TILBURG ◆ UNIVERSITY

Tilburg University

A Corporate Governance Index

Martynova, M.; Renneboog, L.D.R.

Publication date:
2010

Link to publication in Tilburg University Research Portal

Citation for published version (APA):
Martynova, M., & Renneboog, L. D. R. (2010). *A Corporate Governance Index: Convergence and Diversity of National Corporate Governance Regulations*. (CentER Discussion Paper; Vol. 2010-17). Finance.

General rights
Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

Take down policy
If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Download date: 13. Sep. 2024

CentER

Discussion Paper

No. 2010–17

A CORPORATE GOVERNANCE INDEX: CONVERGENCE AND DIVERSITY OF NATIONAL CORPORATE GOVERNANCE REGULATIONS

By Marina Martynova, Luc Renneboog

February 2010

ISSN 0924-7815

TILBURG ◆ UNIVERSITY

A CORPORATE GOVERNANCE INDEX: CONVERGENCE AND DIVERSITY OF NATIONAL CORPORATE GOVERNANCE REGULATIONS

Marina Martynova
Cornerstone Research and Tilburg University
and

Luc Renneboog
Tilburg University and European Corporate Governance Institute (ECGI)

Abstract: The issue of appropriate corporate governance framework has been a focal point of recent reforms in many countries. This study provides a comprehensive comparative analysis of corporate governance regulatory systems and their evolution over the last 15 years in 30 European countries and the US. It proposes a methodology to create detailed corporate governance indices which capture the major features of capital market laws in the analysed countries. The indices indicate how the law in each country addresses various potential agency conflicts between corporate constituencies: namely, between shareholder and managers, between majority and minority shareholders, and between shareholders and bondholders. The analysis of regulatory provisions within the suggested framework enables us to understand better how corporate law works in a particular country and which strategies regulators adopt to achieve their goals. The 15-year time series of constructed indices and large country-coverage (30 European countries and the US) also allows us to draw conclusions about the convergence of corporate governance regimes across the countries. To our best knowledge, this is the first study that intends to address the convergence debate empirically. The analysis is based on a unique corporate governance database that comprises the main changes in corporate governance regulations in the US and all European countries between 1990-2005.

JEL codes: G3, G34, G38, K2, K22, K40, G32

Key words: governance regulation, convergence, corporate governance, agency problem, ownership and control, LLSV

Contact details:

Corresponding author Marina Martynova: Cornerstone Research, 699 Boylston St., Boston, MA 02116, USA, tel: + 1 617 927 3000, email: M.Martynova@uvt.nl

Luc Renneboog: Tilburg University, PO Box 90153, 5000 LE Tilburg, the Netherlands, tel: + 31 13 466 8210, fax: + 31 13 466 2875, email: Luc.Renneboog@uvt.nl

1. Introduction

Triggered by the seminal work of La Porta, Lopez-de-Silanes, Shleifer and Vishny (1997, 1998; hereafter LLSV), the economic effects of corporate governance regulation have received notable academic attention in recent years. The new stream of literature on law and finance does a comparative analysis of institutional frameworks around the world and studies their impact on economic behaviour and on the governance of firms. Although the importance of regulation on economic activities has been stressed since the late 1930s (see e.g. Coase, 1937; Pigou, 1938), LLSV have moved this topic to the top of the research agenda by documenting empirically the relationship between the law and economic growth, the development of markets, and the governance of firms. Importantly, LLSV develop the tools that enable researchers to compare institutional environments across countries and to study empirically the effects of corporate regulation. These tools comprise, amongst others, a country classification by legal origin and indices that characterize the quality of regulatory provisions covering the protection of corporate shareholders and creditors, as well as law enforcement.

Nowadays, virtually every cross-country study employs the LLSV legal origin classification and corporate governance indices. However, the LLSV indices have some limitations. First, the indices are static and refer to national legal environments in 1995. In the late 1990s, many countries have undergone substantial reforms of their corporate legislations. It is therefore likely that the LLSV indices of 1995 no longer reflect the true differences in national legal systems since 1996 and hence require an update. There is little evidence regarding the scope of these reforms and their impact on the protection of the rights of corporate investors and the corporate governance system overall.

A second limitation of the LLSV corporate governance indices is that the authors use a comparative approach to construct them. LLSV opt for the US corporate law as the reference legal system and identify the key legal provisions in the governance of US companies. Subsequently, they verify whether the same types of provisions are present in the law of other countries. It is therefore not surprising that countries with legal systems most closely resembling that of the US receive the highest score on the LLSV rating. This approach, however, typically ignores the regulatory principles that prevail in other countries but not in the US. Moreover, the system of corporate governance in the US is characterized as a shareholder-based system in which the main objective of corporate law is to protect (atomistic) corporate investors from being expropriated by the firm’s management. In contrast, the systems prevailing in most European and Asian countries are characterized as stakeholder-based systems (such as the blockholder-oriented, labour-oriented, or state-oriented systems). In these countries, the expropriation of investors by the management is typically prevented via monitoring by the firm’s large shareholders, creditors or employees such that there is less need to address the problem at the regulatory level. It is therefore also not surprising that

most of the countries with a stakeholder-based system only have a low score on the LLSV shareholder rights protection rating. What is however vital in these countries is how well the law protects the interest of corporate investors from being expropriated by the controlling stakeholders (i.e. larger shareholders, employees, the state). This question goes beyond the scope of the LLSV index.

In this paper we address the limitations of the LLSV corporate governance indices. First, we develop three new corporate governance indices that reflect the quality of national laws aimed at protecting (i) corporate shareholders from being expropriated by the firm's management, (ii) minority shareholders from being expropriated by the large blockholder, and (iii) creditors from being expropriated by the firm's shareholders. When constructing the indices, we depart from the comparative approach employed by LLSV and use a functional approach instead. That is, we identify all major provisions of corporate laws by country and classify them according to the degree of protection they offer to the above-mentioned principals. Subsequently, we quantify the regulatory provisions using three indices that characterize the effectiveness of the legal system in reducing the three basic agency problems: those arising between the management and the shareholders, between majority and minority shareholders, and between creditors and shareholders. The advantage of the functional approach is that it covers all regulatory provisions currently in existence in all European countries and the US and allows us to construct indices that capture both the weak and strong aspects of the various corporate governance regimes.

Second, we empirically document the evolution of corporate governance regulations for all (30) European countries and the US. We analyse whether regulatory convergence has been started, and, if so, detect the main patterns of the converge process. Using the three indices we examine how corporate governance regulation has changed in countries over the past 15 years. The study of the evolution of corporate governance regulations is appealing because it contributes to the ongoing debate on whether a single system of corporate governance is likely to develop (see e.g. McCahery et al. 2002). To our best knowledge, this is the first study that intends to address this question empirically.

The analysis in this paper is based on a unique corporate governance database that comprises the main changes in corporate governance regulations in the US and all European countries between 1990-2005. The database is based on studying various corporate legislations, a questionnaire sent to leading corporate governance specialists as well as direct interview with these specialists. The questionnaire is on the various aspects of the corporate governance regimes and their evolution since the early 1990s. The questionnaire contains 55 questions that cover the most important provisions of company law, stock exchange rules, and bankruptcy and reorganization law at both the national and supranational level. In particular, the questions cover the following: (i) shareholder and creditor protection regulation, (ii) accounting standards, (iii) disclosure rules, (iv) takeover regulation (mandatory bid, squeeze-out rule, takeover defence measures, etc.), (v) insider trading regulation,

(vi) regulation regarding the structure of the board of directors and voting power distribution, (vii) and adoption of codes of good practice. In total, about 150 legal experts throughout Europe and the US have contributed to our database on the changes in corporate governance regulation (see Appendix I).

The reminder of the paper is organized as follows. Section 2 discusses the role of corporate regulation. Section 3 describes our unique database on corporate law reforms in 30 European countries and the US. Section 4 discloses the compositions of the corporate governance indices. Section 5 documents the dynamics of corporate governance regulation reforms and predicts the consequences of these reforms for the (lack of) evolution towards a single corporate governance system. Section 6 concludes.

2. The role of corporate governance regulation

2.1. Agency problems between corporate constituents

A typical public corporation represents a legal entity with limited liability, transferable shares, delegated management under a board structure, and investor ownership (Hansmann and Kraakman, 2004). Together, these characteristics make a corporation the most attractive form of business organization. However, they also generate the potential for agency problems.

The conflicts of interests between management and shareholders frequently arise in companies with a dispersed ownership structure. In these firms, small shareholders cannot effectively manage the firm due to coordination problems and hence have to delegate the control over the firm to professional managers. However, the separation of ownership and control leads to a divergence of interests between the managers and shareholders (Berle and Means, 1932). The managers may forgo the shareholders' wealth maximization objective and undertake actions which maximize their personal interests but not the value of the company. Research on corporate governance shows that shareholders may prevent the misuse of corporate assets by managers either by aligning the managerial interests with their own through executive compensation contracts or by effectively monitoring managerial actions (see e.g. Grossman and Hart, 1980; Shleifer and Vishny, 1986; Becht et al., 2005.). Since the coordination problem among small shareholders does not allow them to effectively monitor the management, they have to rely on external monitoring via the market for corporate control (Fama and Jensen, 1983; Jensen, 1988).[1]

The conflict of interests between management and shareholder is less severe in companies with concentrated ownership structure. In these firms, the controlling shareholders have strong incentives to monitor management and replace it in poorly performing companies (Franks, Mayer

[1] Hostile takeovers can target poorly performing firms and replace poorly performing management. The threat of losing their jobs and perquisites provides managers with an incentive to focus on shareholder objectives.

and Renneboog, 2001). However, the presence of a controlling shareholder may induce another agency problem: the potential opportunistic behaviour of the large blockholder towards minority shareholders (see e.g. Faccio and Stolin, 2004). The activities aimed at expropriating minority shareholders are reduced when the management is held accountable to the interests of all shareholder including minority shareholders. Companies may formulate such accountability in the bylaws of the company e.g. by ensuring the delegation and concentration of control to a board of directors which is independent from the controlling shareholder; by aligning managerial interests with those of (minority) shareholders through managerial compensation contracts; and by clearly defining the fiduciary duties of managers and directors.

The legal entity of public corporations and limited liability of their shareholders may engender another potential conflict of interest, namely that between creditors and shareholders.[2] The equity of a leveraged firm can be viewed as a call option on the firm's assets whose value increases with the volatility of future cash flows (Black and Scholes, 1973). This means that the management can maximize shareholder wealth by increasing the risk of the projects it invests in, and hence re-distribute wealth from creditors to its shareholders. This conflict of interests between creditors and shareholders is likely to be resolved when the creditors are able to perform effectively monitor the corporate activities.

2.2 Why do we need corporate governance regulation?

It is in the interests of companies and their management to implement mechanisms that mitigate the agency problems mentioned above. Companies that can credibly commit themselves to act in the best interests of their constituents benefit from lower costs of equity and debt capital, labor, and other inputs and from a higher value of their products or services to clients (Becht, Bolton and Roell, 2005). The mechanisms available to companies to resolve the agency problems include managerial compensation contracts, (hostile) takeovers, concentrated ownership structures, delegation to and concentration of control by the board of directors which acts independently from executive directors and controlling shareholders, and clearly defined in corporate bylaws fiduciary duties. However, if companies were able to provide adequate protection to their investors, regulatory intervention is unnecessary. This raises a question as to why we need corporate governance regulation aimed at protecting the rights of corporate (minority) shareholders and creditors?

