Abstract:

Much debate has taken place about the ‘convergence’ of national corporate governance systems on a more shareholder-orientated system. Many empirical studies addressing this question have focused on changes in legal rules and much effort went into measuring the level of legal minority shareholder protection around the world (La Porta et al. 1997; Pagano & Volpin 2005, Armour et al. 2009). Comparatively few studies measure changes in firm-level corporate governance practices. One reason for the neglect is a strong assumption of legal determinism that prevails in the literature. Consequently, legal rules are taken to proxy for a national corporate governance system as a whole. However, this assumption is increasingly challenged by actor-centred institutionalism in political science (Streeck & Thelen 2005) and by comparative legal scholarship (Milhaupt & Pistor 2008, Berkowitz & Pistor 2003). Indeed, there may be ‘gaps’ between the ‘laws on the books’ and the actual practices that firms follow. This implies that processes of corporate governance change may not be law-driven processes, at least not in all cases. It might be that corporate practices evolve quite independently of legal rules. This paper attempts to empirically investigate the relationship between legal rules and corporate practices and thus test the Law and Finance school’s ‘law matters thesis’ based on a new unique longitudinal dataset. The dataset is based on a repeated cross-section of the 100 largest firms in four European countries between 1990 and 2010 and contains information for a series of corporate governance items covering ownership structure, capital structure, and
board composition. The four countries represent the legal families identified in the Law and Finance literature: The Netherlands (French civil law), Switzerland (German civil law), Sweden (Nordic civil law), and the UK (common law). I find strong evidence for converging trends, both in processual terms (similar trends) and absolute terms (more similarity across countries). Not all of these changes seem to be driven by legal change, because change in the measure of legal shareholder protection does not precede corporate change in all cases. Nevertheless, the convergence is not complete (differences persist) and I also find that the trends are sufficiently divers in each country to suggest that contextual factors are important to understand the relationship between law and practice.

[369 words]
0. Introduction

Much of the debate about ‘convergence’ of national corporate governance systems on a more shareholder-orientated system is based on empirical evidence of changes in legal rules. Indeed, much effort has been made to measure the level of legal minority shareholder protection around the world (La Porta et al. 1997; Pagano & Volpin 2005, Armour et al. 2009).

Comparatively few studies measure changes in firm-level corporate governance practices. Existing evidence either focuses on a very limited set of firm-level variables (e.g. ownership structure (Cuomo et al. 2012), stock option pay (Sanders & Tuschke 2007) or takeover defences (Davis 1991)), or study changes in a single country. Very few studies provide systematic comparative and longitudinal evidence on changes at the firm-level (Rasheed & Yoshikawa 2012).

One reason for the neglect to measure actual practices is arguably that the dominant theories in the field of ‘Law and Finance’ simply assume that law drives changes in corporate practices. Due to this strong legal determinism, legal rules are taken to proxy for a national corporate governance system as a whole.

This assumption is increasingly challenged by actor-centred institutionalism in political science (Streeck & Thelen 2005) and by comparative legal scholarship (Armour et al. 2009, Milhaupt & Pistor 2008, Berkowitz et al. 2003). Indeed, there may be ‘gaps’ between the ‘laws on the books’ and the actual practices that firms follow. In other words, formal institutions may leave leeway and ambiguities that allow it actors to adopt practices that do not completely correspond with the ‘spirit’ – or indeed even with the ‘letter’ – of the law (Jackson 2005).

This paper attempts to empirically test the Law and Finance school’s ‘law matters thesis’ based on a unique longitudinal dataset. In this sense, the paper expands on the critical literature on Law and Finance, which has investigated several questions that remain unanswered in the LLSV tradition. Thus, Armour et al. (2009) have focused on decomposing different claims about the effect of ‘legal origin’ on economic outcomes and have provided a more sophisticated analysis of how legal rules evolve. The present paper turns more directly to the interaction between legal change and corporate change by not only focusing on economic outcomes of a given CG system (such as market capitalisation, ownership structure and dividend pay outs), but also the actual corporate
governance practices of firms. Thereby, it attempts to address the question of the interplay between law and corporate governance practices more directly.

The dataset is based on a repeated cross-section sample of the 100 largest firms in four European countries between 1990 and 2010. The four countries represent the legal families identified in the Law and Finance literature: The Netherlands (French civil law), Switzerland (German civil law), Sweden (Nordic civil law), and the UK (common law). Yearly data were collected for a series of variables measuring a company’s shareholder-orientation. (cf. table 1). Combining this dataset with the Cambridge Centre for Business Research legal Shareholder Protection Index (Siems et al. 2009), seeks to assess the relationship between legal changes and corporate change. The paper draws theoretical conclusions regarding the interplay between law and corporate practices and contributes to our understanding of institutional change in modern capitalism.

The paper is structured as follows the literature review first discusses the debate about the ‘convergence’ of national corporate governance systems towards a more shareholder-orientated version. It then turns to the more fundamental theoretical literature on the role of law in corporate change and more generally the interplay between institutions and (collective) actors, such as corporations. The paper then proceeds to present the data and discuss the methods used. Preliminary empirical results are presented and discussed in a fourth section. A final section concludes.

1. Convergence of CG systems

There has been a long standing debate in the corporate governance literature about whether corporate governance practices and rules around the world are converging on a shareholder-orientated model inspired by the Anglo-American one (cf. e.g. Gordon and Roe 2004, Rasheed & Yoshikawa 2012). While the early debates focused on the question of outcomes, i.e. whether the more stakeholder- or insider-orientated models of continental Europe and Japan will be ‘swept away’ by the market forces and give way to an Anglo-Saxon style system. Some rather bold statements about the end of the insider-

---

1 The concept of ‘legal origins’ has been debated since LLSV introduced it into the Law and Finance debate. It would indeed seem that the concept is not well defined, conceptually ambiguous and of limited usefulness (cf. Siems 2006). However, given the importance of the concept in the corporate governance literature, this paper still makes reference to the LLSV 1998 distinction between different legal origins. This is for purposes of engaging with the extant literature, rather than because I consider this concept to be particularly useful.

2 Most authors distinguish a market-based, shareholder-orientated or outsider system, which corresponds with Anglo-Saxon countries’ corporate governance rules and practices, from a relationship-based,
orientated system were characteristic of that literature (Hansmann & Kraakman 2000). The evidence, however, increasingly showed that the process of change in corporate governance, that were undeniably taking place in most countries since the 1980s or 1990s, were far from straightforward processes of convergence. Gradually the arguments became more nuanced and researchers’ attention shifted from the outcomes (convergence or persisting diversity?) towards the processes themselves. This led to studies that essentially accepted the idea that the outcome would be combinations of ‘old’ and ‘new’ – oftentimes termed ‘hybridisation’ –, but investigated more the processes and consequences of the changes. In this context, the question of what are the drivers of these changes became relevant (e.g. Tuschke & Sanders 2003).

