the countries in our sample. This is the question to which we now turn.

4. The cross-section of corporate board structure in Europe

This section focuses on the cross-sectional variation in board structure. As data span over eleven years, we focus initially on a representative year and choose the most recent year for which we have data – 2010 – as the benchmark.

4.1. Methodology

How much of the cross-sectional variation in board structure is explained by country effects, industry effects and firm characteristics? Methodologically, we follow the approach of Ferreira et al. (2011) and run linear regressions of board structure variables (size, independence and gender diversity) on firm characteristics, industry dummies and country dummies. We then compare the incremental (adjusted) R-squared(R^2) R of each set of explanatory variables (this is also the approach adopted in Doidge et al. 2007). The goal of this analysis is not to make inferences about the estimated parameters, but to compare the explanatory power, or goodness of fit, of these different specifications.

The main variables of interest are the size of the board, the proportion of independent directors and the proportion of female directors on the board. The set of firm characteristics includes two measures of firm size (the book value of assets and sales), the market to book ratio, return on assets (which is a measure of accounting profitability) and 44 industry dummies. In the robustness section, we also run regressions using sales growth instead of sales and regressions that include controls for leverage. The list of firm characteristics is kept short, for the sake of simplicity.

To address the question of which country characteristics affect board structure, we also run regressions with country characteristics on the left-hand side, such as (the log of) the gross national income per capita, (the log of) the size of the economically active population, a dummy variable indicating a mandatory one-tier board structure and a dummy indicator for former communist countries. Parsimonious model specifications are chosen in order not to lose too many observations due to missing data.

The per capita gross national income serves as a proxy for economic development. The economically active population measures both the size of the country and the depth of labour markets. We expect both variables to have some influence on board characteristics. The former communist country dummy may capture the unique characteristics of countries that underwent recent waves of privatisation.

One of the few board regulations that can be compared across countries is the requirement that firms must be run by a single board, as in the US, or by two different boards, as in Germany. In the two-tier structure, the advisory and monitoring functions of boards are formally separated into a management and a supervisory board (see Adams and Ferreira 2007). The rules on one-tier and two-tier board structures may also serve as a proxy for the overall governance system of a country. Table 4.4 provides a classification of countries into one-tier or two-tier board structures. As can be seen, some European countries adopt a single-tier board structure (e.g. the UK), some adopt a dual board structure (e.g. Germany) and some allow for a choice between the two (e.g. France).

A two-tier board structure is often coupled with stronger labour representation on boards. European boards are fundamentally different from US boards in respect of labour participation rights. For example, whilst these rights are unknown in the US and UK, German laws allocate substantial participation, or co-determination rights, to labour representatives. There is substantial variation in participation rights across the other European countries. The particular German situation is a direct result of the German post-war consensus, in which the labour unions agreed to a growth rate in wages that was below the growth rate in productivity for many years after World War II. This compromise helped the industry to re-capitalise itself more quickly and to rebuild the country after the war. Whilst this structure gives labour a *de facto* ownership over some part of the capital stock and, with it, representation rights on boards in Germany, other European countries adopted this model voluntarily and without the historical context. After the end of the communist area, co-determination principles were adopted widely in Eastern Europe as many countries modelled their own corporate law along the lines of the German code. Co-determination rights and a two-tier board structure often go hand-in-hand. Roe (2003) argues that the politically awarded power of co-determination on board level brings about concentrated ownership as a counter-balance to employee/stakeholder strength.

Finally, to study the determinants of recent *changes* in board structure, we also run regressions of the change in the relevant board characteristic of each firm from 2007 to 2010. All other variables are defined as before, but are now measured as of 2007. This last specification is used to study the determinants of the most recent changes, which may have occurred in the post-crisis period.