The theoretical literature gives a number of reasons. First, regulatory intervention helps markets to achieve the maximization of social welfare rather than the welfare of individual investors (see e.g. Pigou, 1938). To illustrate this in the context of corporate governance regulation, consider

[2] The legal status of the company entails that creditors are first in line in the absolute priority ranking and hence have the first claim on the corporation's assets while the shareholders are residual claimants. Limited liability implies that the shareholders are not personally liable for the debt obligations of the corporation. For more details see Hansmann and Kraakman (2004).

an example of the disclosure requirements related to corporate activities. In the absence of the disclosure requirements, managers may be tempted to conceal some details of the projects in which their company is involved for perfectly legitimate reasons, e.g. to keep their competitors uninformed and gain a competitive advantage in the future. However, more detailed information about corporate projects allow investors to assess the corporate growth potential better and to invest their money into companies that can generate the highest returns. Therefore, if all companies were to conceal information about their activities, a more inefficient allocation of capital would arise, leading to lower economic growth. Hence, a re-distribution of wealth between competing companies caused by a higher level of disclosure seems less harmful for the economy than the misallocation of capital caused by the lack of transparency. As such, mandatory rules that impose more disclosure enable economies to achieve a more optimal outcome.

The second reason for adopting a specific corporate governance regulation is that it forces companies to commit credibly to a higher quality of governance (Becht et al., 2005). Even if companies initially design efficient governance rules, they may break or alter them at a later stage. Investors anticipate this and are willing to provide firms with funds at lower costs only when companies find ways to commit credibly to good governance. However, credible pre-commitment mechanisms may be expensive or unavailable in countries lacking an effective institutional framework (Doidge et. al., 2004). For instance, a well-functioning infrastructure (in terms of internal control structures, audit mechanisms, voting procedures at the annual meetings etc.) is required to enable investors to verify the information that companies disclose (see e.g. Black, 2001).[3]

The importance of corporate governance regulation for corporate activities and economic growth has been further emphasized in a growing number of empirical studies. These papers show that a corporate governance regime has a significant impact on the availability and cost of capital, corporate performance, and the distribution of corporate value between the firm's stakeholders: shareholders, creditors, employees, consumers, and suppliers. Weak legal environment combined with weak enforcement of the law distorts an efficient allocation of resources, undermines the ability of companies to compete internationally, and hinders investment and economic development (see e.g. Levine, 1998, 1999; La Porta et al., 2002; Djankov et al., 2004).

2.3 Evolution of legal systems and corporate governance regimes

Given the beneficial impact of corporate governance regulation (as documented above) on economic growth, the development of markets, and the governance of firms, a natural question to

[3] For example, investors are able to sue a company if it had concealed particular information that is required to be reported by law. It would be a difficult task for investors to prove corporate negligence in the absence of mandatory disclosure requirements.

ask is whether or not a particular national legal system has a competitive advantage over other legal systems, and if so whether the alternative regimes ought to converge towards it.

In this extensive body of research, there is yet no consensus as to the best system of corporate law (for an overview of this literature see Goergen et al., 2005). Some law and economics academics proclaim the superiority of the UK and US legal system, characterized by a focus on shareholder value and good shareholder protection. There are also supporters of the alternative legal systems characterized by a focus on the welfare of employees, creditors, and other types of stakeholders and weak shareholder protection. They claim that the long-term interests of shareholders and stakeholders are not necessarily at odds, such that the different types of governance regimes may produce similar outcomes in terms of long-term economic growth (Bratton and McCahery, 2000). However, the lack of consensus regarding the optimal system of corporate regulation has implications for the current law reforms. It raises the question as to the direction reformers of national systems should adopt.

Bebchuk and Roe (2000) argue that the direction of legal reforms is typically pre-determined by initial institutional structures in a country. In particular, ownership and control concentration is an important factor that affects the role and function of corporate legislation and hence the direction of its reforms. This is because the degree of ownership and control concentration plays a key role in the relationships between the different corporate stakeholders. In countries where widely-held companies prevail, the main function of corporate governance regulation is to protect shareholders from being expropriated by the management. In countries where a vast majority of companies have a concentrated ownership and control structure, the function of corporate governance regulation is to minimize the extent of agency problems between majority and minority shareholders and that between shareholders and creditors.

The differences in the role and functions of corporate governance regulation across countries with dispersed and concentrated ownership structures imply that the convergence of corporate governance regulations towards a single legal system may not be an issue. However, legal convergence is not a necessary (nor sufficient) condition for achieving more harmonisation of corporate governance systems. The reason is that a corporate governance system is a broader concept than corporate governance regulation and covers a broader set of institutional settings typically characterized by the quality of legal protection of corporate constituencies, concentration of ownership and control, and the development of capital markets.

Bebchuk (1999) shows that, in the presence of large private benefits of control, better protection of shareholders is unlikely to affect the degree of ownership concentration. Even if better protection from the expropriation by the management were introduced, an incumbent blockholder is unlikely to sell his stake because a third party acquiring a controlling block is unable to compensate him for his private benefits of control. Thus, where private benefits of control are high, regulatory

reforms aimed at improving investor protection are likely to reinforce the existing ownership and control structures.

Roe (2002) proposes an alternative scenario. In his view, if the costs of monitoring management are high relative to the private benefits of control a blockholder enjoys, better legal protection from expropriation by the management may lead to a shift from concentrated to dispersed ownership. This shift may be further enhanced by some other drawbacks of concentrated control, such as the costs of low liquidity and undiversified risk. We conclude that corporate law reforms that improve investor protection are likely to lead towards more dispersed ownership provided that private benefits of control are relatively low.

Table 1. Reforms of corporate governance regulation and their expected impact on ownership and control within a particular corporate governance system

Initial characteristics of the system	*Corporate governance regulation reforms*	*Expected effect on the ownership structure*
▪ Low minority shareholders protection (High private benefits of control)	Improve in investor protection	Remains concentrated
▪ High minority shareholders protection (Low private benefits of control)	Improve in investor protection	More dispersed
▪ Low investor protection (High managerial discretion)	Decrease in private benefits of control	Remains concentrated
▪ High investor protection (Low managerial discretion)	Decrease in private benefits of control	More dispersed

It also follows from Bebchuk (1999) and Roe (2002) that, when investor protection is already high, reforms aiming at reducing private benefits of control may bring about ownership dispersion. However, if the management has substantial discretion to apply anti-takeover measures, the preferred ownership distribution may shift towards a more concentrated structure even if private benefits of control are curbed. Table 1 summarizes the above conjectures.

In sum, this section has shown that the adoption of a unified corporate governance regulation by countries with different initial institutional structures (in terms of voting structure, ownership and control, capital market development etc.) may not necessarily lead to the convergence of their legal corporate governance regimes. However, the adoption of country-specific corporate legislations may induce the convergence of wider corporate governance systems.

3. Corporate governance database

In this paper, we explore a unique corporate governance database that comprises the main changes in corporate governance regulation in the US and all European countries (including countries from Central and Eastern Europe) over the last 15 years. The database is based on the study of various corporate governance regulations, on the results from a detailed questionnaire sent to more than 150 legal experts, and on direct interviews with some of these experts.

Our approach can be summarized as follows: based on corporate legislation, corporate governance codes and the scientific literature, we have drafted a detailed set of questions about the main aspects of corporate governance regulation that applies to listed companies. A final set of 50 questions was put to leading corporate governance experts (mostly academic lawyers but also some practitioners from law firms). As we focus on listed companies, we have asked the contributors to this project to consider soft law, comprising: (i) (hard) corporate law; (ii) stock exchange regulations (listing requirements); (iii) codes of good practice provided there is a legal basis for these codes (the law refers to a code of good practice which is itself not incorporated in the law); and (iv) corporate practice.[4] The names and affiliations of the corporate governance experts who have contributed to the mapping of the corporate governance regulation of their own countries are presented in Data Appendix.

Somewhat to our surprise, our straightforward questions on the presence or application of specific corporate governance regimes frequently received conflicting answers. Consequently, we have re-contacted the involved experts to ask additional questions and have sought the advice of additional experts in order to reach clear answers. Still, from this experience, we must conclude that the current corporate governance regulations (corporate law, legally binding codes, and stock exchange regulations) leave room for interpretation and sometimes cause confusion even among legal experts.

4. Corporate Governance indices

As discussed in section 2, corporate law plays an important role in mitigating the three central conflicts of interest between the main corporate constituencies: the agency problems which arise between the management and the shareholders, between majority and minority shareholders, and between creditors and shareholders. In this section, we provide a concise overview of the existing corporate governance regulations in Europe and the US. We classify the main provisions of the existing regulations according to their efficiency in mitigating the conflicts of interests within a corporation. Based on this classification, we quantify the regulatory provisions for each country and

[4] In some cases, corporate practice deviates from corporate law. For instance, the regulator in the UK allows that firms issue shares with and without voting rights. Still, since the early 1990s virtually all listed firms on the London Stock Exchange have shares outstanding with voting rights as the issuance of non-voting shares was frowned upon by the stock exchange. Hence, in practice, the UK-system hinges on the 'one-share-one-vote' principle. We accept this principle as a corner stone concept of the UK corporate governance regime.

combine them into three indices that characterize how well national legislations minimize the extent of the agency issues.

The economic literature suggests two main approaches to resolve principal-agent problems: (i) create incentives such that agents act in the interest of their principals; and (ii) enhance the disciplining power of principals (see e.g. Becht, 2005). To implement these approaches, the law can deploy a number of governance strategies. Hansmann and Kraakman (2004) suggest the following classification of such strategies: (i) strengthening the appointment rights of principals, (ii) reinforcing the decision rights of principals, (iii) augmenting the trusteeship, (iv) enhancing corporate transparency, and (v) adopting an affiliation strategy.[5] The appointment rights strategy regulates shareholders' power to select or remove directors. The decision rights strategy grants shareholders with the power to intervene and initiate or ratify managerial decisions. The trusteeship strategy allows shareholders to appoint an independent body (a trustee) that will represent their interests in the firm and monitor managers. The transparency strategy seeks to eliminate conflicts of interests by enforcing strict disclosure requirements on corporate policies and contracts directly related to managers. Finally, an affiliation strategy sets the terms on which shareholders affiliate with managers. These typically involve shareholder rights to entry and exit on fair terms. The strategies are not limited to reducing the agency problem between shareholders and managers, but can also be deployed to address any other agency problems (e.g. between minority and majority shareholders or between shareholders and creditors).

The analysis of regulatory provisions within the framework of the above governance strategies enables us to understand better how corporate law works in a particular country and which strategies regulators adopt to achieve their goals. Hence, we classify the regulatory provisions (i) by type of agency problems and, (ii) by governance strategies within each type of agency problem. We model our corporate governance indices as a sum of sub-indices that indicate the scope of legal protection through different strategies.

4.1 Regulatory provisions addressing management-shareholder relations

When shareholders have limited power, agency problems may be substantial: management may then pursue their own interests (among others; corporate growth at the expense of value creation, excessive remuneration, value-reducing mergers and acquisitions (M&As) or a so-called 'empire building' strategy). These managerial objectives may be detrimental to shareholders' interests (which is corporate value or getting a fair return on their investment). To assess the relative shareholder power granted by law, we study the regulatory provisions that aim at mitigating

[5] There are a number of other strategies open to the law, such as a reward strategy that seeks to alter managerial incentives to act in the interests of shareholders. However, these strategies are usually applied by companies directly rather than imposed by the law. We therefore do not consider them in our legal indices.

managerial opportunistic behavior. Such provisions grant shareholders the right to appoint and dismiss the board of directors and to control most of the important corporate decisions (for instance, on equity issues or takeovers). We also consider the regulation that requires corporate transparency, and demands that the board of directors acts on behalf of the shareholders and effectively monitors top management.