Still, the question of the drivers of change has been remarkably neglected in part of the literature and the relationship between legal change and corporate change is only rarely directly tested empirically. Indeed, many scholars have solely focused on empirical evidence of changes in legal rules. Much effort has been made to measure the level of legal minority shareholder protection around the world (La Porta et al. 1997; Pagano & Volpin 2005, Armour et al. 2009). Most of the time, such studies do not ask the question of the processes of change in any detail, because they work with two strong assumption derived from theory. Firstly, it is assumed that change will be brought about by competitive forces unleashed by the globalisation of financial and product markets (Espen Eckbo 2005). Secondly, it is assumed that when legal rules change corporate practices will change too. This second assumption is not always made explicit and seems in some respect rather to derive from the convenience of studying ‘black letter law’ at the country-level, rather than collecting data on company practices. It appears clearly that at least the first generation of studies on corporate governance convergence operated on the assumption of a strong ‘legal determinism’.

This is partly due to the considerable influence of La Porta and colleagues’ work on law and finance, which explicitly posited a direct link between the quality of company law and the corporate governance outcomes at the firm level. This theory was eagerly picked up and further developed by international financial institutions sometimes in collaboration with La Porta et al. (cf. Djankov et al. 2008). The Law and Finance theory influenced a policy programme that sought to promote economic growth through legal reform (cf. Singh 2011, Ohnesorg 2007). The legal determinism inherent in the Law and Finance school had obtained, for some time, almost axiomatic status. Many studies exist that uncritically use legal variables and/or a ‘legal origin’ simply following LLSV’s assumption

stakeholder-orientated, or insider system, which prevails in different shades in all other countries (see for one often-used typology of corporate governance systems Weimar & Pappe 1999).
that ‘law matters’. Consequently, the question of the direction of causality between legal rules and corporate practices was seldom asked.

Nevertheless, critical scholars have raised questions regarding various aspects of the La Porta and colleagues approach. These critical studies focused notably on the methodological aspects of the minority-shareholder protection measurements used in the LLSV studies (cf. notably Spamann 2006a and 2006b). But an increasing number of studies also investigated the ‘law matters’ claim (cf. Coffee 2000, Cheffins 2001, Gourevitch and Shinn 2005), opening, thus, up a broader and more fundamental question of the link between black letter law and corporate practices.

Rasheed and Yoshikawa (2012) review the literature on convergence in corporate governance regimes at both levels; corporate practices and legal rules. They find that what they call, following Gilson (2004), functional convergence, i.e. convergence of firm-level practices, is more common, because it is easier than formal (i.e. regulatory or legal) convergence (Rasheed & Yoshikawa 2012: 3). At the same time, somewhat paradoxically, they also observe that the literature has shown that where convergence does take place it is mostly ‘in form rather than substance’, i.e. changes to legal rules are not always implemented at the firm level (Rasheed & Yoshikawa 2012: 18). What is lacking in the current literature on CG convergence is ‘an understanding of the impact of the institutions and motivations of key actors as well as the interactions among them’ (Rasheed & Yoshikawa 2012: 18). Indeed, Rasheed & Yoshikawa (2012: 17) distinguish clearly between country-level studies, mainly interested in legal and regulatory changes, and firm-level studies, which very largely exclusively focus at firm level practices. The clear division of labour between researchers focusing on the institutional/country level and those focusing on the company level may explain the limited nature of our knowledge about the interaction between law and corporate practices in this area.

A few studies do exist, which explicitly address the ‘law matters thesis’, thus investigating the relationship between the two levels. One recent contribution to this stream of research is Cuomo et al. (2012). This study investigates whether Italian companies have indeed changed their ownership structures following the implementation of various corporate governance reforms in Italy starting with the “Draghi Law” of 1998. The authors attempt to measure the impact that these legal changes, which considerably increased the level of protection that minority shareholders are afforded under Italian law, have had on companies’ ownership concentration (% of largest direct stake), on the ownership-control ratio (discrepancy between the cash flow rights and the control rights that the investor gets in return), and the use of control enhancing mechanisms (CEMs). The authors find that the law seems indeed to have led to a significant decline in the number of CEMs and
that the discrepancy between cash-flow rights and control rights has declined. The evidence for ownership concentration – one of the key claims of LLSV's theory – is mixed however. Cuomo et al (2012) find that in some cases increasing legal protection went together with higher levels of ownership concentration, which contradicts LLSV's claim that 'good law' will entail dispersed ownership structure (which is assumed to be more efficient as it allows capital markets to play a disciplining role).³

Cuomo et al.'s (2012) study has the distinct merit of explicitly investigating the relationship between legal- and corporate change, adopting a longitudinal rather than cross-sectional approach. Indeed, they use a data set on all listed Italian companies at four time points: 1985, 1995, 2000, 2005. However, they still focus on a limited set of corporate practices and investigate one country only. To be sure, the choice of looking at ownership structures may be well-founded given the importance that ownership structure has acquired as a dependent variable in the Law and Finance literature. The choice of the CEMs that they investigate (pyramids, dual class stock, and shareholder agreements), however, seems less well justified. They state that these were chosen because they constitute the most common mechanisms to separate ownership and control in Europe (Cuomo et al. 2012: 431). This begs the question, however, whether they are also the most relevant instruments of insider control in Italy. Indeed, instruments of insider control vary greatly even among European countries, which are usually all grouped into the same ‘insider corporate governance’ category (cf. Schnyder 2012a). More fundamentally, as in many corporate governance studies the – arguably arbitrary – way of selecting a small number of corporate governance mechanisms is not explained. In the present case, it seems notable that no measures of board structure or composition are included. This may be justified by the research question, which focuses on ownership structures. Nevertheless, it is questionable whether such a narrow selection of CG mechanisms covers indeed all important aspects of a firm's corporate governance system (for an in-depth discussion of this problem see Schnyder 2012b).

What Links Law and CG Practices?

Another set of limitations of Cuomo et al.’s (2013) study concerns the legal measures used. The authors used the original Anti-Director Rights Index (ADRI) developed by La Porta et al. (1997, 1998), a revised version of the ADRI that corrects certain coding errors.

³ It should be noted, however, that Cuomo et al.’ 2012 finding, which contradicts LLSV’s theory, is compatible with studies on other European countries, which have argued that legal control mechanism and ownership concentration can work as substitutes. From this perspective, it is quite plausible that insiders who do not want to lose control over ‘their’ company may increase ownership stakes, as their traditional legal control mechanisms are outlawed (cf. for the cases of the Netherlands, Sweden, and Switzerland Schnyder 2012a).
(Djankov et al. 2008) and a new Anti-Self-dealing index (ASDI) also developed by Djankov et al. (2008). They also use for certain analyses the CBR SPI (Siems et al. 2009), but cannot use it for all of them, because it is available only from 1990. These are hence aggregate measures of legal MSP at the country level, which were developed in comparative studies and do hence not necessarily capture all aspects of the Draghi law and other legal reforms that have taken place in in Italy.  