Table 4.4 *One-tier versus two-tier board structures*

Country	One-Tier Board Structure	Two-Tier Board Structure	Choice over Board Structure
Austria	0	1	0
Belgium	1	0	0
Bulgaria	0	0	1
Croatia	0	1	0
Cyprus	1	0	0
Czech Republic	0	1	0
Denmark	0	1	0
Finland	1	0	0
France	0	0	1
Germany	0	1	0
Greece	0	0	1
Hungary	1	0	0
Iceland	1	0	0
Italy	0	0	1
Liechtenstein	0	0	1
Luxembourg	0	0	1
Netherlands	0	1	0
Norway	1	0	0
Poland	0	1	0
Portugal	0	0	1
Republic of Ireland	1	0	0
Romania	1	0	0
Russian Federation	0	0	1
Slovenia	0	1	0
Spain	1	0	0
Switzerland	0	0	1
Turkey	1	0	0
United Kingdom	1	0	0
United States	1	0	0

Note: The table is based on Adams and Ferreira (2007) and Ferreira et al. (2010), and was extended by consulting the individual governance codes and, where necessary, the corporate law provisions, in March 2012. For the Nordic countries (except Denmark) we follow note 148 by Hansen, in Geens et al. (2010). Denmark was categorised as a two-tier board after observing that firms calculate the size of the board by combining both tiers.

4.2. *Board size*

Table 4.5 reports the estimates of the parameters of the models (a)–(e) (as reported in the Table), in which the dependent variable is the log of board size. All regressions are cross-sectional and estimated by ordinary least squares with robust standard errors.

Column (a) in Table 4.5 shows results for a regression of the log of board size on a set of firm characteristics: (log) assets; (log) sales; market-to-book; return on assets; and 44 industry dummies. We find that firm size, as measured either by total assets or by revenue, is positively related to board size. We also find that book profitability (measured by return on assets) has a statistically weak positive association with board size. The model in column (a) explains a sizeable part of the cross-sectional variation in board size, with an adjusted R^2 of 51 per cent.

Column (b) shows results for a regression of board size on a set of country dummies (all dummy coefficients are omitted from the table). This exercise reveals that country dummies alone can explain 33 per cent of the observed variation in board size.

Finally, column (c) includes firm characteristics, industry dummies and country dummies. The incremental explanatory power of country dummies is not very large; the adjusted R^2 increases by less than 10 percentage points when moving from (a) to (c). The incremental R^2 for the firm characteristics (plus industry dummies) is larger: moving from (b) to (c), the R^2 increases by roughly 27 percentage points. We conclude that few firm characteristics, such as firm size and profitability, suffice to explain much of the observed variation in board size in Europe.

Column (d) confirms the relative unimportance of country effects for board size. The only country characteristic that shows a statistically strong association with board size is the one-tier board structure dummy. This association is expected; boards are likely to be larger if they can be organised as two separate boards. Because the R^2 only falls from about 60 per cent to 55 per cent as one moves from (c) to (d), we also conclude that the parsimonious model in (d) performs relatively well.

We conclude that the cross-sectional distribution of board size in Europe is mostly determined by the cross-section of firm sizes, industry classifications and other firm characteristics. Except for the influence of the regulations affecting the choice between single versus dual board structures, countries matter relatively little for board size. For example, although UK firms appear to have quite small boards, this effect is mostly

Table 4.5 *Corporate board size in Europe: the impact of firm characteristics, industries and countries (2010)*

	Dependent Variable: Board size				
Independent Variables	(a)	(b)	(c)	(d)	(e)
Assets (log)	0.089***		0.079***	0.082***	0.001
	[7.389]		[5.893]	[5.704]	[0.319]
Revenue (log)	0.029***		0.023***	0.023***	−0.003
	[3.969]		[3.171]	[2.853]	[−0.697]
Return on Assets	−0.051*		−0.052*	−0.048*	0.093***
	[−1.723]		[-2.028]	[−1.992]	[2.912]
Market to Book	−0.001		−0.000	−0.000	0.001**
	[−1.458]		[−0.566]	[−0.832]	[2.111]
One tier board structure				−0.201***	−0.054***
				[−3.572]	[−6.441]
Former communist country				0.085	−0.081**
				[0.640]	[−2.415]
GNI per capita (log)				−0.125	−0.057**
				[−1.365]	[−2.412]
Economically active pop. (log)				0.016	−0.002
				[0.539]	[−0.489]
Country Dummy	No	Yes	Yes	No	No
Industry Dummy	Yes	No	Yes	Yes	Yes

Table 4.5 (*cont.*)

	Dependent Variable: Board size				
Independent Variables	(a)	(b)	(c)	(d)	(e)
Observations	2,288	2,288	2,288	2,285	1,951
Adj. R-square	0.506	0.329	0.599	0.545	0.005