4.1.1 The appointment rights strategy

Appointment and replacement rights enable shareholders to shape the basic structure, power, and the composition of a firm's internal governance structure. Voting rules and requirements on the board's composition are the main components of these shareholder rights.

Among the voting rules, we distinguish between the requirements for the nomination to the board by shareholders, the voting procedures (whether or not proxy voting by mail is allowed, whether or not shareholders are required to register and deposit shares prior to the general meeting), and restrictions imposed on the length of directors' contracts. With their right to elect the directors, shareholders can affect the composition of the board. This power should ensure the board's representativeness of shareholder interests. Some jurisdictions like the Netherlands restrict shareholders' election power in order to ensure the representation of labor interests in the boardroom. However, labor representation may erode shareholder power. A similar problem arises when a jurisdiction mandates employee representation on the board (as is the case in Germany, Luxembourg, and Norway). The presence of employee representatives (co-called codetermination) on the board reduces the power of directors elected by shareholders which may make it more difficult for them to implement corporate strategies in the best interest of shareholders.

Whereas codetermination redistributes the power from shareholders to employees, cross-shareholdings between two firms increase the relative power of management. Company's shares held by its subsidiary (or a firm in which the company has a controlling stake) are typically more under the discretion of the company's management. The management may use these shares to affect corporate decisions that are to be approved by the shareholder assembly (board members' election, in particular) to its own benefit. This makes the agency problems between management and shareholders more severe. Regulatory restrictions on cross-shareholdings are seen as an instrument mitigating these potential distortions. We expect shareholder interests to be better protected in countries where cross-shareholdings are addressed at a regulatory level and limits are imposed on share stakes held by a subsidiary in its parent firm.

When shareholders cannot vote by mail and are required to register and/or deposit shares prior to the meeting, their participation in management elections may be substandard and may augment inside managers' power to appoint their own candidates. The requirement to register[6] and

[6] In many Continental European countries, bearer shares are issued. Therefore, companies may require the shareholders to register prior to a general annual meeting such that they will be able to participate to the meeting.

block[7] shares several days prior to the general meeting is seen as a barrier for many shareholders to participate in the meeting, and decreases shareholders' participation in corporate decision-making. Therefore, we consider the election rules that enable shareholders to send their votes by mail and prohibit companies to require share deposits prior to the meeting as instruments that ensure better representation of the shareholder interests in the boardroom.

Restrictions on the length of managerial contracts encourage shareholders to assess managerial performance on a regular basis and replace board members when they do not satisfy shareholder requirements. Long-term contracts with board members are seen as a barrier to replace inefficient directors. The shorter the contractual tenure, the more incentives directors have to act in the interests of shareholders in order to be re-elected for another term[8]. In countries where the mandatory frequency of managerial rotation is high, the management-shareholders conflict of interests is likely to be less pronounced.

We consider the regulatory provisions mentioned above to be important legal mechanisms that grant shareholders appointment and replacements rights. We therefore quantify these provisions into an index capturing the efficiency of appointment and replacement rules that align the interests of management and shareholders. The components of the index and their coding are given in Table 2. A higher index score indicates higher likelihood that management acts in the interest of shareholders.

4.1.2 The decision rights strategy

The right to participate in corporate decisions enables shareholders to effectively monitor the management and prevent the misuse of corporate assets. However, due to coordination problems, (atomistic) shareholders are unable to participate in daily decision-making but can only be expected to weigh on major corporate decisions (e.g. the use of takeover defence measures, new equity issues, and mergers and acquisitions). Shareholders have the power to affect these activities if corporate legislation grants them with preemption rights, rights to approve the adoption of anti-takeover measures, and rights to call for an extraordinary general meeting.

Hostile takeovers constitute a real threat for corporate managers of losing their jobs. Therefore, managers may be tempted to unduly implement takeover-defence measures that discourage potential buyers from taking over the company, even if this violates the shareholders' interests. The shareholders' right to approve anti-takeover measures is a mechanism to mitigate managerial discretion over the firm's cash flows. Preemption rights can also be considered as an

[7] Companies may require shareholders to deposit their shares several days prior to a general annual meeting such that investors that acquire shares during the deposit period are unable to participate in the meeting. This way, firms can prevent strategic trades in shares (votes) in the period around the meeting. .

[8] However, short-term contracts have a negative impact on managerial incentives to focus on long-term investment projects. Managers that anticipate to be fired in the end of their term are more likely to focus on short-term projects and short-term profits. Therefore, very short contracts may be undesirable.

anti-takeover mechanism; therefore shareholders vote on their approval is required to lessen managerial discretion.

Shareholders disagreeing with certain managerial should have a right to call an extraordinary general meeting. The lower the minimum percentage needed to call such a meeting is, the easier shareholders can intervene in critical situations and present their concerns of any mismanagement of the company.

A major shareholder in a firm typically has a decisive power and strong incentives to monitor management and replace it in poorly performing companies (Franks at al., 2001). Bolton and von Thadden (1998) argue that the advantage of monitoring by blockholders is that it takes place on an ongoing basis. In contrast, the disciplining by atomistic shareholders only occurs in crisis situations. If the interests of the major shareholder coincide with those of minority shareholders, managerial-shareholder conflict of interests is likely to be mitigated via monitoring by blockholders. However, an introduction of voting caps may reduce major shareholders' power to affect corporate decisions and may hence weaken the monitoring of management. Therefore, a regulation prohibiting voting caps can be considered as an additional mechanism to reduce managerial opportunism.

Using the regulatory provisions discussed above, we construct a decision rights index that captures the legal power of shareholders to participate in corporate decision-making. The constitutuants of the index and their coding are given in table 2; a higher index score indicates that managers have less discretion.

4.1.3 The trusteeship strategy

Appointment and replacement rights ensure the shareholder's representation on the board. However, having a shareholder representative on the board may not guarantee board's accountability to the shareholders interests, unless there is a set of rules that guarantees the elected directors do monitor corporate managers in the interests of shareholders. The board's independence from the management is essential. In practice, two board models are used: one-tier and two-tier board structures. Under the two-tier board, the governance functions are granted to a supervisory board (a board consisting of non-executive directors) who monitors top management assembled in the management board. In a unitary board system, both top management and non-executive directors make up the board. In order to guarantee board independence, the overlap between the management and supervisory boards in 2-tier systems is restricted. In a one-tier system, the CEO is usually forbidden to hold a position of chairman simultaneously. Separating the executives' and non-executives' roles on the board enhances the monitoring of management.

Some countries also require companies to establish a separate board of auditors (for e.g. Italy). The main purpose of the board of auditors, which consists of people who do not serve as non-executive directors, is to ensure that the management provides sufficient and truthful information about all corporate activities to regulatory authorities and shareholders. As such, it facilitates

monitoring by the market and thereby contributes to the improvement in the management-shareholder relationship. In contrast, employee representation on the board is likely to have negative effect on the management-shareholder relation. Labor interests are often in conflict with those of company's shareholders. The lack of consensus on corporate strategy, caused by a conflict of interest between directors representing employees and shareholders, enlarges the discretion of the management to implement corporate policies to their own benefit. Therefore, employee representation on the board is considered to be harmful for the shareholders.

4.1.4 Transparency

Transparency regulation intends to improve the quality of information about company and management. It should be noted that the intention of this legal strategy is not to improve the quality of the accounting procedures as these are usually not incorporated in corporate law but are set by accounting standards boards. More disclosure increases the informativeness of the market on e.g. corporate policies and contracts directly related to the management. More specifically, corporate legislation regulates the extent to which information is released on the managerial compensation package (on an aggregate or individual basis, if at all) and the requirement to disclose any transactions between management and company (e.g. consulting contracts, interest-free loans). The quality of the transparency is more reliable when the law or the stock exchange regulations include a comply-or-explain principle. It is important that the codes of best practice which exist in almost every country are legally enshrined.

Therefore, we collect information on the following transparency provisions : (i) requirement to disclose managerial compensation on aggregate or individual basis; (ii) requirement to disclose any transactions between management and company; (iii) frequency of financial reporting (annually, semi-annually, quarterly); and (iv) the presence of comply or explain rules. We quantify these provisions into the transparency index. The composition of the index is presented in table 2; a higher index score reflects more transparency about corporate and managerial activities and profits.

4.2 Regulatory provisions addressing majority-minority shareholders relationship

We also study the relative power of the minority shareholders, which is particularly important when strong majority shareholders are present. This aspect of corporate governance is particularly important in Continental Europe where most of the listed firms are closely-held with one shareholder (group) often controlling a majority of the voting rights. In a firm with concentrated ownership, it is possible that the dominant shareholder influences managerial decisions to his own benefit and at the expense of minority shareholders. The minority shareholder legal protection rests on the regulatory provisions that increase the relative power of the minority shareholders and reduce the private benefits of control that the controlling blockholder can exploit at the detriment of these

shareholders. In this respect, vital rules are the direct minority shareholder rights (board representation, minority claims, extraordinary general meetings, blocking minorities), the one-share-one-vote principle (dual class shares, voting caps, break-through rule, equal treatment principle), ownership transparency, and the relative power in case of a takeover threat.

4.2.1 Appointment rights strategy

The appointment rights strategy aims at protecting minority shareholders as it gives minority shareholders a say in the appointment of the management and the internal governance system (the body of non-executive directors). The most straightforward legal approach is to grant minority shareholders with a right to nominate their representative to the board. This director is independent from the large blockholders and monitors the management in order to prevent it from acting to the benefit of the large shareholders only.

Additional legal solutions to increase the power of minority shareholders when a strong blockholder is present include the use of voting caps and adherence to the one-share-one-vote principle. Voting caps curb the voting power of the large shareholder and hence reduce its influence on managerial actions, leaving more scope for minority shareholders to participate in corporate governance. The one-share-one vote principle aligns the blockholder's cash flow and voting rights. Issuing dual class shares or non-voting shares allows some shareholders to accumulate control while limiting their cash investment. A ban on a deviation from the one-share-one-vote principle should discourage controlling blockholdings, as this makes them relatively more expensive than when the deviation from the principle is allowed. Less power concentration in the hands of large blockholders improves the status of minority shareholders in the firm and their role in the firm's corporate governance.

Overall, we expect the following regulatory provisions of an appointment rights strategy to contribute to minority shareholder protection: (i) mandatory minority shareholder representation on the board; (ii) rules that allow to apply voting caps; and (iii) a ban on the dual class shares (non-voting and multiple-votes shares). We quantified the use of these regulations in our minority shareholders appointment rights index. The components of the index and their coding are disclosed in table 2; a higher index score reflects that the law upholds the rights of the minority shareholders.

4.2.2 The decision rights strategy

The most powerful regulatory strategy to enable minority shareholders to participate in the governance of their firm is to grant them strong decision rights. This is achieved either by introducing the need of a supermajority approval for major corporate decisions such that minorities who own a combined blocking minority are able to block corporate policies that may harm their interests. Therefore, the higher is the majority percentage the law requires for a corporate decision to be approved by shareholders, the more powerful are the minority shareholders. Regulations that

grant shareholders the right to call for extraordinary meeting may also strengthen minority shareholders' incentives to monitor management. The level of protection depends on the minimum percentage of share capital ownership required to call for an extraordinary shareholders' meeting. The lower the percentage, the easier the minority shareholders can pass their concerns to the company's management.