The problem with using a general measure of the level of legal shareholder protection in a study that investigates the impact of legal change on corporate change is that the legal index does not necessarily contain a corresponding item for each practice included in the study. Therefore, the measures of legal shareholder protection are not necessarily directly linked to the selection of firm-level CEMs included in this study. The ADRI for instance does not contain any measures for capital structures, which means an increase in the ADRI does not directly impact the existence or absence of dual class stock, one of the CEM measures used by Cuomo et al. (2012). Similarly, none of the six variables composing the ADRI affect directly the existence of pyramid structures or syndicate agreements among shareholders.

The link between the legal measure and the measure of corporate governance practice would be relatively straightforward if they contain exactly equivalent items (e.g. rules concerning the use of dual class shares and the practice of having dual class shares). In such study we would expect that if a given legal reform outlaws a specific firm-level mechanism, – at least in a country with strong ‘rule of law’, i.e. where laws are generally implemented, enforced, and followed – the practice in question to disappear. Conversely, in such a study – if it were designed as a longitudinal study – we could also investigate whether a given corporate practice changed before the relevant legal rule changed, which would suggest a practice-driven process of change.

Without a direct correspondence between the legal items measured and the measures of corporate practices, the relationship between law and practice becomes more complex. Even absent of a direct correspondence of the items captured in a legal measure and the firm-level practices analysed, it is plausible that the two levels may be related. However, if the practices analysed are not directly affected by the changes in the legal items contained in the legal indices, the question arises why we should expect such a

4 However, arguably Mario Draghi – the main sponsor of the Draghi law – was himself strongly influenced by the ADRI. One could hence expect that the changes brought about by that law is actually captured very well by this index. Or rather conversely: the law reflects the ADRI.

5 The six variables included in the ADRI are ‘Proxy by mail allowed’, ‘Shares not blocked before AGM’, ‘Cumulative voting / Proportional representation’, ‘Oppressed minority rights’, ‘Pre-emptive rights to new issues’, ‘percentage of shareholders needed to call extraordinary AGM’ (La Porta et al. 1997).
relationship to exist. If the legal measure does not impact the corporate practices by directly prohibiting them, how would we expect law to matter for the practices in question?

There are two types of answers to this question in Cuomo et al.’s (2012) article. Firstly, the link between legal shareholder protection and ownership concentration is explicitly conceptualised in LLSV’s theory: Increasing protection of property rights means that investors do not have to fear expropriation by insiders, which incentivises shareholders to abandon large controlling stakes in favour of more diversified portfolios with minority positions in many firms.

The link with CEMs, however, is less direct and subtler. Here, Cuomo et al. (2012: 432) argue that law indirectly affects the extent to which companies use CEMs via the level of private benefits of control (PBCs). In countries where legal rules protect minority shareholders poorly, the use of CEMs is potentially more rewarding for controllers. They can use CEMs to extract larger amounts of PBCs than they would with ‘better’ shareholder protection even if the CEM in question were still allowed. The mechanism at work is hence the incentives that controllers have to use CEMs to expropriate minority shareholders. While Cuomo et al. (2012: 432) quote several studies that find evidence for an association between the general level of legal shareholder protection and the use of CEMs, there is also contrary evidence. Gilson (2005) finds that the level of PBC varies not just between countries with high levels of shareholder protection and countries with low levels, but also within these categories. A striking example is Sweden: Gilson (2005: 9) estimates that the amount of PBC that controlling families extract from firms is less then 1% of firm value. This is in spite of the fact that Sweden’s legal system did not protect minority shareholders very well up until the mid-2000s. Gilson’s explanation for this situation is that Sweden has ‘functionally good law’, i.e. laws and procedures are transparent and generally well enforced (2005: 14). Be that as it may, the Swedish example shows clearly that there are cases where low levels of MSP do not go together with high levels of PBC. Moreover, the causal mechanism between ‘bad law’, ‘high levels of PBCs’ and ‘existence of CEMs’ is also problematic, because of an inherent endogeneity problem. Gilson argues that it is precisely the extent the use of CEMs (more precisely the discrepancy between cash-flow and control rights) that determines the amount of PBCs that controllers extract: the more cashflow rights and control rights are distorted, the stronger the incentives for controllers to extract PBCs. The mechanism suggested by Cuomo et al. (2012) based on incentives is hence not entirely convincing to explain the link between legal levels of shareholder protection and the extent to which companies use CEMs, as CEMs may cause PBC rather than the other way round.

The ASDI, the second measure of legal change that Cuomo et al. (2012) use, on the other hand, is a measure of insider dealing. It measures the ease with which shareholders can either prevent from taking place insider dealing between two companies controlled by the
same owner, or the ease with which they can obtain compensation in a court of law (Djankov et al. 2008). Consequently, the ASDI applies to a very specific situation only, i.e. the one of a business group where transactions take place among companies owned and controlled (to different degrees) by the same controller. The ASDI measures how easy the law makes it for minority shareholders to prevent transactions that benefit the controlling shareholder at the expenses of the minority shareholders, or how easy it is from them to gain redress once the transaction has taken place. The relationship of this measure with the CEMs that Cuomo et al. (2012) include in their analysis is hence not a straightforward one. The relationship between the ASDI and at least one of the CEMs analysed by Cuomo et al. (2012) may indeed be endogenous: One could argue that a higher level of ASDI may be the result of the number of pyramids that exist in a country rather than the other way round, because demand for anti-self-dealing rules will be higher the more pyramids there are. Cuomo et al. (2012) are able to mitigate this problem of endogeneity to some extent, because they are using longitudinal data. Indeed, they find a significant decrease of pyramids between 1995 and 2005 with a corresponding increase in the ASDI. However, as they themselves admit, this is obviously not prove of causality, as both trends may simply be part of a long-term trend possibly driven by unobserved antecedents without the legal reforms causing the corporate change. Cuomo et al. (2012) attempt to tackle this potential objection by running t-tests on the changes between 1985 and 1995 – a period without any major legal change – and 1995 and 2005 on the other. They find that changes during the first period are not significant, while they are during the latter period (Cuomo et al. 2012: 441, Table 3). They interpret this as evidence that the changes in corporate practices are not part of a long-term trend, which supports the view that the corporate changes are indeed caused by legal change.