Note: This table shows OLS regressions of corporate board size on firm characteristics, industry dummies, country dummies and country characteristics in 2010. The sample consists of 2,288 firms from 23 European countries. The number of observations varies because of missing data. The dependent variable in columns (a)–(d) is the natural logarithm of board size. The dependent variable in column (e) is the change in board size from 2007 to 2010. All independent variables are as of 2010 in columns (a)–(d) and as of 2007 in column (e). *Assets* is the book value of total assets (in millions of EUR). *Revenue* is measured by sales (in millions of EUR). *Market-to-book* is the market value of equity over the book common equity. *Return on assets* is net income over assets. *GNI per capita* (in EUR, at constant 2011 prices and fixed 2011 exchange rates) is sourced from the World Bank's World Development Indicators. The *economically active pop.* is the economically active population (in thousands) sourced from the International Labour Organisation. *One-tier board* is a dummy variable that equals 1 if boards are required to have a unitary board structure; this variable was hand-collected from various sources. *Former communist country* is a dummy variable. Robust t-statistics are in brackets. Asterisks indicate significance at 0.01 (***), 0.05 (**) and 0.10 (*) levels.

explained by the presence of many small UK firms in our sample. This effect is magnified by the fact that UK firms have one-tier boards.

A different picture emerges when considering the changes in board size since the 2007 crisis. Column (e) shows that both market-to-book ratios and return on assets are positively related to changes in board size. One possible explanation for this finding is that firms that performed poorly during the crisis decided to reduce their boards. We also find that firms in countries with one-tier board structures reduced the sizes of their boards by more than those firms in countries with two-tier boards. Former communist countries have also been reducing the sizes of their boards. Finally, the decrease in board size is more pronounced in richer countries.

Our conclusions are as follows. Most of the cross-sectional variation in board size in Europe is explained by differences in firm characteristics, in particular by differences in firm size and industry characteristics. Country effects do not seem to matter much, except for the effect of the rules governing the choice between one-tier and two-tier board structures. Changes in board size since 2007 are explained by different factors. Interestingly, poorly performing firms have chosen to reduce the sizes of their boards. Country effects seem to matter more in this case: former communist countries, countries with one-tier boards and richer countries were all more likely to reduce the sizes of their boards.

4.3. Board independence

Table 4.6 reports the estimates for regressions in which the dependent variable is the fraction of independent directors on the board. All right-hand-side variables are as before.

Column (a) in Table 4.6 shows results for a regression of the log of board independence on a set of firm characteristics (which includes 44 industry dummies). We find that firm size, profitability and market-to-book are positively related to board independence. The most striking result, however, is the finding that the model in column (a) explains very little of the cross-sectional variation in board independence, with an adjusted R^2 of just 8 per cent.

Column (b) shows results for a regression of board independence on 22 country dummies. The explanatory power of country effects is far superior to that of firm and industry characteristics: country effects alone can explain up to 18 per cent of the cross-sectional variation in board independence. In column (c), the complete specification with firm

Table 4.6 *Corporate board independence in Europe: the impact of firm characteristics, industries and countries (2010)*

	Dependent Variable: Board Independence				
Independent Variables	(a)	(b)	(c)	(d)	(e)
Assets (log)	0.027***		0.035***	0.032***	0.006**
	[3.622]		[3.747]	[3.504]	[2.764]
Revenue (log)	0.001		0.007*	0.007*	−0.004**
	[0.235]		[1.981]	[1.774]	[−2.320]
Return on Assets	0.030**		0.028**	0.019*	0.023*
	[2.075]		[2.337]	[1.973]	[1.987]
Market-to-Book	0.002***		0.002***	0.002***	0.001*
	[6.985]		[6.210]	[6.632]	[1.810]
One-tier board structure				0.168**	0.003
				[2.483]	[0.496]
Former communist country				0.089	0.042**
				[0.806]	[2.564]
GNI per capita (log)				0.087	0.012
				[1.629]	[0.928]
Economically active pop. (log)				0.059*	0.003
				[−1.978]	[0.943]

Country Dummy	No	Yes	Yes	No	No
Industry Dummy	Yes	No	Yes	Yes	Yes
Observations	2,288	2,288	2,288	2,285	1,951
Adj. R-square	0.081	0.179	0.296	0.172	0.005