We quantify the two types of legal provisions discussed above into the minority shareholders decision rights index, while the details on the coding are given in table 2. A higher index score reflects more power for minority shareholders to affect corporate decisions.

4.2.3 The trusteeship strategy: Independence of directors from controlling shareholders

The right to elect the directors to the board gives large shareholders the opportunity to affect the board composition as well as the board's decisions. This may harm the interests of minority shareholders. Some jurisdictions, like the Netherlands, restrict the election power of the shareholders such that large shareholders' influence on the board's decision-making process is limited. Consequently, potential opportunistic behavior by the large blockholder is strongly reduced which thereby increases the protection of small shareholders.

We quantify the provisions open to the trusteeship strategy into the minority shareholders trusteeship rights index. A higher index score reflects that the board of directors acts independently from the controlling shareholder and hence is more accountable for the interests of minority shareholders. The components of the index and their coding are given in table 2.

4.2.4 The affiliation rights strategy

Our final, but probably most powerful strategy of corporate law to enhance the power of minority shareholders is to provide them with entry and exit rights on fair terms. Most of the regulatory provisions of this category are part of the takeover regulation. The relevant clauses include the mandatory bid, the principle of equal treatment of shareholders, the sell-out rule, and the break-through rule. The mandatory bid rule requires the acquirer to make a tender offer to all the shareholders once she has accumulated a certain percentage of the shares. The mandatory bid requirement is justified on the grounds that an investor who obtains control, may be tempted to exploit private benefits of control at the expense of the minority shareholders. As such, the role of the mandatory bid rule is to protect the minority shareholders by providing them with the opportunity to exit at a fair price. The principle of equal treatment complements the mandatory bid rule by requiring controlling shareholders, the management, and other constituencies to treat all shareholders within each individual class of shares equally. Although the principle of equal treatment constitutes an important principle of corporate governance regulation with respect to any type of corporate activities, it is particularly important in takeovers where the possibilities of violations of the rights of minority shareholders are far-reaching. The equal treatment principle

mandates an acquirer to offer minority shareholders to exit on terms that are no less favourable than those offered to the shareholders who sold a controlling block. Both the mandatory bid rule and the equal treatment principle have received wide recognition at the regulatory level in European countries. The sell out and the break-through rules are less accepted at the regulatory level, though they also aim at protecting the minority shareholders (for an overview see Goergen et al., 2005).

A minority claim is another legal device that grants shareholders the right to exit a company on fair terms when they fear their rights are expropriated. Some regulations stipulate a minimum (combined) percentage which enables shareholders to launch a minority claim. The lower the percentage of ownership required, the easier it is for shareholders to use the minority claim rights to challenge important managerial decisions.

A fundamental element of corporate governance that provide minority shareholders with the entry right consists of the disclosure of voting and cash flow rights. Information about major share blocks allows the regulator, minority shareholders and the market to monitor large blockholders in order to avoid that the latter extracts private benefits of control at the expense of other stakeholders. In other words, transparency minimizes potential agency problems *ex ante*. Moreover, transparency allows the regulator to investigate, for instance, insider trading or self-dealing by large blockholders.

The legal devices that provide minority shareholders with the right to entry and exit on fair terms are quantified into a minority shareholders affiliation rights index. A higher index score reflects that the expropriation of minority shareholders by the controlling blockholder is less likely (the components of this index and their coding is given in table 2).

4.3 Regulatory provisions aimed at creditor rights protection

Creditor protection hinges on the regulatory provisions that allow creditors to force repayment more easily, take possession of the collateral, or even gain control over firm. We closely follow the LLSV's approach to assess the efficiency of national bankruptcy and reorganization laws in terms of protecting the interests of creditors from being dismissed by managers acting in the interests of shareholders. LLSV argue that creditors are less vulnerable to the opportunism and negligence of managers (shareholders) when the law enables them with the right to pull collateral from a firm without waiting for the completion of the reorganization procedure; when they are ranked first in the distribution of the proceeds that result from the disposition of the assets of a bankrupt firm; and when they have the decision power to approve or veto the reorganisation (liquidation) procedure initiated by management (shareholders). The protection of creditor rights also increases when the law requires the court or the creditors to appoint an independent official responsible for the operation of the business during the reorganization (or liquidation) procedure.

We complement the LLSV set of regulatory provisions on creditor rights protection by emphasizing the difference between creditor-oriented and debtor-oriented insolvency codes. A

creditor-oriented code is a pure liquidation bankruptcy code according to which an insolvent company (or its creditors) has to initiate a liquidation procedure and all of the company's (bankrupt) property is claimed in the interest of the creditors. The key point of a pure liquidation bankruptcy code is that it does not provide for the possibility for a reorganization procedure, such that the insolvent company has to be declared bankrupt and its assets sold on behalf of the creditors. In contrast, a debtor-oriented code incorporates a reorganization option which may enable the company to continue its operations after restructuring. The purpose of the reorganization is to enable companies in financial distress but which still have prospects of continued profitable activity to restructure without resorting to bankruptcy. Asset restructuring usually also involves financial restructuring whereby creditors are writing down their claims. Examples of debtor-oriented codes are the Chapter 11 procedure in the US and Administration procedure in the UK. As insolvency codes that facilitate corporate reorganization focuses on corporate survival which leads to substantial write-downs of creditor claims, the (more senior) creditors may lose more in debtor-oriented codes than in creditor-oriented ones. Details about the calculation of the creditor rights index are given in Table 2; a higher index score signifies stronger creditor rights.

5. Evolution of corporate governance regulations around the world

5.1 Ownership structure around the world

As discussed in section 2, the need to reform corporate governance regulation may be different in each country because of the differences in control structures. Therefore, in order to understand the evolution of the legal environments better, we exhibit in figures 1 and 2 the ownership and control concentration and structures in Europe and the US in the late 1990s. Since major corporate governance regulation reforms took place in the late 1990s, we predict how these ownership patterns may evolve as a result of the corporate governance reforms.

Figures 1 and 2 show that the stakeholder-based regime prevails in most of Continental Europe and is characterized by majority or near-majority holdings of stock held in the hands of one shareholder or a small group of investors. In contrast, the shareholder-based system of the US, UK, and the Republic of Ireland, is characterized by a dispersed equity structure. Although the difference in ownership between Continental Europe, on the one hand, and the UK, US, and Ireland, on the other, is remarkable, there is still variation in the percentage of companies under majority or blocking minority control across the Continental European countries. In particular, Figure 1 shows that the countries of Scandinavian legal origin have the lowest percentage of companies that are controlled by a majority blockholder, whereas countries of German legal origin and the countries that recently acceded to the EU (with exception of for Slovenia) have the highest percentage. Figure 2 reports that the percentage of Continental European companies controlled by investors controlling

a blocking minority of at least 25 percent is very high. The difference across countries is less pronounced, as in almost all countries more than 50 percent of listed companies have a controlling blockholder.

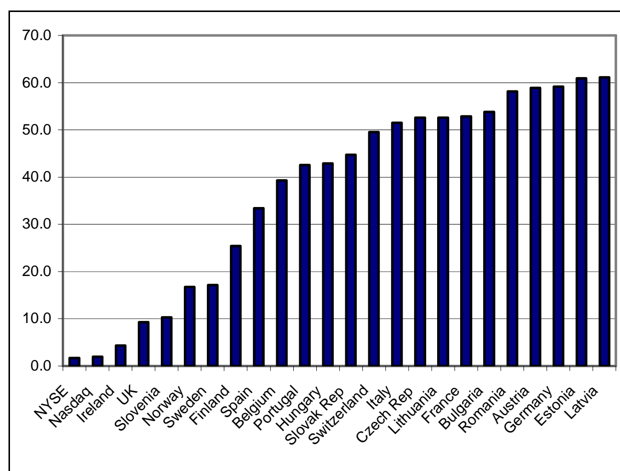

Figure 1. Percentage of listed companies under majority control

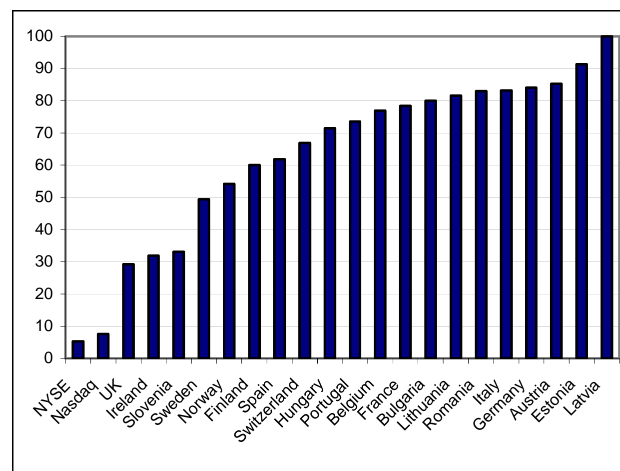

Figure 2. Percentage of listed companies with a blocking minority of at least 25%

Data source: Faccio and Lang (2002) for European countries with law of English, German, French, and Scandinavian origin, Barca and Becht (2001) for the US, and the ECGI project "Corporate Governance & Disclosure in the Accession Process"(2001) for the EU accession countries.

5.2 The protection of shareholder rights

We develop two indices capturing the protection of shareholder rights: an 'anti-directors' right index employing the LLSV-methodology and a broader index. While the former captures a limited set of criteria, the broader shareholder rights index also measures the shareholders' power to appoint directors, shareholder decision power, the board structure and the information available to shareholders (as discussed in section 4.1).

Column 1 of Table 3 shows the updated and corrected 'anti-directors' right index of LLSV. We classify all countries into six groups according to their legal origin and economic development. Countries from the former communist block are classified according to their (staged) accession to the European Union, as this event has had an important impact on their legislative reforms prior to the accession. The dynamics of the index reveals that most of European countries have reformed their corporate law during the 1990s in order to ensure better shareholder protection. The countries that were not involved in the reforms are those of English legal origin. However, these countries already had high standards of protection in place.

It is important to note that although we apply the same methodology as LLSV to construct the index, we find that our index score differs for some countries from the one reported by LLSV.

For instance, the difference is pronounced for the countries of English legal origin.[9] An example of the differences between the LLSV index and our index is summarized in Appendix II where we compare the Delaware Code and UK Company law provisions.[10]

Column 2 of Table 3 shows the dynamics in the protection of shareholder rights captured with our shareholder rights protection index and reveals that in virtually every European country significant changes in corporate law were implemented during the past 15 years. Nonetheless, countries of English legal origin remain the leaders in terms of the quality of shareholder protection. However, in the mean time, the French legal origin countries have evolved and reach a level close to the English origin standard. The lowest level of investor protection is nowadays observed in countries of German and Scandinavian legal origins, as well as in the EU 2004 accession countries.

The countries achieving the strongest improvement in their legal environment over the period 1990 to 2005 are the former communist-block countries that have recently joined the EU, whereas the least improvement is observed in Scandinavian countries (where shareholder protection has even decreased somewhat). The EU Accession process has already had an important impact on the legislative reforms in Bulgaria, Croatia, and Romania. However, a discussed in section 2, one needs to put the shareholder protection index in the right perspective; an improvement in shareholder protection may not be meaningful if the enforcement of these rights in courts is difficult. This may be particularly difficult in Italy, and in Central and Eastern Europe.