This is a problematic conclusion however. Indeed, it might well be that the corporate changes are indeed part of a long-term trend that is not driven by legal reform, but simply it might be that this trend set in during the 1990s rather than during the 1980s. This latter view is certainly in line with much of the literature on economic liberalisation in Europe, which finds that in many policy fields the strongest liberalisation policies were adopted during the 1990s (e.g. the privatisations of formerly state-owned companies Höpner et al. 2009: 15; also Table 2 p.29, which shows that the strongest ‘liberalisation push’ in Europe took place during the second half of the 1990s).

Indeed, the different pace of change between 1985 and 1995 and between 1995 and 2000 does not allow it to distinguish whether the increased pace of change was indeed due to the legal reforms, or whether both increased pace of corporate change and the emergence of legal reforms were caused by an non-observed underlying factor. Indeed, it
seems like a plausible explanation that the increase in legal shareholder protection reflects a broader trend in a given national economy towards more attention to shareholder interests. This does not imply that there is no causal link going from legal changes to corporate change. It is for instance conceivable that legal changes have a signalling effect on companies who will react to legal changes by modifying practices that are not directly targeted by the new legal rules.

More generally, institutionalist scholarship has pointed out that legal reform may be just one of different processes at work in the spread of a new social norm or cognitive notions (cf. Davis & Thompson 1994, Gourevitch and Shinn 2005). Or in Jackson's (2010: 69) words: “[T]he rapid spread and institutionalization of a particular cognitive notion such as ‘shareholder value’ may be associated with new opportunities to mobilize actors in support of political change of existing institutions, such as through shareholder-oriented legal reforms”. There may hence be a broader, more fundamental link between legal reforms and corporate practices that operates at the level of ‘soft institutions’ such as social norms or shared routines and practices.

This conceptualisation of the relationship between law and practices, makes it difficult however to identify the precise causality between legal change and changes in practice. Indeed, it might well be that both types of changes are the reflection or effect of a more fundamental change in the position of shareholders in a given country’s economy. In order to investigate this more complex relationship, more sophisticated approaches are required.

The underlying rationale of the approach pursued in this paper is to relate legal change not so much to macro-economic outcomes such as financial development, for instance the depth of equity markets, but rather to firm attributes. Most of the Law and Finance literature attempts indeed to test the impact of legal rules on macro-outcomes, e.g. stock market development (Deakin et al. 2011: 13). It has proven inherently difficult to establish robust relationships between legal rules and macro outcomes (Armour et al. 2009). This can be, among other things, due to the fact that the focus on macro-outcomes would require to control for a myriad of other factors that potentially influence characteristics of an economy such as its overall capital market development. Isolating the impact of legal changes alone on such a macro outcome has proven statistically very challenging. In the corporate governance literature a similar effect has been observed even at the firm level between corporate governance practices and overall organisational performance. It has been argued that one of the reasons why the hypothesised link between ‘good’ governance and ‘good’ performance has proven elusive in empirical studies is precisely, because it is tremendously difficult to isolate the impact of just CG practices on
performance from all other potential antecedents of performance. A more promising strategy may hence be not to focus on overall outcomes, but rather on outputs of the corporate governance system, such as specific decisions that are taken by a given firm (Aguilera and Desender 2012). This approach dovetails with the insight from actor-centred institutionalism that considers that ‘institutions are a remote cause of an outcome, and action remains a proximate cause’ (Jackson 2010: 70). In this paper I apply a similar logic to the question of ‘does law matter’? Rather than investigating the impact that law has on overall outcomes, as most Law and Finance studies do, I attempt to establish whether and how law affects specific corporate practices. This allows us to gain a better understanding on the relationship between law and corporate practices. Deakin et al. (2011: 14) for instance do not find any effect of the CBR SPI on financial development at the country level. However, this does not necessarily imply that law does not have an effect on firm-level CG practices. It might be that the absence of a statistically significant relationship is due to any number of other – non-measured – factors, besides CG, which influence financial development. Focusing on firm-level corporate governance practices allows us to address this question and gain a better understanding of how law matters.

2. Data and Methods

This paper attempts to address several of the issues identified in the previous section by using a unique new dataset on firm-level corporate governance practices and combining it with the CBR SPI (Siems et al. 2009).

The firm-level data used in this study covers several dimensions of corporate governance including the company’s capital structure (deviations from the one share, one vote principle), the board structure and composition, and the companies’ ownership structure. Certain CG mechanisms are measured both at the firm-level and at the level of legal shareholder protection. Thus, the SPI includes an indicator for the prohibition of multiple voting rights and super-voting shares and for prescriptions on minimum percentages of independent board members (Siems 2009: 6). These two mechanisms are also measured at the firm level. This will allow us to investigate more precisely the mechanisms of change that are at work, because we can distinguish mechanisms that are directly affected by changing legal rules and mechanisms that are not directly targeted by the legal reforms.

The ultimate goal of the analysis is to investigate the co-evolution of legal rules and corporate practices through a cross-lagged autoregressive model. In this version of the paper, I proceed in a more descriptive way, as a first step to explore the differential dynamics at play in different countries.
I adopt a comparative strategy. Indeed, it can be hypothesised that the relationship between legal rules and corporate practices may vary across different national contexts. One reason for this is that countries have political systems, which make legal change either relatively quick and easy for the governing party to carry out (notably the majoritarian Westminster system), or more consensual political processes can create veto points at various stages and make legal change hence more difficult. Such differences in the political system may affect the direction of causality between legal changes and changes in practices, with major legal changes more likely in more majoritarian systems and companies hence more exposed to legal pressures than in consensual ones (Schnyder 2010).

Studies investigating corporate governance change over time have adopted various statistical techniques to do so. Some authors have used panel vector auto-regressive (VAR) granger causality tests (Deakin et al. 2011). Others use various versions of regression analysis on the temporally differentiated dependent and independent variables with an auto-regressive term (Cuomo et al. 2012). Still others have used discrete-time event history analysis (Sanders & Tuschke 2007). In order to gain first insights into the trend in the countries covered by this study, this paper uses in a first step a less sophisticated descriptive approach to compare legal changes to a series of corporate governance changes.

The dataset is based on a repeated cross-section sample of the 100 largest firms by market capitalisation in four European countries between 1990 and 2010. The four countries represent the legal families identified in the Law and Finance literature: The Netherlands (French civil law), Switzerland (German civil law), Sweden (Nordic civil law), and the UK (common law).

The selection criteria for the repeated cross-section sample used in this study was market capitalisation in USD at year end. We took indeed the 100 largest companies by market capitalisation for each year. We made sure that we had 100 companies that were not just listed in the country in question, but were actually domestic companies. This procedure led to a situation where we had to go beyond the top 100 to capture 100 domestic companies. As a result our sample size for each country and year varies between 105 and 164.