Note: This table shows OLS regressions of independence on firm characteristics, industry dummies, country dummies and country characteristics in 2010. The sample consists of 2,288 firms from 23 European countries. The number of observations varies because of missing data. The dependent variable in columns (a)–(d) is the proportion of independent non-executive directors on the board. The dependent variable in column (e) is the change in independence from 2007 to 2010. All independent variables are as of 2010 in columns (a)–(d) and as of 2007 in column (e). *Assets* is the book value of total assets (in millions of EUR). *Revenue* is measured by sales (in millions of EUR). *Market-to-book* is the market value of equity over the book common equity. *Return on assets* is net income over assets. *GNI per capita* (in EUR, at constant 2011 prices and fixed 2011 exchange rates) is sourced from the World Bank's World Development Indicators. The *economically active pop*. is the economically active population (in thousands) sourced from the International Labour Organisation. *One-tier board* is a dummy variable that equals 1 if boards are required to have a unitary board structure; this variable was hand-collected from various sources. *Former communist country* is a dummy variable. Robust t-statistics are in brackets. Asterisks indicate significance at 0.01 (***), 0.05 (**) and 0.10 (*) levels.

characteristics, industry dummies and country dummies is used. The model can explain roughly 30 per cent of the cross-sectional variation in board independence.

The evidence here is quite different from that in section 4.2. Country effects are more important than firm characteristics for explaining board independence. This result is similar to the evidence reported by Ferreira et.al. (2010), in a sample of commercial banks. They argue that differences in regulations and governance practices can explain the importance of countries for bank board independence. However, unlike Ferreira et al., here much of the cross-sectional variation in board independence remains unexplained.

Moving to column (d), we find that the adjusted R-squared drops significantly from 30 per cent to 17 per cent. This drop suggests that the country characteristics included in model (d) capture only part of the importance of country effects. As expected, boards are more independent in countries with one-tier boards. Larger countries appear to have less independent boards, but this effect is statistically weak.

Column (e) considers the determinants of changes in board independence. Good performing firms (as measured by ROA) appear to have increased board independence, but these effects are statistically weak. The effect of firm size on independence is ambiguous: the two different proxies for size have effects of different signs on independence. Board independence has been increasing in former communist countries, which is to be expected as these countries catch up with others.

Our conclusions are as follows. Countries appear to matter for board independence. Board regulations and business practices vary substantially across European countries, which could explain the importance of country effects for board independence. Both firm size and firm performance are positively related to board independence in European countries. But much of the variation in board independence is not explained by firm size, performance, industry effects or country effects.

Poor performance in the crisis has led, if anything, to reductions in board independence levels. Thus, there is no evidence that European firms reacted to the crisis by increasing the independence of their boards. In fact, the average board independence in European firms has remained stable at 34 per cent from 2004 to 2010. Despite the existence of considerable variation across European countries, there seems to have been no structural change in board independence levels in recent years.

4.3. *Board gender diversity*

As discussed in Section 3, gender diversity in the boards of European firms has been monotonically improving since 2000, but the average proportion of women on boards is still quite low, at levels below 10 per cent.

Table 4.7 considers the cross-sectional determinants of board gender diversity, as measured by the proportion of female directors on the board. Column (a) shows that firm and industry characteristics can explain only a trivial fraction of the cross-sectional variation in board gender diversity. The adjusted R^2 is quite low: 4 per cent. Not surprisingly, country effects do a much better job of explaining the cross-section of board gender diversity. In column (b), the adjusted R^2 is just under 25 per cent. This is strong evidence of the power of gender balance rules and quotas which have been adopted by some countries in Europe. The combination of country effects with firm characteristics can explain 30 per cent of the variation (column (d)).

There are two important results here. First, firm profitability, as measured by return on assets, is positively related to the proportion of women on the boards of European firms. This evidence is quite robust in the data. A positive correlation between gender diversity and profitability is reported in many different studies (see Ferreira 2010 for a review of the literature). It is tempting to conclude that board gender diversity improves firm performance. However, equally plausible is the hypothesis that more profitable firms select more women to their boards. Adams and Ferreira (2009) provide some evidence in support of this hypothesis. For a recent analysis of the performance effects of the introduction of gender quotas in Norway, see Ahern and Dittmar (2012).

Second, the importance of gender-specific rules for explaining the evidence is underscored by the results in column (d). Country characteristics such as economic development and country size have little effect on board gender diversity. The country effects that explain board gender diversity are very idiosyncratic. The countries with explicit gender balance policies, such as Norway, Iceland and Finland, are the ones that explain most of the variation. It is expected that Spain and France will also show significant effects in the near future, once their gender balance policies become binding.