Columns 3-6 of Table 3 dissect the shareholder protection index into an appointment rights sub-index, a decision rights sub-index, a trusteeship sub-index, and a transparency sub-index. For each of these constituting elements, there are striking differences across legal origins. Whereas the German origin countries and the EU 2004 Accession countries focus on reforms that provide shareholders with more decision rights in the firm (see Column 4 of Table 3), countries of English legal origin and those of likely 2007 EU accession direct their reforms to the establishment of a trusteeship relation to ensure a board of directors continue representing the interest of shareholders after their election (see Column 5 of Table 3). A strategy that all countries deploy to improve shareholder protection is to provide investors with more transparency. Column 6 of Table 3 shows dramatic changes in transparency standards overall. Introducing (more strict) disclosure regulation is likely to affect the broader corporate governance system because it reduces the private benefits of control to major blockholders and also helps investors to monitor the management better and at lower costs. This may induce further convergence towards the shareholder-based corporate

[9] We find that, for some countries, the LLSV records of regulatory provisions do not coincide with those of our database. When we find inconsistencies we contacted our legal experts again to clarify the issue. We replace LLSV records with new information only when our legal experts confirm that our information is correct.

[10] Most of corporate governance regulatory provisions in the US are on the state level rather than on federal level. Therefore, there is a considerable variation in legal regimes across the American states. In our analysis we only focus on Delaware where a majority of US companies is incorporated.

governance regime with dispersed ownership and control structures and strong shareholder protection.

5.3 The protection of minority shareholder rights

Fewer regulatory changes have taken place for the protection of minority shareholders since 1990. Columns 1-5 of table 4 exhibit the changes in the minority shareholder rights protection index by legal origin and by country.

The problem of the misalignment of interests between minority and majority shareholders has been addressed during the 1990s on a regulatory level in almost all countries with the exception of the US, the Netherlands, and Spain (see column 1 of Table 4). Countries of French and German legal origin and former communist countries are the leaders among the reformers, whereas English and Scandinavian legal origin countries are much less involved in the reforms. Until about ten years ago, the highest level of minority protection was observed in the countries of English legal origin, but nowadays, the level of minority rights protection is relatively similar across all countries, with Scandinavian countries being lagging somewhat behind.

We also dissect the minority shareholders protection index into three parts: appointment rights, decision rights, trusteeship strategies and affiliation strategies. As in the case of the shareholder rights protection index, countries are able to achieve an increase in minority shareholder protection using different strategies (see columns 2-5 of Table 4). The appointment rights, decision rights, and trusteeship strategies are mainly employed by the EU 2004 and EU 2007 (likely) accession countries and by only a few countries of French and Scandinavian legal origins (Italy, Finland, and Iceland). In these countries, the relative power of minority shareholders vis-à-vis a strong blockholder has been increased by stronger board representation, blocking minorities, minority claims, and voting caps.

The affiliation strategy is pursued in virtually all countries to improve minority protection (see column 5 of Table 4). It is associated with granting minority shareholders the right to entry and exit the company on fair terms. The entry right is strengthened by the introduction of (more strict) disclosure requirements regarding corporate control structures and managerial activities. This should make investors aware of the firm’s governance structure and potential agency problems before they decide to buy a firm’s shares. Reforms of takeover regulation, introduction of equal treatment of shareholders, mandatory bid, and sell-out rules in particular, enable minority shareholders to exit without being expropriated.

An increase in the power of minority shareholders when a large blockholder is present in the firm reduces the private benefits of control of this blockholder which may lead to more ownership dispersion. Therefore, one could expected a shift towards more dispersed ownership in the leading reformers in the area of minority shareholder protection, namely: the French and German legal origin countries and the former communist countries. To conclude, also on this aspect of corporate governance we observe more convergence towards a shareholder-based system with lower ownership concentration.

5.4 The protection of creditor rights

Column 6 of Table 4 reports the evolution of the legal environment with respect to creditors rights protection. Strikingly, we find that countries have very different perspectives on the protection of creditor rights. There are three different scenarios: first, creditor protection in countries of French, German, and Scandinavian legal origin has weakened significantly. Second, former communist countries have in contrast moved towards more creditor protection. Finally, English legal origin countries have abstained from reforming their bankruptcy and reorganization legislation and have currently the system which is least protective for creditors.

Most of the French, German, and Scandinavian legal origin countries have reorganized their bankruptcy legislation by introducing a reorganization procedure that enables companies to restructure their debts and escape liquidation. By the late 1990s, a large majority of Continental European countries (with exception of the former communist block) have a debtor-oriented corporate insolvency code that includes two tracks: a reorganization part (e.g. Administration in the UK) and a pure liquidation code (e.g. Receivership in the UK). It is in fact not that surprising that in a number of countries the creditor protection has diminished as in these countries one can observe an increase in shareholder protection. We believe that the lack of a well-developed equity market is one of the main reasons for the regulators of EU accession countries to increase creditor protection. Better protection of creditors reduces the costs of debt financing, which is essential for companies in such countries. Further equity market development in these countries may lead to a new wave of the bankruptcy law reforms, which will reduce creditor rights.

6. Conclusion

This paper performs a comparative analysis of the corporate governance legal regimes and their evolution in 30 European countries and the US. The analysis is based on a unique corporate governance database that comprises the main changes in corporate governance regulations over the period 1990 to 2005. We develop three new corporate governance indices that reflect the quality of national laws aimed at protecting (i) corporate shareholders from being expropriated by

management, (ii) minority shareholders from being expropriated by large blockholder, and (iii) creditors from being expropriated by shareholders. We further dissect these indices along various dimensions of regulator strategies (as captured by e.g. the subindices expressing relative decision power, appointment rights, trusteeship, or corporate transparency). We find that, in contrast to the LLSV ranking system, our new governance indices capture a broader scope of corporate governance regulation reforms and their dynamics.

The time-series analysis of the newly constructed indices reveals that virtually every country from our sample has been involved in substantial changes in their corporate legislations since 1990. The changes relate to all three major types of agency problems. The improvement of corporate transparency has been a dominant legal strategy across countries to address both the protection of shareholders from the misuse of corporate assets by managers, and the protection of minority shareholders from expropriation by a strong blockholder. A large majority of continental European countries also has also strengthened the protection of minority shareholders in their takeover regulations.

We also detect some differences in the patterns of legal reforms across countries. For instance, in their attempts to improve shareholder protection, German legal origin and EU 2004 accession countries focus on reforms that provide shareholders with more decision rights in the firm, while the countries of English legal origin (and those of the EU 2007 accession) direct their reforms to the representation of investors on the board of directors (trusteeship) and the effective monitoring by boards. Furthermore, countries have very different perspectives on the how to deal with financial distress and bankruptcy. Whereas French, German, and Scandinavian legal origin countries put less emphasis on creditor protection, the former communist countries move in the opposite direction and strengthen creditor protection. Countries of English legal origin have not modified their bankruptcy and reorganization codes.

While varying degrees of creditor protection that were recently introduced in national bankruptcy laws show that the global convergence of legal systems towards a single system of corporate regulation is unlikely, there are still signs of increasing convergence by national corporate governance regulations towards a shareholder-based regime when the protection of (minority) shareholders is considered. The recent legislative changes in countries of French and German legal origin may bring about more ownership dispersion in time. A stakeholder-based system is likely to be maintained in Scandinavian and former communist countries. Over the past 15 years, Scandinavian countries have substantially lagged other West-European countries in terms of increasing the level of (minority) shareholder rights protection, such that their legal reforms may be insufficient to induce changes in corporate control. In contrast to Scandinavian countries, the former communist countries have undertaken dramatic revisions of their national corporate legislation in order to guarantee (theoretically) more (minority) shareholder protection. However, the ownership structure is unlikely to evolve towards more dispersion because their reforms also augment the

creditor rights in case of financial distress. This regulatory choice may discourage the development of efficient equity markets and hence changes in corporate control.

The countries of English legal origin still provide the highest quality of shareholder protection. In the mean time, many Continental European countries have improved their legal system up to the standard set by the English legal system. Whether and to what extent these reforms will lead to changes in the degree of ownership and control concentration remains an appealing topic for future research.

7. List of References

Barca, F. and M. Becht, 2001, *The Control of Corporate Europe*, Oxford University Press, Oxford.

Bebchuk, L. and M. Roe, 2000, A theory of Path Dependence of Corporate Ownership and Governance, *Stanford Law Review* 52, 775-808.

Becht, M., P. Bolton and A. Röell (2005), Corporate Governance and Control, in G. Constantinides, M. Harris and R. Stulz (eds.), The Handbook of the Economics of Finance, North-Holland, forthcoming.

Black, F., and M. Scholes, 1973, The Pricing of Options and Corporate Liabilities, *Journal of Political Economy* 81 (3), 637-654.

Berle A. and G. Means, 1932, *The Modern Corporation and Private Property*, Macmillan: New York.

Coase, R., 1937, The Nature of the Firm, *Economica*, 4, 386-405.

Doidge, C., A. Karolyi, and R. Stulz, 2004, Why Do Countries Matter So Much For Corporate Governance?, *ECGI Working Paper*, 50/2004.

Denis, D.K. and J.J. McConnell, 2003, International corporate governance, *Journal of Financial and Quantitative Analysis*, 38(1), 1-36.

Djankov, S., C. McLiesh, and A. Shleifer, 2004, Private Credit in 129 Countries, *NBER Working Paper* No. W11078

Dyck, A. and L. Zingales, 2004, Private benefits of control: An international comparison, *Journal of Finance*, 59(2), 537-600.

Faccio, M. and L. Lang, 2002, The ultimative ownership of Western European companies, *Journal of Financial Economics* 65(3), 365-395.

Faccio, M., and D. Stolin, 2004, Expropriation vs. proportional sharing in corporate acquisitions, *Journal of Business*, forthcoming.

Fama E. and M. Jensen, 1983, Separation of Ownership and Control, *Journal of Law and Economics* 26, 301-325.

Franks, J., C. Mayer and L. Renneboog, 2001, Who disciplines management of poorly performing companies?, *Journal of Financial Intermediation*, 10, 209-248.

Goergen, M., M. Martyunova, and L. Renneboog, 2005, Corporate Governance Convergence: Evidence From Takeover Regulation Reforms in Europe, *Oxford Review of Economic Policies*, 21 (2), 243-268.

Grossman, S. J. and O. Hart, 1980, Takeover bids, the free-rider problem, and the theory of the corporation, *Bell Journal of Economics* 11(1): 42-64.

Hansmann, H. and R. Kraakman, 2004, The Basic Governance Structure, in *The Anatomy of Corporate Law*, R. Kraakman, P. Davies, H. Hansmann, G. Hertig, K. Hopt, H. Kanda, and E. Rock, Oxford University Press, 33-70.

Jensen, M., 1988, Takeovers: Their Causes and Consequences, *Journal of Economic Perspectives* 2, 21-48.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer and R. Vishny, 1997, Legal determinants of external finance, *Journal of Finance* 52, 1131-50.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. Vishny, 1998, Law and Finance, *Journal of Political Economy* 106, 1113–1155.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. Vishny, 1999, Ownership around the world, *Journal of Finance* 54, 471-517.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. Vishny, 2002, Investor Protection and Corporate Valuation, *Journal of Finance* 57, 1147-1170.

Levine, R., 1998, The Legal Environment, Banks, and Long-run Economic Growth, *Journal of Money, Credit, and Banking* 30, 688-726.

Levine, R., 1999, Law, Finance, and Economic Growth, *Journal of Financial Intermediation* 8, 36-67.