Yearly data were collected for a series of variables measuring a company’s shareholder-orientation (cf. table one).
3. Results and Discussion

Figure 1 reports the evolution of legal minority shareholder protection in the four countries as measured by the CBR shareholder protection index (SPI). The index contains 10 variables that range between 0 and 1 and takes hence values between 0 and 10 (cf. Siems et al. 2009). The figure shows two things. Firstly, at the beginning of the 1990s the level of legal shareholder protection in the four countries was very different, with the UK – as one would expect from a shareholder-orientated corporate governance model – affording most protection to shareholders. Sweden and Switzerland both had low levels of shareholder protection, but still higher than the Netherlands. Secondly, there is a clear common trend in all four countries, i.e. legal SPI has increased over the past 20 or so years to reach substantially higher levels in all four countries. This kind of legal convergence can be termed *processual* formal convergence (i.e. all countries followed a common trend). However, the differences across countries have reduced as well, which can be termed *absolute* formal convergence. It is equally noteworthy, however, that the differences have not completely disappeared. Importantly, the UK legal system remains more protective of minority shareholders than the three continental countries with civil law systems.

Figure 1: CBR 10-Variable shareholder protection index (SPI)

A related regulatory issue to legal change is the question of cross listing. Indeed, cross-listings on a foreign stock exchange have been theorised as a ‘bonding mechanisms’ whereby companies list in countries with stricter CG regulations then their own so as to signal to investors their commitment to shareholder protection (Chemmanur & Fulgherie
The main stock exchanges where foreign firms have increasingly started to cross-list to signal shareholder-orientation are the London Stock Exchange (LSE), the New York Stock Exchange (NYSE), and NASDAQ (Rasheed & Yoshikawa 2012: 7). Given that the UK are part of the countries included in this study, an LSE listing cannot be considered as opting into a stricter regulatory regime regarding shareholder orientation for our British sample companies. A listing in NYC, however, constitute even for UK companies a choice that implies a higher regulatory burden regarding shareholder rights; not necessarily because the US legal system is more protective of shareholders than the UK one, but because corporate governance and disclosure rules are not the same and different reporting requirements create additional costs for the firm to comply with a second regulatory regime. Figure 2 reports the proportion of firms from each country that are cross-listed in New York City and for non-UK companies in London (LSE). The figure reveals that very few the UK firms in our sample were listed in NYC. Similarly, the number of Swedish cross-listed firms remains very low throughout. With a slight increase during the late 2000s however. In the Swiss case, we find a somewhat higher level of cross-listing with some remarkable changes however: there seems to have been a strong increase during the mid-1990s, but a equally strong drop in the early 2000s, presumably related to the dot-com bubble. There was then a recovery, which only lasted for a couple of years before the level of cross-listed firms dropped back to around 5%. The strongest presence in New York was among Dutch companies: we observe a steady increase from around 10% of our sample to nearly 25%. Overall, we find hence very different trends in the four countries, which share in common however.

In sum, a considerable proportion of the Dutch and – at times – Swiss firms were exposed to regulatory constraints stemming from the more strongly shareholder orientated system of the US. No such constraints existed for the large majority of the UK and Swedish firms in our sample. Only a minority of companies may hence have been driven to increase their shareholder-orientated practices due to cross-listing.
The CBR SPI clearly hints at convergence of legal corporate governance rules towards more shareholder-friendly rules. I now turn to discussing how these legal changes compare to what has happened during the same period of time at the firm-level. An overview of the variables for which data is being collected (work in progress) is provided by the correlation matrix in table 1.

Figure 3 reports the yearly evolution of market capitalisation (in mU$D) in the four countries between 1990-2010. Two features seem interesting based on this graph: Firstly, in all countries, market capitalisation has increased over the period observed. Secondly, however, the changes were by far strongest in the UK, followed by Switzerland with some substantial increases in Switzerland, while the Netherlands and especially Sweden only saw a very moderate increase in its companies’ market capitalisation.

How to interpret these trends? Market capitalisation was used in this study as a measure for the size of the companies, as is habitual in various fields in business management. However, aggregate or average market capitalisation at the country level is also used as an indicator of a countries’ overall financial – and by implication – economic development and/or the extent to which its corporate governance system is ‘market-‘ as opposed to ‘bank based’. Higher levels of market capitalisation are associated with deeper, more liquid capital markets, facilitating corporate finance and as a result promoting economic development (Claessens & Laeven 2003, Djankov et al 2008). As mentioned in the theory
section of this paper, LLSV explicitly see market capitalisation to be driven by the increase in legal shareholder protection (La Porta et al. 1997, 1998).

Comparing figures 1 and 3 suggests that they might be broadly right in the sense that a period of increasing legal shareholder protection in the four countries went indeed together with increasing market capitalisation, even net of the quite strong fluctuations in the market cap figure, notably due to the dot-com bubble that burst in March 2000 and the global financial crisis of 2007 and following. Two important caveats to this however: firstly, the temporal coincidence obviously does not prove that there is indeed a causal relationship running from law to market capitalisation. Secondly, looking more closely at the trend lines reveal that there does not seem to be a one to one correspondence between legal change and change in market capitalisation. Most importantly, it is noteworthy that the country with the lowest change in MSP during this period, the UK, is the one with the most dramatic growth in market capitalisation.

Figure 4 below reports the average number of employees in each country at each point in time. The number of employees is an alternative measure of firm size and allows us to assess to what extent the trends shown in figure 3 are due to purely financial phenomena (e.g. appreciation of share price), or actual increase in a companies size, e.g. through mergers and acquisitions (M&As) or organic growth. Unsurprisingly, figure 4a confirms the observation based on figure 3 that UK firms are much larger than Swiss and Swedish firms, which is what one would expect given the size of the economies. Moreover, the UK show an interesting increase in the average number of employees in the run up to the crisis of 2007/8. This may be due to the favourable economic environment and an active M&A market. Figure 4b zooms in on the trends in Sweden and Switzerland excluding the UK (the dutch data has not been collected yet). A remarkable feature is that the trends are flat or even declining. This, indicates that much of the increase in market capitalisation during the 1990s and 2000s is a financial phenomenon, related to share price appreciation rather than an actual growth in size of the firms in our sample. The diverging trends in market cap and number of employees also supports arguments about a potential adverse effect of increasing shareholder orientation on employment. Indeed, it has been argued that cost cutting notably through a reduction in the size of the work force is part of a shareholder-orientated ‘downsize and distribute’ strategy (Lazonick & O’Sullivan 2000).
Figure 3: Average Market Capitalisation (m U$D)

Figure 4a: Average number of employees (NL not collected yet)
To more precisely explore the relationship between legal change and corporate governance change, I now turn to a series of corporate governance practices at the firm level.

I will look at three dimensions of corporate governance: 1. The composition of the BoD, 2. The companies’ capital structure and existence of devices that separate cash-flow- from control rights (control enhancing mechanisms). 3. The companies’ ownership structure.