Column (e) shows that larger firms have been increasing the proportion of female directors on their boards since 2007. As board gender diversity has become a more important policy issue, it is natural to expect that more visible (larger) firms would be the first to employ more women. Another possibility is that larger firms may find it easier to recruit top female directors.

Table 4.7 *Board gender diversity in Europe: the impact of firm characteristics, industries and countries (2010)*

	Dependent Variable: Board Gender Diversity				
Independent Variables	(a)	(b)	(c)	(d)	(e)
Assets (log)	0.002		0.003**	0.002	0.000
	[0.705]		[2.333]	[0.884]	[0.149]
Revenue (log)	0.003		0.003**	0.002	0.003**
	[1.601]		[2.544]	[0.974]	[2.181]
Return on Assets	0.017**		0.020**	0.018***	−0.001
	[2.520]		[2.402]	[2.858]	[−0.217]
Market-to-Book	0.000		0.000*	0.000	−0.000
	[1.002]		[1.847]	[1.377]	[−0.890]
One-tier board structure				−0.004	−0.000
				[−0.302]	[−0.080]
Former communist country				0.112	−0.029
				[1.254]	[−1.702]
GNI per capita (log)				0.102	−0.019**
				[1.374]	[−2.420]
Economically active pop. (log)				−0.010	−0.006*
				[−1.052]	[−2.058]
Country Dummy	No	Yes	Yes	No	No
Industry Dummy	Yes	No	Yes	Yes	Yes
Observations	2,288	2,288	2,288	2,285	1,951
Adj. R-square	0.044	0.247	0.303	0.118	0.005

Note: This table shows OLS regressions of the gender ratio on firm characteristics, industry dummies, country dummies and country characteristics in 2010. The sample consists of 2,288 firms from 23 European countries. The number of observations varies because of missing data. The dependent variable in columns (a)–(d) is the proportion of female directors on the board. The dependent variable in column (e) is the change in board gender diversity from 2007 to 2010. All independent variables are as of 2010 in columns (a)–(d) and as of 2007 in column (e). *Assets* is the book value of total assets (in millions of EUR). *Revenue* is measured by sales (in millions of EUR). *Market-to-book* is the market value of equity over the book common equity. *Return on assets* is net income over assets. *GNI per capita* (in EUR, at constant 2011 prices and fixed 2011 exchange rates) is sourced from the World Bank's World Development Indicators. The *economically active pop*. is the economically active population (in thousands) sourced from the International Labour Organisation. *One-tier board* is a dummy variable that equals 1 if boards are required to have a unitary board structure; this variable was hand-collected from various sources. *Former communist country* is a dummy variable. Robust t-statistics are in brackets. Asterisks indicate significance at 0.01 (***), 0.05 (**) and 0.10 (*) levels.

The main conclusions are as follows. The proportion of female directors on European corporate boards has been on the rise since 2000. However, this fraction is still quite small, at about 8 per cent. Much of the progress was only made possible by active intervention; only those countries with explicit gender balance policies have averages above 20 per cent. Left to their own devices, European firms have done little to increase female representation on their boards. We also find that profitability and board gender diversity are strongly associated, but we would caution against making causal statements on the basis of this correlation.

5. Additional evidence and robustness

This section examines the robustness of the conclusions and provides some additional evidence.

5.1. Alternative specifications

Specifications (a) to (d) in Section 4 use contemporaneous firm and country characteristics. Our goal is not to infer causal relationships, but simply to investigate how much of the variation in board characteristics is 'explained' by cross-sectional variation in firm characteristics. The use of contemporaneous independent variables mitigates concerns about firm characteristics being measured with error, as they better reflect the current state of the firm. One drawback, however, is that contemporaneous firm variables may be temporarily affected by board characteristics, and as such should not be considered as 'long run' determinants of board characteristics. This section replicates the previous tables now using all independent variables as of 2007. It is important to note that the use of lagged variables is not aimed at establishing causality. Rather, the goal here is simply to ascertain which correlations seem to be persistent and which are short-lived.

To address possible concerns with multicollinearity of measures of firm size, this section also reruns all regressions after replacing sales with sales growth. For brevity of exposition, only results in which sales growth is used are reported. There is no important difference between the results reported in this section and the results from unreported regressions that use lagged sales as a control variable.