McCahery, J., P. Moerland, T. Raaijmakers and L. Renneboog, 2002, *Corporate Governance Regimes: Convergence and Diversity*, Oxford University Press.
Pigou, A., 1938, *The Economics of Social Welfare*, Macmillan: London
Rajan, R. and L. Zingales, 1998, Financial Dependence and Growth, *American Economic Review*. 88(3), 559-586.
Shleifer, A. and R. Vishny, 1986, Large shareholder and corporate control, *Journal of Political Economy* 94, 461-488.
Shleifer, A., 2005, Understanding Regulation, *European Financial Management*, 11(4), 439-451.
Stulz, R., 2005, The Limits of Financial Globalisation, *Journal of Finance*, 60 (4), 1595-1638.

Appendix I.

The names of the legal experts who contributed to our corporate governance database are presented below:

Austria: Prof. Dr. Susanne Kalls (*University of Klagenfurt*), Prof. Dr. Christian Nowotny and Mr. Stefan Fida (*Vienna University of Economics and Business Administration*);

Belgium: Prof. Dr. Eddy Wymeersch (*University of Ghent, Chairman of the Commission for Finance, Banking and Assurance*), Prof. Dr. Christoph Van der Elst (*University of Ghent*);

Bulgaria: Dr. Plamen Tchipev (*Institute of Economics, Bulgarian Academy of Sciences*), Ms. Tania Bouzeva (*ALIENA Consult Ltd., Sofia*), Dr. Ivaylo Nikolov (*Centre for Economic Development, Sofia*);

Croatia: Dr. Domagoj Racic and Mr. Josip Stajfer (*The Institute of Economics, Zagreb*), Mr. Andrej Galogaža (*Zagreb Stock Exchange*), Prof. Dr. Drago Čengić (*IVO PILAR Institute of Social Sciences*), Prof. Dr. Edita Culinovic-Herc (*University of Rijeka*);

Cyprus: Mr. Marios Clerides (Chairman) and Ms. Christiana Vovidou (*Cyprus Securities and Exchange Commission*);

Czech Republic: Prof. Dr. Lubos Tichy, Mr. Martin Abraham, and Mr. Rostislav Pekar (*Squire, Sanders & Dempsey, Cousellors at Law*), Dr. Petr Kotáb and Prof. Dr. Milan Bakes (*Charles University of Prague*), Dr. Stanislav Myslil (*Čermák Hořejš Myslil a spol, Lawyers and Patent Attorneys*), Dr. Jan Bárta (*Institute of State and Law, The Academy of Science of Czech Republic*), Ms. Jana Klirova (*Corporate Governance Consulting, Prague*);

Denmark: Prof. Dr. Jesper Lau Hansen and Prof. Dr. Ulrik Rammeskow Bang-Pedersen (*University of Copenhagen*);

Estonia: Prof. Dr. Andres Vutt (*University of Tartu*), Mr. Toomas Luhaaar, Mr. Peeter Lepik, and Ms Katri Paas (*Law Office of Lepik & Luhaäär*);

Finland: Prof. Dr. Matti J. Sillanpää (*Turku School of Economics and Business Administration*), Mr. Ingalill Aspholm (*Rahoitustarkastus/Financial Supervision Authority*), Ms Ari-Pekka Saanio (*Borenius & Kemppinen, Attorneys at Law, Helsinki*), Ms Johan Aalto (*Hannes Snellman, Attorneys at Law; Helsinki*);

France: Prof. Dr. Alain Couret (*Université Paris I- Panthéon-Sorbonne*), Ms. Joëlle Simon (*MEDEF - French Business Confederation*), Prof. Dr. Benoit Le Bars (*MC Université de Cergy-Pontoise*), Prof. Dr. Alain Pietrancosta (*Universities of Tours and Paris I- Panthéon-Sorbonne*), Prof. Dr. Viviane de Beaufort (*ESSEC-MBA*), Prof. Dr. Gerard Charreaux (*Université de Bourgogne Pôle d'économie et de gestion*);

Germany: Prof. Dr. Peter O. Muelbert (*University of Mainz*), Prof. Dr. Klaus Hopt and Dr. Alexander Hellgardt (*Max Planck Institute for Foreign Private and Private International Law*), Prof. Dr. Theodor Baums and Mr. Tobias Pohl (*Johann Wolfgang Goethe University, Frankfurt/Main*);

Greece: Prof. Dr. Loukas Spanos (*Centre of Financial Studies, University of Athens*), Dr. Harilaos Mertzanis (*Hellenic Capital Market Commission*), Prof. Dr. Georgios D. Sotiropoulos (*University of Athens*);

Hungary: Dr.Tamás Sándor (*Sándor Bihary Szegedi Szent-Ivány Advocats*), Dr. Andras Szecskay and Dr. Orsolya Görgényi (*Szecskay Law Firm - Moquet Borde & Associés*), Prof. Dr. Adam Boóc and Prof. Dr. Anna Halustyik (*Corvinus University of Budapest*);

Iceland: Mr. Gunnar Sturluson and Mr. Olafur Arinbjorn Sigurdsson (*LOGOS legal services*), Dr. Aðalsteinn E. Jónasson (*Straumur Investment Bank and Reykjavik University*), Mr. David Sch. Thorssteinsson (*Iceland Chamber of Commerce*);

Ireland Republic: Dr. Blanaid Clarke (*University College Dublin*), Ms. Kelley Smith (*Irish Law Library, Barrister*);

Italy: Prof. Dr. Guido Ferrarini and Mr. Andrea Zanoni (*University of Genoa*), Dr. Magda Bianco and Dr. Alessio Pacces (*Banca d'Italia*), Prof. Dr. Luca Enriques (*Università di Bologna*);

Latvia: Prof. Dr. Kalvis Torgans and Dr. Pauls Karnups (*University of Latvia*), Mr. Uldis Cerps (*Riga Stock Exchange*);

Lithuania: Mr. Virgilijus Poderys (Chairman) and Ms. Egle Surpliene (*The Securities Commission of Lithuania*), Mr. Rolandas Valiūnas, Dr. Jaunius Gumbis, and Dr. Dovilė Burgienė (*Lideika, Petrauskas, Valiūnas ir partneriai*), Dr. Paulius Cerka (*Vytautas Magnus University*), Mr. Tomas Bagdanskis (*Tomas Bagdanskis, Attorney at Law*);

Luxembourg: Mr. Jacques Loesch (*Linklaters Loesch Law Firm*), Mr. Daniel Dax (*Luxembourg Stock Exchange*);

Netherlands: Prof. Dr. Jaap Winter (*De Brauw Blackstone Westbroek, High Level Group of Company Law Experts European Commission Office (Chairman), University of Amsterdam*), Mr. Marcel van de Vorst and Mr. Gijs van Leeuwen (*Norton Rose Advocaten & Solicitors*), Mr. Johan Kleyn and Dr. Barbara Bier (*Allen & Overy LLP*), Dr. Pieter Ariens Kappers (*Boekel De Nerée*), Prof. Dr. A.F. Verdam (*Vrije Universiteit Amsterdam*), Prof. Mr. C. A. Schwarz (*Maastricht University*);

Norway: Prof. Dr. Kristin Normann Aarum (*Oslo University*), Prof. Dr. Tore Brathen (*University of Tromsø*), Prof. Dr. Jan Andersson (*University of Bergen*);

Poland: Prof. Stanisław Sołtysiński and Dr. Andrzej W. Kawecki (*The law firm of Sołtysiński Kawecki & Szlęzak*), Mr. Igor Bakowski (*Gotshal & Manges, Chajec, Don-Siemion & Żyto Sp.k.*), Dr. Piotr Tamowicz**,** Mr. Maciej Dzierżanowski, and Mr. Michał Przybyłowski (*The Gdańsk Institute for Market Economics*), Ms. Anna Miernika-Szulc_(*Warsaw Stock Exchange*);

Portugal: Mr. Victor Mendes (*CMVM – Comissão do Mercado de Valores Mobiliários*), Mr. Carlos Ferreira Alves (*CEMPRE, Faculdade de Economia, Universidade do Porto*), Prof. Dr. Manuel Pereira Barrocas (*Barrocas Sarmento Rocha - Sociedade de Advogados*), Dr. Jorge de Brito Pereira (*PLMJ - A.M. Pereira, Sragga Leal, Oliveira Martins, J dice e Associados - Sociedade de Advogados*), Dr. Manuel Costa Salema, Dr. Carlos Aguiar, and Mr. Pedro Pinto (*Law firm* Carlos Aguiar P Pinto & Associados), Mr. Antonio Alfaia de Carvalho (*Lebre Sá Carvalho & Associados*);

Romania: Mr. Gelu Goran (*Salans, Bucharest office*), Dr. Sorin David (*Law firm David & Baias SCPA*), Ms. Adriana I. Gaspar (*Nestor Nestor Diculescu Kingston Petersen, Attorneys & Counselors*), Mr. Catalin Baiculescu and Dr. Horatiu Dumitru (*Musat & Associates, Attorneys at Law*), Ms. Catalina Grigorescu (*Haarmann Hemmelrath Law Firm*);

Slovak Republic: Dr. Jozef Makuch (Chairman) and Dr. Stanislav Škurla (*Financial Market Authority, Slovak Republic*), Dr. Frantisek Okruhlica (*Slovak Governance Institute*);

Slovenia: Prof. Dr. Janez Prasnikar and Dr. Aleksandra Gregoric (*University of Ljubljana*), Prof. Dr. Miha Juhart, Mr. Klemen Podobnik, and Ms. Ana Vlahek (*Securities Market Agency*);

Spain: Prof. Dr. Candido Paz-Ares (*Universidad Autonoma de Madrid*), Prof. Dr. Marisa Aparicio (*Universidad Autonoma de Madrid and Universidad Pontificia Comillas de Madrid*), Prof. Dr. Guillermo Guerra (*Universidad Rey Juan Carlos*);

Sweden: Prof. Dr. Per Samuelsson and Prof. Dr. Gerard Muller (*School of Economics and Management at Lund University*), Prof. Dr. Rolf Dotevall (*Göteborg University*), Dr. Catarina af Sandeberg, and Prof. Dr. Annina Persson (*Stockholm University*), Prof. Dr. Björn Kristiansson (*Linklaters Sweden*);

Switzerland: Dr. Urs P. Gnos (*Walder Wyss & Partners*), Prof. Dr. Gerard Hertig (*Swiss Federal Institute of Technology - ETH Zurich*), Dr. Michel Haymann (*Haymann & Baldi*), Prof. Dr. Wolfgang Drobetz (*University of Basel – WWZ*), Prof. Dr. Karl Hofstetter (*Universität Zürich*), Prof. Dr. Peter Nobel and Mr. Marcel Würmli (*Universität St. Gallen*);

UK: Prof. Dr. Antony Dnes (*Bournemouth University*), Prof. Dr. Dan Prentice and Ms. Jenny Payne (*Oxford University*), Prof. Dr. Brian R Cheffins, Mr. Richard Charles Nolan, and Mr. John Armour (*University of Cambridge*), Prof. Dr. Paul Davies (*London School of Economics*), Mr. Gerard N. Cranley, Ms. Holly Gregory, and Ms. Ira Millstein (*Weil, Gotshal & Manges*), Ms. Eva Lomnicka (*University of London*);

US: Prof. Mark Roe (*University of Harvard*), Prof. Dr. Edward Rock (*University of Pennsylvania Law School*), Prof. Dr. William Bratton (*Georgetown University*), Prof. Dr. Roberta Romano (*Yale Law School*).

Appendix II.