**Board of directors**

Figure 5 below shows the proportion of companies where the chairman and the CEO are different persons. Overall, throughout the period of interest the proportion of companies separating the two roles is high with nearly 70% of all companies in our sample separating the two roles already in the early 1990s. However, here too we observe interesting trends of convergence: The UK companies increasingly separated the two roles already in the early 1990s and reached a level of separation similar to the Swedish one (above 90%). This evolution can be explained by the fact that the separation of chairman and CEO roles was one of the central claims of the shareholder movement early on. Switzerland somewhat ‘lagged behind’ the UK in this respect. Nevertheless, starting in the early 2000s more and more Swiss companies separated the two roles too. By the late 2010s, the proportion more or less matched the UK and Swedish ones.
Figure 5: Proportion of firms where CEO and Chairman are two different persons

Figure 6 shows the proportion of firms where the CEO sits on the board of directors. In all three countries for which we have data, the proportion of companies where the CEO sits on the board has steadily increased throughout the 1990s (from an already high level of between 80 and 90% to nearly 100% in the mid-2000s). Since then, however, the trend has reverted in the UK. The steepest decline took place during the crisis years 2008 and 2009.

This trend is interesting. The increase during the 1990s runs counter to the agency theory idea that the CEO should not have undue influence over boards. Their influence is considered to be increased when they sit on the board. The trend may be interpreted as the CEOs attempt to compensate for a loss of power through other mechanisms. Since CEOs’s power is increasingly constrained by various shareholder-orientated reforms and practices, sitting on the board – albeit not as chairman – may remain a relatively uncontroversial way of maintaining some influence over the company. This may have changed with the financial crisis, when companies came under increasing scrutiny from public authorities and investors, which would explain the steep downwards trend in the UK. However, this would not explain why the two other countries did not experience similar trends (a certain decline is perceptible in Switzerland too, but the number of firms with CEO on board remains around 95%).
Capital structure

The second dimension of corporate governance we investigated is the companies’ capital structure. Different share types with different cash-flow and voting rights constitute arguably one of the corporate insiders’ most formidable means to maintain control over the firm and isolate the firm from capital market pressures and shareholder influence. The existence or absence of dual class shares is hence an important measure of the extent to which a company is in the hands of insiders and minority shareholders may hence run the risk of not having their voice heard.

Figure 7 reports a first measure, which simply indicates whether a firm has dual class shares (e.g. A and B shares as in Sweden, with A shares giving right to more votes for the same amount of money invested than B shares). This figure excludes the Netherlands where proper dual class stock structures are technically very uncommon, indeed, inexistent. We can see striking – but not surprising - differences between the three countries: In Sweden and Switzerland, companies use dual class share structures much more often than in the UK. Indeed, the number of firms having dual class stock issued is virtually zero in the UK. In Sweden, during the early 1990s, 80% or more companies had a capital structure consisting of more than one share class. In Switzerland the proportion was similar but started to decline more quickly. In both continental countries, there is however a remarkable decline in the number of firms using this instrument of control. Here we have hence a very strong indication of convergence towards a more shareholder friendly model.
Yet, again, it is noteworthy that even in 2010 some differences remain: In the UK only 2% of the firms in the sample had dual class stock, which is still considerably lower than the two other countries.

Other measures of capital structure confirm this trend towards simpler capital structures and less diversity across countries. Figure 8 summarises this trend, reporting the average number of deviations from the proportionality principle (1 share, 1 vote) that exist. This figure summarises eight different dichotomous items relating to voting rights and capital structure: 1. Dual class share structure, 2. Non-voting shares, 3. Shares with multiple voting rights, 4. Preferred or priority shares, 5. Preferred stock with voting rights, 6. Voting caps, 7. Existence of golden shares, 8. Restriction to the transfer of shares – which can be used as a functional equivalent to voting rights limitations, as it allows it insiders to ‘lock in’ certain power structures. The variable can hence take values from 0 to 8. In reality, the variables ranges only between 0 and 5.

The trend on all deviations from the proportionality principle is the same as for dual class stock (indeed the correlation between the two variables is strong at .76): The Netherlands, Sweden, and Switzerland had higher occurrence of deviations from one share one vote: in the early 1990s the average Swedish company had 3.5 deviations from 1 share, 1 vote and the average Swiss firm had 3. The average Dutch firm, for which data is available since 1992, had around 2 deviations. This compares to a much more shareholder friendly approach among UK companies, where the same figure was 0.7.

All three continental countries have experienced a certain decline in the use of voting right distortions over the 1990s and 2000s. Although, it is once again important to note some differences: the change among Dutch companies seems to have been much more limited than in Swedish- and especially Swiss companies. Swiss companies’ reliance on voting right distortions seems to have declined earlier and more strongly than the other two continental countries, although Sweden seems to have ‘caught up’ since the mid-2000s. These patterns are consistent with existing studies on corporate governance change in these three countries, which observed that Switzerland reformed earlier and more strongly, while both the Netherlands and Sweden did not show many signs of change until the early 2000s (Culpepper 2010, Schnyder 2012a, de Jong & Roell 2005).
Figure 7: Proportion of firms with dual class stock

Figure 8: Average Number of Deviations from ‘1 Share, 1 Vote’
Ownership structure

The third dimension of corporate governance I analyse in this paper is the structure of ownership. This is arguably the most direct instrument of corporate control and a vast literature shows that ownership has important effects on various aspects of corporate governance (cf. among many Shleifer and Vishny 1997, Aguilera and Jackson 2010).

I used two measures to assess change on this dimension. The first one is the overall concentration of ownership as measure by the cumulated stake held by all declared blockholders in the firm. We collected information for all disclosed blocks of 3% or above. Figure 10 reports the trends on this dimension.

The figure largely confirms what we know about the ownership structures in these four countries: We find the expected difference of concentrated versus dispersed ownership between the continental and the anglo-saxon corporate governance system (cf. Weimar & Pappe 1999). Among the continental countries, previous research finds that ownership is more concentrated in Switzerland than in the two other cases (Faccio & Lang 2002, Schnyder 2012a). This is indeed the pattern that we observe from 1995 onwards. Before that date, Swiss ownership seems less concentrated than Swedish ownership and Dutch ownership seems remarkably dispersed for the first two years. This, however, may largely be an artefact of disclosure requirements. Sweden has historically been more transparent than the other two countries. Disclosure requirements were only adopted in the Netherlands and Switzerland during the 1990s (1992 and 1995 respectively). This implies that the strong increase in concentration may be due to increased transparency rather than an actual increase in concentration. Also, and more interestingly, the capital structure of most Swiss companies was usually divided into registered stock, bearer stock and non-voting participation certificates (cf. Schnyder 2010). The largest part of issued stock usually was in bearer shares, whose owners would not have to register. In other words, these shareholders could remain anonymous and it was impossible for companies to know the identity of their owners and the size of their stakes. The move away from dual class shares (cf. figure 7) most of the time meant that companies replaced the three-fold division of capital with a unitary structure of only registered stock (which was also a requirement of the NYSE for companies cross-listed there). To some extent, the higher concentration figure for the years 1995 through 2002 for Switzerland may hence partly be the result of these changes.