Table 4.8 reports the results for board size. Overall, the results are very similar to those in Table 4.5. There are two important differences, though. First, past performance (as measured by ROA in 2007) is

Table 4.8 *Board size in 2010 and firm characteristics in 2007*

	Dependent Variable: Board size				
Independent Variables	(a)	(b)	(c)	(d)	(e)
Assets (log)	0.122***		0.102***	0.105***	−0.003
	[9.191]		[9.766]	[9.754]	[−1.681]
Sales growth	0.000		0.000	0.000	0.001***
	[0.877]		[0.985]	[0.748]	[6.383]
Return on Assets	0.081*		0.047	0.078**	0.096**
	[2.024]		[1.542]	[2.261]	[2.765]
Market-to-Book	0.002***		0.002***	0.002***	0.001**
	[2.970]		[5.447]	[4.197]	[2.182]
One-tier board structure				−0.218***	−0.057***
				[−3.178]	[−6.596]
Former communist country				−0.235	−0.128***
				[−1.057]	[−3.277]
GNI per capita (log)				−0.167	−0.057**
				[−1.193]	[−2.188]
Economically active pop. (log)					−0.009
				[−0.351]	[−1.355]
Country Dummy	No	Yes	Yes	No	No
Industry Dummy	Yes	No	Yes	Yes	Yes
Observations	1,655	1,655	1,655	1,655	1,665
Adj. R-square	0.503	0.326	0.600	0.543	0.023

Note: This table shows OLS regressions of corporate board size in 2010 on firm characteristics, industry dummies, country dummies and country characteristics as of 2007. The sample consists of 2,288 firms from 23 European countries. The number of observations varies because of missing data. The dependent variable in columns (a)–(d) is the natural logarithm of board size. The dependent variable in column (e) is the change in board size from 2007 to 2010. All independent variables are as of 2007. *Assets* is the book value of total assets (in millions of EUR). *Sales growth* is the one-year change in sales divided by sales in the previous year. *Market-to-book* is the market value of equity over the book common equity. *Return on assets* is net income over assets. *GNI per capita* (in EUR, at constant 2011 prices and fixed 2011 exchange rates) is sourced from the World Bank's World Development Indicators. The *economically active pop*. is the economically active population (in thousands) sourced from the International Labour Organisation. *One-tier board* is a dummy variable that equals 1 if boards are required to have a unitary board structure; this variable was hand-collected from various sources. *Former communist country* is a dummy variable. Robust t-statistics are in brackets. Asterisks indicate significance at 0.01 (***), 0.05 (**) and 0.10 (*) levels.

positively related to board size. Second, market-to-book now appears to be positively related to board size.

Table 4.9 reports the results for board independence. Again, the main conclusion remains the same: country effects are much more important than firm characteristics for explaining board independence. The positive correlation between ROA during the crisis and changes in board independence appears slightly stronger in this specification.

Table 4.10 reports the results for board gender diversity. Again, the results are similar. One key difference is that the positive correlation between ROA and board diversity is now statistically weak. This is further discussed in Section 5.3.

5.2. Leverage

We also re-run all regressions after including leverage (assets over equity) as a control. Leverage is robustly negatively related to board size and independence. It does not have a statistically reliable relation with board diversity. All previous results remain unchanged after the inclusion of leverage in the regressions.

5.3. UK versus non-UK firms

About half of the sample firms come from the UK. It is thus natural to ask which results are influenced by the disproportionate importance of UK firms in the sample. To address this question, all previous regressions are rerun using only non-UK firms. Tables are omitted for the sake of brevity.

There is virtually no difference in the board size regressions. There seems to be nothing special to UK firms when it comes to the relation between firm characteristics and board size. The same is true in the regressions with board independence. Obviously, because of the reduced sample size (about 800 firms), most estimates appear statistically weaker. Nevertheless, all point estimates are similar to those estimated in the full sample.