The table summarizes the provision of the Delaware and UK Company Law with regard to the shareholder rights employed to construct the LLSV anti-director index. The classification of shareholder rights closely follows the one deployed in LLSV. If a particular provision is in the law, we denote this with 1; it is 0 otherwise.

Shareholder rights	UK LLSV data	UK Company Law	US LLSV data	Delaware Code
One-share-one-vote	0	0 (The law does not forbid non-voting shares)	0	0 (Non-voting shares are allowed subject to inclusion in the certificate of incorporation, Del. Code. Ann. tit. 8 §151(a))
Proxy by mail allowed	1	1 (The law requires this)	1	1 (The Code also permits the use of electronic or telegraphic proxies. Telephonic proxies or internet website proxies are used as well, Del. Code. Ann. tit. 8 § 212(c)(2))
Shares are not blocked before a general meeting	1	1 (A deposit is not wholly forbidden but the practice is not present)	1	1 (No provisions in the Code but the practice is not present)
Cumulative voting / proportional representation	0	0 (There are no requirements by law and the practice is not present)	1	0 (Cumulative voting is optional, subject to inclusion in the certificate of incorporation, Del. Code. Ann. tit. 8 §214)
Oppressed minority	1	0 (No provisions in the Law and the practice is not present)	1	1 (Any shareholder can bring a fiduciary duty claim against a management decision that is a breach/conflict of interest favoring majority shareholders)
Preemptive right to new issues	1	1 (The law grants preemptive rights in relation to the issue of equity shares for cash)	0	0 (Prior to 1967, Del. Code. Ann. tit. 8 provided for stockholders preemptive rights, unless limited by the certificate of incorporation. In 1967 an opposite rule was enacted)
Total, Anti-director rights	**4**	**3**	**4**	**3**
Percentage of share capital to call an extraordinary meeting	.10	.10	.10	Majority (In Delaware shareholders may not call a special shareholders meeting, unless otherwise provided in the certificate of incorporation or bylaws, see Del. Code. Ann. tit. 8 §211(d). The Code lets a majority of shares act without a meeting, Del. Code. Ann. tit. 8 §228)

Table 2. Methodology employed to construct corporate governance regulation indices

The table shows how specific regulations are quantified to construct three corporate governance regulation indices: the shareholder rights protection index, the minority shareholders protection index, and the creditor rights protection. Some regulatory aspects are incorporated in several indices.

1. *The shareholder rights protection index (Max=32)* reflects the shareholders' ability to mitigate managerial opportunistic behavior. The index is constructed by combining the following 4 sub-indices:

1.1 The appointment rights index (Max=12) is based on the rules to appoint and replace executive and non-executive directors. It measures the degree of alignment of the interests of management and shareholders. The regulatory provisions are quantified as follows:

- Employee representation: 0 if required, 2 if not.
- Nomination to the board by shareholders: 2 if required, 0 if not.
- Tenure on the board: 0 if more than 4 years, 1 if 4 years, 2 if less then 4 years
- Cross-shareholdings:
  - Cross-shareholdings between 2 independent companies: 1 if regulated, 0 if not.
  - Maximum shareholding of a subsidiary in its parent company: 1 if regulated, 0 if not
- Election rules:
  - Proxy voting by mail: 2 if allowed, 0 if not
  - Requirement to Deposit/Register shares prior to a general meeting:
    - ⇨ Bearer shares: 0 if deposit is required, 1 if only registration of shares is required, 2 if none is required
    - ⇨ Nominal shares: 0 if deposit is required, 2 if deposit requirement is forbidden

1.2 The decision rights index (Max=8) captures the shareholders' ability to mitigate managerial discretion. The decision rights index cover regulatory provisions that mandate direct shareholder decision-making. The regulatory provisions are quantified as follows:

- Shareholders approval of anti-takeover defense measures: 2 if required, 0 if not.
- Shareholders approval of preemption rights: 2 if required, 0 if not.
- Percentage needed to call for extraordinary meeting: 0 if no rule or more than 20%, 1 if 20% or less but more than 5%, 2 if 5% and less.
- Voting caps: 0 if allowed, 2 if not.

1.3 The trusteeship index (Max=5) measures the efficiency of the board of directors in monitoring the actions of CEOs. The following regulatory provisions are quantified as follows:

- Board independence:
  - 2 if CEO cannot be the chairman of the board of directors (in 1-tier board structure), 0 otherwise
  - 2 if the overlap between management and supervisory board is forbidden (in 2-tier board structure), 0 otherwise
- Employee representation: 0 if required, 2 if not.
- Separate board of auditors: 1 if required, 0 otherwise

1.4 The transparency index (Max=7) is based on the quality of information about company, its ownership structure, and management available to investors

- Requirement to disclose managerial compensation: 0 if not required, 1 if required on aggregate basis, 2 if required on individual basis.
- Requirement to disclose any transactions between management and company: 2 if required, 0 if not
- Frequency of financial reports: 0 if once per year, 1 if twice per year, 2 if more than twice per year
- Comply or explain rule: 1 if the requirement is present, 0 otherwise

The higher each index, the better is the protection of the shareholders.

2. *The minority shareholders protection index (Max= 27)* is based on the regulatory provisions aimed at increasing the relative power of the minority shareholders in a context of strong majority shareholders. The index is constructed by combining the following 4 sub-indices:

4.1 Minority shareholders appointment rights index (Max=5) is based on the appointment rights that can be used to protect minority shareholders. These include rights to reserve seats on the board of directors for minority shareholders or to limit voting power of large shareholders. The regulatory provisions are quantified as follows:

- Minority representation on the board: 2 if required, 0 otherwise.
- Voting caps limiting power of large shareholders: 1 if voting caps are allowed, 0 if not.
- One-share-one-vote rule: 0 if both multiple voting rights and non-voting shares are allowed; 1 if one of the two is allowed; 2 if none is allowed.

4.2 Minority shareholders decision rights index (Max=4) captures the ability of minority shareholders to affect fundamental corporate transactions that require a shareholder vote. The regulatory provisions are quantified as follows:

- Supermajority requirement for approval of major company's decisions: 0 if 50% or less; 1 if more then 50% but less then

75%; 2 if 75% or more

- Percentage needed to call for extraordinary meeting: 0 if the rule is not present or required percentage is 20% or more; 1 if the required percentage is between 20 and 5%; 2 if the percentage is 5% or less.

4.3 The minority shareholders trusteeship rights index (Max=4) indicates the extent to which the board of directors serves as a trustee for minority shareholder, i.e. the directors are independent from the firm's controlling shareholders. The regulatory provisions are quantified as follows:

- Nomination to the board by shareholders: 2 if shareholders voting to elect non-executive directors is not required (2-tier boards); 0 if required or 1-tier board
- Board independence: 2 if CEO cannot be the chairman of the board of directors (in 1-tier board structure) or if the overlap between management and supervisory board is forbidden (in 2-tier board structure), 0 otherwise

4.4 The minority shareholders affiliation rights index (Max=14) groups the remaining regulatory provisions aimed at protecting minority shareholders: the principle of equal treatment (or shared returns) and rights for entry and exit on fair terms. The regulatory provisions are quantified as follows:

- Equal treatment rule: 2 if required, 0 if not,
- Mandatory disclosure of large ownership stakes: 0 if disclosure is not required or the minimum percent is 25% or more; 1 if 10% or more (less then 25%); 2 if 5% or more (less then 10%); 3 if less then 5%.
- Mandatory bid rule: 0 if not required; 1 if 50% or control; 2 if between 50 and 30%; 3 if 30% or less.
- Sell-out rule: The squeeze-out rule is used as a proxy for the sell-out rule, (assumption: sell-out is always in place if squeeze-out is adopted, with the same terms as squeeze-out): 0 if no squeeze-out; 1 if squeeze-out at 95% or more; 2 if squeeze-out at 90% or less.
- Minority claim: 0 if no; 1 if 10% or more; 2 if 5% or more; 3 if less then 5%.
- Break-through rule: 1 if required; 0 if not,

The higher each index, the better is the protection of the minority shareholders.

3. *The creditor rights protection index* (Max=5) is based on regulatory provisions that allow creditors to force repayment more easily, take possession of collateral, or gain control over firm in financial distress. The regulatory provisions are quantified as follows:

- Debtor-oriented versus Creditor-oriented code: 1 if no reorganization option (liquidation only); 0 if reorganization + liquidation option;
- Automatic stay on the assets: 1 if no automatic stay is obliged in reorganization (if debt-orient code) or liquidation procedure (if liquidation code); 0 otherwise;
- Secured creditors are ranked first: 1 if secured creditors are ranked first in the liquidation procedure; 0 if government and employees are ranked first;
- Creditor approval of bankruptcy: 1 if creditor approval is required to initiate reorganization procedure (if debtor-oriented code) or liquidation procedure (if liquidation code); 0 otherwise;
- Appointment of official to manage reorganization/liquidation procedure: 1 if it is required by law in a reorganization procedure (if debtor-oriented code) or a liquidation procedure (if liquidation code); 0 otherwise.

The higher each index, the better is the protection of the creditors

Table 3. Anti-director index (LLSV) and newly constructed shareholder rights protection indices by country and over time

	ANTI-DIRECTOR INDEX (LLSV) (1)				**SHAREHOLDER RIGHTS PROTECTION INDEX:** **Total Index** (2)				Appointment Rights strategy (3)				Decision Rights strategy (4)				Trusteeship strategy (5)				Transparency strategy (6)			
	1990	**1995**	**2000**	**2005**	**1990**	**1995**	**2000**	**2005**	**1990**	**1995**	**2000**	**2005**	**1990**	**1995**	**2000**	**2005**	**1990**	**1995**	**2000**	**2005**	**1990**	**1995**	**2000**	**2005**
English Legal Origin:																								
Ireland	3	3	3	3	16	16	18	21	8	8	8	8	3	3	5	5	2	2	2	3	3	3	3	5
UK	3	3	3	3	19	22	24	24	9	9	9	9	5	5	5	5	2	4	4	4	3	4	6	6
US (Delaware)	3	3	3	3	15	15	15	17	6	6	6	6	1	1	1	1	2	2	2	3	6	6	6	7
Average	3.0	3.0	3.0	3.0	16.7	17.7	19.0	20.7	7.7	7.7	7.7	7.7	3.0	3.0	3.7	3.7	2.0	2.7	2.7	3.3	4.0	4.3	5.0	6.0
French Legal Origin:																								
Belgium	2	2	2	2	15	17	18	18	6	6	6	6	4	4	4	4	3	3	3	3	2	4	5	5
France	2	2	2	4	11	11	11	16	4	4	4	5	5	5	5	5	0	0	0	0	2	2	2	6
Greece	3	3	3	3	12	12	15	20	4	4	4	4	5	5	7	7	2	2	2	3	1	1	2	6
Italy	1	1	3	4	15	15	22	26	8	8	9	9	2	2	5	7	3	3	3	3	2	2	5	7
Luxembourg	0	0	0	0	11	11	11	12	3	3	3	3	4	4	4	4	0	0	0	0	4	4	4	5
Netherlands	1	1	1	1	15	15	15	19	4	4	4	4	5	5	5	5	4	4	4	4	2	2	2	6
Portugal	2	2	3	3	15	15	17	20	6	6	7	7	3	3	3	3	3	3	3	3	3	3	4	7
Spain	3	3	3	4	15	15	15	19	5	5	5	6	5	5	5	5	2	2	2	2	3	3	3	6
Average	1.8	1.8	2.1	2.6	13.6	13.9	15.5	18.8	5.0	5.0	5.3	5.5	4.1	4.1	4.8	5.0	2.1	2.1	2.1	2.3	2.4	2.6	3.4	6.0
German Legal Origin:																								
Austria	3	3	4	4	9	10	14	14	2	2	4	4	3	3	5	5	2	2	2	2	2	3	3	3
Germany	2	2	3	3	12	14	16	18	3	3	3	3	3	5	7	7	2	2	2	2	4	4	4	6
Switzerland	1	1	1	1	10	10	13	17	5	5	5	5	3	3	5	5	2	2	2	2	0	0	1	5
Average	2.0	2.0	2.7	2.7	10.3	11.3	14.3	16.3	3.3	3.3	4.0	4.0	3.0	3.7	5.7	5.7	2.0	2.0	2.0	2.0	2.0	2.3	2.7	4.7
Scandinavian Legal Origin:																								
Denmark	2	2	2	2	9	9	9	11	4	4	4	4	3	3	3	3	0	0	0	0	2	2	2	4
Finland	1	1	2	2	15	15	17	19	6	6	7	7	3	3	3	3	2	2	2	2	4	4	5	7
Iceland	2	2	2	2	20	18	18	22	8	8	8	8	5	3	3	3	4	4	4	4	3	3	3	7
Norway	3	3	3	3	14	14	16	16	4	4	4	4	5	5	5	5	2	2	2	2	3	3	5	5