Ownership concentration has steadily and quite substantially declined in Sweden during the period of interest (from 60% in 1990 to around 40% in 2010), the UK has seen a remarkable trend of concentration since the early 2000s up to the financial crisis (from
around 20% in 1990 to 30% in 2006). The data points for 2007 and 2008 need to be taken with a grain of salt, as some database effect may be at work here, which will need to be investigated. Nevertheless, the increasing concentration in the UK is consistent with the increasing amount of equity held by institutional investors. Firms like BlackRock, Fidelity, etc. own increasing stakes in UK companies; a trend that has accelerated in particular during the early 2000s. This evolution is consistent with our data that shows a steady increase of concentration from 2003 onwards. The suspicious values are for 2007 and 2008 where concentration seems to have accelerated very strongly (47% and 57%) respectively. The general trend in the UK seems to hold independently of the reliability of the two outliers in the yearly means (UK 2007, 2008). Even without these, there is an increasing concentration during the 2000s with the average: the average concentration for the 1990s was 20.91%, for the 2000s it was 29.79% excluding the two outliers 2007 and 2008.

A second measure for ownership concentration is simply to use the stake of the single largest direct shareholder (figure 11). This measure may be more reliable, as it is less prone to be affected by disclosure practices especially of smaller stakes. This figure shows again that the continental countries have higher ownership concentration than the UK. It also shows a considerable decline in concentration in these three countries (strongest in Sweden), but an increase in the UK (although once again the data points for the late 2000s should be disregarded here).

This measure is also interesting in terms of the comparison between the Netherlands, Sweden and Switzerland. All three countries show a similar trend towards a decrease in concentration starting from a high level. The decline does not imply a complete dispersion of ownership as La Porta and colleagues (1997, 1998) theory might suggest. But again, the largest owners in Switzerland seem to hold on to larger stakes than in the two other continental cases. This is consistent with different types of insider corporate governance with the Swiss model being more based on direct ownership, while the two others typically use legal devices of control more extensively (Schnyder 2012a). This implies that Swiss insiders are less vulnerable than Swedish or Dutch insiders to the abandoning of legal CEMs. Indeed, where owners who hold larger stakes directly, may not have to fear losing control even when certain CEMs were outlawed or would have to be abandoned for other reasons. This may have an impact on the preferences of the business elite in terms of legal shareholder reform, hinting at the endogeneity of ownership structures and legal changes (Schnyder 2012a).
This section has described in very broad terms the evolution of shareholder-orientated practices in three European countries over two decades, based on the corporate practices of the approximately 100 largest listed companies in each.

Four points emerge from this discussion: firstly, there is a clear indication that the companies in these three countries had markedly different corporate governance practices at the beginning of the 1990s. This is consistent with theories of national business systems and varieties of capitalism (Whitley 2003, Hall & Soskice 2001, Weimar & Pappe 1999).

Secondly, in many cases we find a common trend across the countries towards more shareholder-orientated practices. In most cases this implies that the continental European countries have become more similar to the UK case, indicating that there is indeed to a certain extent a ‘convergence’ on the Anglo-Saxon model.

Thirdly, however, we should not overlook that despite common trends (processual convergence), and a reduction in differences between countries (absolute convergence), differences do remain at the end of the first decade of the 21st century. Convergence is hence clearly not complete, as some scholars have predicted it would be (Hansmann & Kraakman 2004).

It should also be noted that the trends in the different countries seem to show certain country-specific features, which suggest that it is important to investigate the processes in each country in some detail.
5. Legal change and changes in practice: cause and effect

One of the main aims of this research is to investigate the direction of causality between legal change and changes in corporate practices. Different studies in the literature have attempted something similar using a variety of methods (see above). As it stands, the data collected for this project does not allow it to employ sophisticated statistical methods. Therefore, this section uses once again a descriptive approach to make some first observations regarding the plausibility of the 'law matters' thesis or the thesis that practices change independently of legal change. One way of doing that is by using the two variables from the CBR SPI for which we have a direct correspondence in our data on shareholder-orientation practices. These are the proportionality principle (1 share, 1 vote) and the requirement to appoint a certain number of independent board members.

Figures 12 and 13 report the evolution of these two rules in the different countries based on the SPI. The figure for the proportionality principle shows that the UK and the Netherlands do not know any such rule, while the two other countries had, or introduced during the early 1990s, certain limitations to voting right distortions: Switzerland introduced a rule limiting the maximal amount of voting right distortions to a proportion of 1:10, i.e. super-voting shares cannot carry more than 10 times as many voting rights as ordinary shares. Sweden adopted a similar rule in the 1970s, even though a ‘grandfather clause’ allowed it companies with higher levels of distortions to keep such structures in place, which many did. Overall, there does hence not seem to be much legal pressure to change capital structures in the two countries.

The absence of a ‘one share, one vote’ legal rule in the Netherlands and the UK is also interesting. Indeed, as figure 7 above shows, these two countries literally did not have any – or very few – companies with dual class shares. The absence of legal rules in this respect may hence simply be the result of the absence of a perceived need to prohibit such structures. In this case, clearly, the law did not determine the corporate practices.

Similarly, the strong decline in dual class shares in Switzerland and Sweden does not seem directly be caused by any equivalent legal change, although the limited legal change may have had a ‘signalling’ effect for companies in the sense that limitations to voting right distortions – however timid – may indicate to companies that such practices are not ‘appropriate behaviour’ anymore.
Figure 13 shows that there has been more extensive legal change regarding the board independence rule. Here all three countries have introduced – mainly during the 2000s – some legal requirements forcing companies to appoint more independent directors. If ‘law matters’, we would expect corporate change to follow and changes taking place during the 2000s mainly. The timing, however, was somewhat different in each country. In 1993, the UK was the first country to Introduce regulatory requirements regarding board member independence. Switzerland followed in 2002, the Netherlands, in 2004 and Sweden in 2005. Comparing this pattern to the trends reported in figure 14, which shows the corporate practices, we find interesting patterns. We observe that all three countries experienced a continuous increased in independent board members since 1999.\(^6\)

At the end of the 1990s only a minority of board members in the continental European cases were considered independent (around 20% in each case), while there were more than twice as many in the UK (40%). However, the Netherlands ‘caught up’ quickly with the UK over the next couple of years, and Sweden followed with a couple of years ‘delay’. By 2010 all three countries had reached levels of 60% of independent board members. Switzerland shows a very interesting trend as well. Here, independent directors started to spread during the early 2000 starting from around 20% in 1999 to reach a peak of above

\(^6\) No data was available before that date, which is in itself an interesting finding. While the concept of non-executive directors (NEDs) had emerged relatively early on as an important claim of the shareholder movement, the question of actual independence emerged much later. Neither annual reports nor stock exchange yearbooks during the early and mid-1990s contain hence any information on board independence.
40% in 2006. It is remarkable, however, that after that point the proportion seems to flatten out and indeed decrease to some extent. This is remarkable, because the issue was regulated in 2002, which could have created pressures to increase the percentage of IDs further. Based on the descriptive approach adopted here, it is however difficult to determine whether legal change was instrumental in bringing about corporate change in this instance.