There is one remarkable difference between the full sample and the non-UK sample regressions with board diversity. In the non-UK sample, there is a positive and statistically strong relation between past performance (ROA in 2007) and current levels of board gender diversity (in 2010). In the full sample, this relationship is weaker and not statistically significant (see Table 4.10). We conclude that ROA is not a good

Table 4.9 *Board independence in 2010 and firm characteristics in 2007*

	Dependent Variable: Board Independence				
Independent Variables	(a)	(b)	(c)	(d)	(e)
Assets (log)	0.028*		0.042***	0.041***	0.003**
	[1.968]		[3.942]	[3.838]	[2.344]
Sales growth	−0.000		−0.000	−0.000	−0.001***
	[−1.264]		[−1.233]	[−0.542]	[−6.318]
Return on Assets	0.014		0.014	−0.006	0.029**
	[0.608]		[0.645]	[−0.227]	[2.405]
Market-to-Book	0.001**		0.001*	0.001*	0.000
	[2.840]		[2.051]	[2.095]	[1.084]
One-tier board structure				0.168**	0.006
				[2.512]	[1.071]
Former communist country				0.118	0.018
				[0.959]	[1.202]
GNI per capita (log)				0.021	0.006
				[0.302]	[0.339]
Economically active pop. (log)					−0.049*
				[−1.951]	[0.831]
Country Dummy	No	Yes	Yes	No	No
Industry Dummy	Yes	No	Yes	Yes	Yes
Observations	1,655	1,655	1,655	1,655	1,665
Adj. R-square	0.060	0.213	0.313	0.171	0.007

Note: This table shows OLS regressions of corporate board independence in 2010 on firm characteristics, industry dummies, country dummies and country characteristics as of 2007. The sample consists of 2,288 firms from 23 European countries. The number of observations varies because of missing data. The dependent variable in columns (a)–(d) is the proportion of independent non-executive directors on the board. The dependent variable in column (e) is the change in independence from 2007 to 2010. All independent variables are as of 2007. *Assets* is the book value of total assets (in millions of EUR). *Sales growth* is the one-year change in sales divided by sales in the previous year. *Market-to-book* is the market value of equity over the book common equity. *Return on assets* is net income over assets. *GNI per capita* (in EUR, at constant 2011 prices and fixed 2011 exchange rates) is sourced from the World Bank's World Development Indicators. The *economically active pop*. is the economically active population (in thousands) sourced from the International Labour Organisation. *One-tier board* is a dummy variable that equals 1 if boards are required to have a unitary board structure; this variable was hand-collected from various sources. *Former communist country* is a dummy variable. Robust t-statistics are in brackets. Asterisks indicate significance at 0.01 (***), 0.05 (**) and 0.10 (*) levels.

Table 4.10 *Board gender diversity in 2010 and firm characteristics in 2007*

	Dependent Variable: Board Gender Diversity				
Independent Variables	(a)	(b)	(c)	(d)	(e)
Assets (log)	0.005		0.009***	0.009***	0.004**
	[0.863]		[13.875]	[5.071]	[2.698]
Sales growth	−0.000**		−0.000***	−0.000***	−0.000
	[−2.406]		[−8.956]	[−3.793]	[−1.294]
Return on Assets	0.037		0.010	0.020	0.002
	[0.986]		[0.840]	[0.881]	[0.341]
Market-to-Book	0.000		0.000	0.000	−0.000
	[0.191]		[1.349]	[0.083]	[−0.469]
One-tier board structure				0.039	0.000
				[1.489]	[0.038]
Former communist country				0.218	−0.009
				[1.669]	[−0.680]
GNI per capita (log)				0.153	−0.021**
				[1.640]	[−2.651]
Economically active pop. (log)					−0.005
				[−0.680]	[−2.811]
Country Dummy	No	Yes	Yes	No	No
Industry Dummy	Yes	No	Yes	Yes	Yes
Observations	1,655	1,655	1,655	1,655	1,665
Adj. R-square	0.036	0.291	0.338	0.153	0.005

Note: This table shows OLS regressions of the gender ratio on firm characteristics, industry dummies, country dummies and country characteristics in 2010. The sample consists of 2,288 firms from 23 European countries. The number of observations varies because of missing data. The dependent variable in columns (a)–(d) is the proportion of female directors on the board. The dependent variable in column (e) is the change in board gender diversity from 2007 to 2010. All independent variables are as of 2010 in columns (a)–(d) and as of 2007 in column (e). *Assets* is the book value of total assets (in millions of EUR). *Revenue* is measured by sales (in millions of EUR). *Market-to-book* is the market value of equity over the book common equity. *Return on assets* is net income over assets. *GNI per capita* (in EUR, at constant 2011 prices and fixed 2011 exchange rates) is sourced from the World Bank's World Development Indicators. The *economically active pop*. is the economically active population (in thousands) sourced from the International Labour Organisation. *One-tier board* is a dummy variable that equals 1 if boards are required to have a unitary board structure; this variable was hand-collected from various sources. *Former communist country* is a dummy variable. Robust t-statistics are in brackets. Asterisks indicate significance at 0.01 (***), 0.05 (**) and 0.10 (*) levels.

predictor of board gender diversity in the UK, while it appears to be so in other European countries.