	ANTI-DIRECTOR INDEX (LLSV)				SHAREHOLDER RIGHTS PROTECTION INDEX:																			
					Total Index				Appointment Rights strategy				Decision Rights strategy				Trusteeship strategy				Transparency strategy			
	(1)				(2)				(3)				(4)				(5)				(6)			
	1990	**1995**	**2000**	**2005**	**1990**	**1995**	**2000**	**2005**	**1990**	**1995**	**2000**	**2005**	**1990**	**1995**	**2000**	**2005**	**1990**	**1995**	**2000**	**2005**	**1990**	**1995**	**2000**	**2005**
Sweden	2	2	2	2	9	12	12	12	4	4	4	4	3	3	3	3	2	2	2	2	0	3	3	3
Average	2.0	2.0	2.2	2.2	13.4	13.6	14.4	16.0	5.2	5.2	5.4	5.4	3.8	3.4	3.4	3.4	2.0	2.0	2.0	2.0	2.4	3.0	3.6	5.2
EU Accession 2004:																								
Cyprus	4	4	4	4	14	15	15	18	9	9	9	9	3	3	3	5	2	2	2	2	0	1	1	2
Czech Rep	0	1	1	3	5	7	10	13	2	2	3	3	1	1	3	6	2	2	2	2	0	2	2	2
Estonia	0	1	1	2	9	15	17	19	4	5	5	5	3	5	5	5	2	4	4	4	0	1	3	5
Hungary	0	0	1	2	6	6	10	15	3	3	3	5	1	1	3	5	2	2	2	2	0	0	2	3
Latvia	0	1	1	2	13	15	15	17	6	6	6	6	3	3	3	3	4	4	4	4	0	2	2	4
Lithuania	2	3	3	3	9	18	20	24	4	6	6	7	3	5	5	7	2	4	4	4	0	3	5	6
Poland	2	2	2	2	13	18	14	15	6	6	4	2	3	3	3	5	4	4	2	2	0	5	5	6
Slovak Rep	0	1	1	2	8	8	8	10	2	2	2	2	3	3	3	5	2	2	2	2	1	1	1	1
Slovenia	1	3	3	4	8	9	11	16	3	4	4	4	3	3	5	7	2	2	2	2	0	0	0	3
Average	1.0	1.8	1.9	2.7	9.4	12.3	13.3	16.3	4.3	4.8	4.7	4.8	2.6	3.0	3.7	5.3	2.4	2.9	2.7	2.7	0.1	1.7	2.3	3.6
EU (likely) Accession 2007:																								
Bulgaria	0	0	2	3	11	12	14	18	4	4	4	4	5	5	7	7	2	2	2	2	0	1	1	5
Croatia	1	2	2	4	12	14	14	23	6	5	5	6	2	5	5	7	4	4	4	4	0	0	0	6
Romania	0	0	1	2	11	11	14	19	5	5	5	5	3	3	3	5	3	3	5	5	0	0	1	4
Average	0.3	0.7	1.7	3.0	11.3	12.3	14.0	20.0	5.0	4.7	4.7	5.0	3.3	4.3	5.0	6.3	3.0	3.0	3.7	3.7	0.0	0.3	0.7	5.0

Table 4. Newly constructed minority shareholder rights and creditor rights protection indices by country and over time

	MINORITY SHAREHOLDER RIGHTS PROTECTION INDEX:																				CREDITOR RIGHTS PROTECTION INDEX			
	Total Index (1)				Appointment Rights strategy (2)				Decision Rights strategy (3)				Trusteeship strategy (4)				Affiliation strategy (5)				(6)			
	1990	**1995**	**2000**	**2005**	**1990**	**1995**	**2000**	**2005**	**1990**	**1995**	**2000**	**2005**	**1990**	**1995**	**2000**	**2005**	**1990**	**1995**	**2000**	**2005**	**1990**	**1995**	**2000**	**2005**
English Legal Origin:																								
Ireland	13	13	16	16	1	1	1	1	3	3	3	3	0	0	0	0	9	9	12	12	2	2	2	2
UK	14	16	16	16	3	3	3	3	3	3	3	3	0	2	2	2	8	8	8	8	2	2	2	2
US (Delaware)	8	8	8	8	1	1	1	1	2	2	2	2	0	0	0	0	5	5	5	5	0	0	0	0
Average	11.7	12.3	13.3	13.3	1.7	1.7	1.7	1.7	2.7	2.7	2.7	2.7	0.0	0.7	0.7	0.7	7.3	7.3	8.3	8.3	1.3	1.3	1.3	1.3
French Legal Origin:																								
Belgium	12	13	13	13	2	2	2	2	2	2	2	2	0	0	0	0	8	9	9	9	5	5	2	2
France	12	12	12	14	1	1	1	1	2	2	2	2	0	0	0	0	9	9	9	11	1	1	1	1
Greece	7	7	8	9	1	1	1	1	2	2	2	2	0	0	0	0	4	4	5	6	4	4	4	4
Italy	7	11	18	17	2	2	4	3	1	1	2	2	0	0	0	0	4	8	12	12	2	2	2	1
Luxembourg	3	4	4	4	0	0	0	0	1	1	1	1	0	0	0	0	2	3	3	3	2	2	2	2
Netherlands	13	13	13	13	2	2	2	2	2	2	2	2	3	3	3	3	6	6	6	6	4	4	4	4
Portugal	6	6	11	13	3	3	3	3	2	2	2	2	0	0	0	0	1	1	6	8	4	4	4	3
Spain	15	15	15	15	4	4	4	4	2	2	2	2	0	0	0	0	9	9	9	9	1	1	1	1
Average	9.4	10.1	11.8	12.3	1.9	1.9	2.1	2.0	1.8	1.8	1.9	1.9	0.4	0.4	0.4	0.4	5.4	6.1	7.4	8.0	2.9	2.9	2.5	2.3
German Legal Origin:																								
Austria	15	15	17	17	4	4	4	4	3	3	3	3	2	2	2	2	6	6	8	8	2	2	2	2
Germany	9	11	12	16	1	1	1	1	3	3	3	3	2	2	2	2	3	5	6	10	3	3	2	2
Switzerland	5	7	11	10	1	1	1	1	2	2	2	2	0	0	0	0	2	4	8	7	5	5	3	3
Average	9.7	11.0	13.3	14.3	2.0	2.0	2.0	2.0	2.7	2.7	2.7	2.7	1.3	1.3	1.3	1.3	3.7	5.0	7.3	8.3	3.3	3.3	2.3	2.3
Scandinavian Legal Origin:																								
Denmark	10	10	12	12	2	2	2	2	2	2	2	2	0	0	0	0	6	6	8	8	3	3	3	3
Finland	9	10	10	10	2	2	1	1	2	2	2	2	2	2	2	2	3	4	5	5	5	2	2	2
Iceland	7	8	11	12	0	1	1	1	2	2	2	2	2	2	2	2	3	3	6	7	2	2	2	2
Norway	11	11	11	12	1	1	1	1	2	2	2	2	2	2	2	2	6	6	6	7	3	3	3	3

	MINORITY SHAREHOLDER RIGHTS PROTECTION INDEX:																				CREDITOR RIGHTS PROTECTION INDEX			
	Total Index (1)				Appointment Rights strategy (2)				Decision Rights strategy (3)				Trusteeship strategy (4)				Affiliation strategy (5)				(6)			
	1990	**1995**	**2000**	**2005**	**1990**	**1995**	**2000**	**2005**	**1990**	**1995**	**2000**	**2005**	**1990**	**1995**	**2000**	**2005**	**1990**	**1995**	**2000**	**2005**	**1990**	**1995**	**2000**	**2005**
Sweden	9	10	10	10	2	2	2	2	2	2	2	2	2	2	2	2	3	4	4	4	4	4	1	1
Average	9.2	9.8	10.8	11.2	1.4	1.6	1.4	1.4	2.0	2.0	2.0	2.0	1.6	1.6	1.6	1.6	4.2	4.6	5.8	6.2	3.4	2.8	2.2	2.2
EU Accession 2004:																								
Cyprus	5	5	7	9	1	1	1	1	3	3	3	3	0	0	0	0	1	1	3	5	5	5	5	5
Czech Rep	6	10	12	20	2	2	2	4	2	2	2	4	2	2	2	2	0	4	6	10	0	4	4	4
Estonia	2	7	9	12	0	1	1	1	2	2	2	2	0	2	2	2	0	2	4	7	0	2	2	3
Hungary	8	8	14	16	2	2	2	2	3	3	3	3	2	2	2	2	1	1	7	9	0	2	2	3
Latvia	8	9	9	14	1	1	1	1	3	3	3	3	2	2	2	2	2	3	3	8	0	5	5	5
Lithuania	11	11	12	13	2	1	1	1	2	2	2	2	2	2	2	2	5	6	7	8	0	5	5	3
Poland	12	17	15	18	4	4	4	4	3	3	3	3	2	2	2	2	3	8	6	9	2	2	2	3
Slovak Rep	6	12	12	15	2	2	2	2	2	2	2	2	2	2	2	2	0	6	6	9	2	2	2	2
Slovenia	7	12	18	17	2	2	2	1	2	2	2	2	2	2	2	2	1	6	12	12	0	1	1	1
Average	7.2	10.1	12.0	14.9	1.8	1.8	1.8	1.9	2.4	2.4	2.4	2.7	1.6	1.8	1.8	1.8	1.4	4.1	6.0	8.6	1.0	3.1	3.1	3.2
EU (likely) Accession 2007:																								
Bulgaria	3	7	11	11	0	0	1	1	2	2	2	2	0	0	0	0	1	5	8	8	0	2	2	2
Croatia	7	10	14	15	1	1	2	1	2	3	3	3	2	2	2	2	2	4	7	9	5	5	4	4
Romania	4	9	12	14	2	2	2	4	2	2	2	2	0	0	2	2	0	5	6	6	1	2	2	3
Average	4.7	8.7	12.3	13.3	1.0	1.0	1.7	2.0	2.0	2.3	2.3	2.3	0.7	0.7	1.3	1.3	1.0	4.7	7.0	7.7	2.0	3.0	2.7	3.0