Figure 13: CBR SPI Variable 5: Independent BoD Members Rule

Figure 14: Proportion of Independent Directors on Boards
6. Conclusion

This paper addressed the question of the interrelation between legal change in the area of corporate governance and the parallel corporate change. This question has been subject to extensive and at times quite heated debates amongst scholars from various areas. The ‘law matters’ claim still remains an – often implicitly – widely-accepted assumption in corporate governance. There are relatively few studies that test this claim empirically and even fewer do so using longitudinal firm-level data. This study seeks to contribute to cover this gap.

The preliminary data present in this paper clearly shows that there is indeed a strong trend towards convergence in both legal rules and corporate practices. The four very different countries have converged both processually (i.e. the changes go in the same direction) and absolutely (they have become more similar), but not completely (they are still distinct).

To be sure, the descriptive approach adopted in this paper – due to the stage the data collection process is at – does not allow us to draw any firm conclusions regarding the direction of causality between law and ‘agency’ (i.e. corporate practices). Nevertheless, the discussion in the last section clearly shows that the assumption of a straightforward legal determinism is most likely wrong. Practices and legal rules seem to co-evolve, but they seem to do so in quite complex and probably context-specific ways. Further research will have to explore what exactly the drivers of the observed trends are and how exactly ‘law matters’. Indeed, the descriptive approach uses mainly a temporal logic to investigate causality. This does not allow us to capture for instance anticipation effects (laws are elaborated over a relatively long period of time, which may lead companies to adjust their practices already before the legal change is actually implemented). More sophisticated statistical techniques will be required to be more certain about causality.
References:


Table 1: Variables correlation matrix (Pearson correlations)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Dual Class Stock</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Deviations 1S-1V</td>
<td>0.76</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Min Shares to vote</td>
<td>0.10</td>
<td>0.04</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Unitary share structure</td>
<td>-0.98</td>
<td>-0.74</td>
<td>-0.10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Cumulated block</td>
<td>0.23</td>
<td>0.08</td>
<td>0.09</td>
<td>-0.19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Largest block</td>
<td>0.22</td>
<td>0.13</td>
<td>0.00</td>
<td>-0.22</td>
<td>0.62</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Controlling shareholder</td>
<td>0.22</td>
<td>0.23</td>
<td>-0.05</td>
<td>0.25</td>
<td>0.65</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 Percentage NEDs</td>
<td>0.36</td>
<td>0.19</td>
<td>0.16</td>
<td>-0.36</td>
<td>0.25</td>
<td>0.28</td>
<td>0.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 CEO – Chair separation</td>
<td>0.05</td>
<td>0.01</td>
<td>0.07</td>
<td>-0.06</td>
<td>0.10</td>
<td>-0.04</td>
<td>0.01</td>
<td>0.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 CEO BoD member</td>
<td>0.09</td>
<td>0.11</td>
<td>0.03</td>
<td>-0.10</td>
<td>0.01</td>
<td>0.06</td>
<td>0.02</td>
<td>0.09</td>
<td>0.06</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 Dividends per share</td>
<td>0.05</td>
<td>0.03</td>
<td>-0.03</td>
<td>-0.05</td>
<td>0.05</td>
<td>0.12</td>
<td>0.14</td>
<td>0.09</td>
<td>-0.01</td>
<td>0.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 Interest paid</td>
<td>-0.07</td>
<td>-0.08</td>
<td>-0.05</td>
<td>0.06</td>
<td>-0.06</td>
<td>-0.09</td>
<td>-0.07</td>
<td>0.01</td>
<td>-0.07</td>
<td>0.02</td>
<td>-0.09</td>
<td>0.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13 Wage bill</td>
<td>-0.07</td>
<td>-0.07</td>
<td>-0.05</td>
<td>0.06</td>
<td>0.01</td>
<td>-0.06</td>
<td>-0.07</td>
<td>0.00</td>
<td>-0.09</td>
<td>-0.08</td>
<td>0.00</td>
<td>0.25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 No. employees</td>
<td>-0.13</td>
<td>-0.14</td>
<td>-0.08</td>
<td>0.15</td>
<td>-0.14</td>
<td>-0.21</td>
<td>-0.14</td>
<td>-0.16</td>
<td>-0.23</td>
<td>-0.08</td>
<td>-0.71</td>
<td>0.31</td>
<td>0.57</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 Payout ratio</td>
<td>0.02</td>
<td>0.02</td>
<td>0.00</td>
<td>-0.02</td>
<td>0.00</td>
<td>-0.01</td>
<td>-0.01</td>
<td>0.02</td>
<td>0.01</td>
<td>-0.01</td>
<td>0.00</td>
<td>-0.01</td>
<td>0.00</td>
<td>-0.01</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16 NYC listing</td>
<td>-0.13</td>
<td>-0.18</td>
<td>-0.05</td>
<td>0.11</td>
<td>-0.15</td>
<td>-0.06</td>
<td>-0.08</td>
<td>0.05</td>
<td>-0.37</td>
<td>0.00</td>
<td>-0.02</td>
<td>0.11</td>
<td>0.23</td>
<td>0.37</td>
<td>-0.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17 London listing</td>
<td>-0.33</td>
<td>-0.26</td>
<td>-0.12</td>
<td>0.36</td>
<td>-0.25</td>
<td>-0.32</td>
<td>-0.24</td>
<td>-0.68</td>
<td>-0.13</td>
<td>-0.13</td>
<td>-0.03</td>
<td>0.15</td>
<td>0.14</td>
<td>0.35</td>
<td>-0.03</td>
<td>0.24</td>
<td></td>
</tr>
<tr>
<td>18 Market capitalisation</td>
<td>-0.18</td>
<td>-0.16</td>
<td>-0.10</td>
<td>0.17</td>
<td>-0.11</td>
<td>-0.17</td>
<td>-0.12</td>
<td>0.09</td>
<td>-0.24</td>
<td>-0.03</td>
<td>0.02</td>
<td>0.29</td>
<td>0.38</td>
<td>0.51</td>
<td>-0.01</td>
<td>0.46</td>
<td>0.35</td>
</tr>
</tbody>
</table>