6. Concluding remarks and policy notes

This chapter provides the first comprehensive account of the distribution of board size, independence and gender diversity in Europe in the post-crisis period. Understanding the determinants of board characteristics is a necessary step to assess the likely success or failure of many of the governance reforms that have recently been proposed.

We find that European firms have been reducing the sizes of their boards. This pattern is more pronounced for those firms that performed poorly during the crisis period. We also find that firm size and industry affiliation are the most robust determinants of board size. Despite the differences in regulations mandating either a one- or a two-tier board structure, the differences in average board sizes in Europe and in the US are not significant.

European firms have also been increasing the independence of their boards, but from a distinctly lower level than their US counterparts. Whilst in the US almost three out of four directors are independent, in Europe independent directors are still in the minority. Interestingly, European firms that performed poorly during the crisis have chosen to reduce board independence. This finding and the existing evidence relating pro-shareholder boards in financial firms to poor performance in the crisis (e.g. Beltratti and Stulz 2009) question the received wisdom that more board independence is beneficial in crisis periods.

Board gender diversity is a fairly recent – but passionately debated – topic in both public and academic debates. There have been many policy initiatives, at both country and European level, aimed at increasing female participation on corporate boards. Some countries, such as Norway or Finland, have chosen to increase the female participation rate through quotas or explicit rules, whilst others, such as the UK, are attempting to achieve gender balance through voluntary targets. The evidence in this chapter is relevant for this debate as well: differences in regulations across countries are the single most important factor that explains the differences in board gender diversity across European countries. Whilst female participation on European boards has been increasing continuously since 2000, significant changes should be attributed mainly to policy initiatives.

This chapter does not show direct evidence of specific country-level characteristics affecting board gender diversity, but such evidence is available from contemporaneous studies. For example, Adams (2009) examines the extent to which female labour force participation and institutional and country-level factors are related to board diversity. They find that female labour force participation is not related to the representation of women in executive ranks. In fact, female executive participation cannot be explained by any country-specific variables. In contrast, female labour force participation is positively correlated with the representation of women in non-executive positions. This suggests that policies that facilitate female labour force participation may also eventually have an impact on corporate boards. However, cultural norms are also correlated with female participation in non-executive positions even after controlling for labour force participation. This raises the question of whether policies directly targeting boardroom diversity will be sustainable in the long run.

Given the importance of the corporate board in the governance framework of firms, questions of board structure, composition and conduct feature highly in the various governance codes and policy initiatives on both country and European levels. In fact, such an initiative was first introduced by the UK's Treasury in 1982. At that time it was hoped that more effective work by non-executive directors could help improve the performance of the UK's commercial sector, which was perceived to be lagging behind other countries in terms of competitiveness. While it will never be known whether this initiative had the desired effect, it did, however, form the foundations of the UK's governance code. Thirty years of governance debate produced a code that is mature and widely accepted within the UK's business community and allows for flexibility through its 'comply or explain' rule (even if the actual use of the explain rule is rare – see Arcot et al. 2010). The maturity and flexibility of the code gives it credibility within the boardroom. Interviews with company chairmen revealed just how important this is: boards that see the usefulness of certain code provisions are happy to apply them, while less-accepted provisions are seen as 'box-ticking exercises' with little impact on boardroom behaviour (Owen and Kirchmaier 2008).

Herein we see the dangers of regulation that is not sufficiently tied to the individual needs of a company, the institutional structure of a country, or both. Disconnected regulation can easily be seen in the boardroom as an unnecessary burden, and therefore dismissed. Given that boards are typically staffed with people of extraordinary talent, what

might be needed is a vivid public debate about the benefits of certain best practices that convinces boards of their merits, rather than new regulation. Given that board structures in Europe are so diverse, far-reaching regulation with little connection to the individual needs of firms runs the risk of being dismissed as another 'box-ticking exercise'.

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