Shareholder protection and stockmarket development: an empirical test of the legal origins hypothesis

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SHAREHOLDER PROTECTION
AND STOCK MARKET DEVELOPMENT:
AN EMPIRICAL TEST OF THE LEGAL ORIGINS HYPOTHESIS

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Abstract

We test the 'law matters' and 'legal origin' claims using a newly created panel dataset measuring legal change over time in a sample of developed and developing countries. Our dataset improves on previous ones by avoiding country-specific variables in favour of functional and generic descriptors, by taking into account a wider range of legal data, and by considering the effects of weighting variables in different ways, thereby ensuring greater consistency of coding. Our analysis shows that legal origin explains part of the pattern of change in the adoption of shareholder protection measures over the period from the mid-1990s to the present day: in both developed and developing countries, common law systems were more protective of shareholder interests than civil law ones. We explain this the result on the basis of the head start common law systems had in adjusting to an emerging 'global' standard based mainly on Anglo-American practice. Our analysis also shows, however, that civil law origin was not much of an obstacle to convergence around this model, since civilian systems were catching up with their counterparts in the common law. We then investigate whether there was a link in this period between increased shareholder protection and stock market development, using a number of measures such as stock market capitalisation, the value of stock-trading and the number of listed firms, after controlling for legal origin, the state of economic development of particular countries, and their position on the World Bank rule of law index. We find no evidence of a long-run impact of legal change on stock market development. This finding is incompatible with the claim that legal origin affects the efficiency of legal rules and ultimately economic development. Possible explanations for our result are that laws have been overly protective of shareholders; transplanted laws have not worked as expected; and, more generally, the exogenous legal origin effect is not as strong as widely supposed.

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1. Introduction

The seminal work of La Porta, Lopez de Silanes, Shleifer and Vishny (henceforth 'LLSV') on law, finance and development has provided evidence suggesting, *inter alia*, a distinct 'legal origin' effect in relation to the protection of shareholders against managers (the classic reference here is La Porta *et al.*, 1998). LLSV argue that countries whose legal systems are rooted in the common law provide superior shareholder protection than civil law systems. Companies in common law systems can therefore access external finance more easily and should, in principle, grow more quickly, to the benefit of the economy as a whole.

An acknowledged weakness of this research is that it is almost entirely based on cross-sectional data, due to the non-availability of comparative time series data. The main purpose of the present paper is to introduce newly constructed longitudinal data for the period 1995-2005. This period is selected because it was a time of considerable international change in laws relating to shareholder protection, making it a good period on which to test for relationships between legal change and both legal origin and stock market development, respectively. The period examined is relatively short due to the immense difficulties of constructing robust indicators of legal protection of shareholders over long periods for a large number of countries. This is mainly due to changes in law in different countries at different times and to difficulties of interpretation and comparison.

This paper investigates three main hypotheses. First, on the basis of the new data on shareholder protection, we investigate the legal origin hypothesis in both its strong and weak forms (explained below). The second and related hypothesis which receives attention in this paper is that countries' greater legal protection of shareholders is associated with higher levels stock market development. If there is a link between legal origin and levels of shareholder protection, this second hypothesis would predict that common law countries may be expected to exhibit higher levels of stock market development than civil law countries. Thirdly, we examine the hypothesis that companies in common law countries finance their growth more from external sources and particularly from the stock market, than from internal sources.

The rest of the paper is structured as follows. Section II sets out some of the core theoretical claims associated with the legal origins literature, and the explanations which have been offered for them. Section III provides an overview of our dataset, and compares it with prior approaches to the quantification of legal rules. Sections IV and V present our econometric analyses. In section IV we report the results of tests investigating links between legal origin and levels

of shareholder protection in countries' company laws. We interpret these as supporting a 'weak' version of the legal origin effect. While common law systems exhibited a greater overall level of shareholder protection than their civilian counterparts over the period 1995-2005, countries in our sample from civilian systems exhibited a greater increase in shareholder protection over the same period, suggesting that if there is a legal origin effect, its impact is likely to be declining over time. In section V we go on to look at the impact of these legal changes on stock market development. Using the principal indicators of financial development for which time series exist – stock market capitalisation as a percentage of GDP, the value of stock trading as a percentage of GDP, the stock market turnover ratio and also the number of domestic firms listed in the stock market – we find no relationship. This finding holds good when controlling for the legal origin of countries, their state of economic development, and their position on the World Bank's 'rule of law' index. This section also reports additional evidence which suggests a complex pattern of relationships between financing of corporate growth, economic development, and legal origin. Section VI offers an assessment of our empirical findings.

Apart from providing a new longitudinal dataset on legal protection of shareholders, the paper contributes to the legal origins literature by improving the quality of the data by offering fully sourced information on the state of the law, which makes it possible to track the process of legal change over time. In addition, it contributes by clarifying the legal origins hypothesis and by deriving empirical results which only partly support LLSV's conclusions and which prompt alternative hypotheses which explain the data better. Finally, again contrary to LLSV, the paper finds no overall relationship between legal origin and various indicators of stock market development.

2. The Legal Origins Claim: Hypotheses and Explanations

There are two linked claims which arise from the legal origins literature and three potential sets of explanations. The two claims are sometimes referred to as the 'law matters' or 'quality of law' claim, on the one hand, and the 'legal origins' claim properly so-called, on the other. The 'quality of law' claim maintains that legal rules shape economic outcomes according to how far they support market-based economic activities. From the perspective of new institutional economics, legal rules support market exchange by specifying property rights and protecting the principle of freedom of contract. The development of legal institutions for safeguarding private property against expropriation by the state is one aspect of this (North, 1990). The development of the bundle of rules underpinning the institution of the joint-stock company can be seen as playing a functional role in supporting the emergence of the modern business

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enterprise (Kraakman *et al.*, 2004). In the literature on law and finance, it is argued that legal protections for shareholders and creditors will enhance the flow of investments and increase the degree to which firms are able to tap external finance (La Porta *et al.*, 1997, 1998, 1999a, 1999b, 2000; Johnson *et al.*, 2000; Djankov *et al.*, 2003; Levine, 1997; Beck *et al.*, 2003a, 2003b; Claessens and Laeven, 2003). The effect of the legal system depends in part on the nature of substantive rules governing investor protection, in areas as company law and bankruptcy law, and also on the quality of enforcement of those rules (Berkowitz *et al.*, 2003; Pistor *et al.*, 2002, 2003).

The 'legal origins' claim, its more precise sense, contends that the quality of laws governing investor protection (among other things) differs according to whether a country's legal system has inherited its basic forms and processes from the English common law or from the French, German or Nordic civil law. Since, a few 'parent systems' aside, countries derive their 'legal origin' in this sense from an external source (whether through the borrowing of legal structures, or through military conquest or colonization), legal origin is thereby said to operate as an exogenous influence on both legal and economic development. When this hypothesis is combined with the quality of law claim, they together imply that common law systems are more likely than civil law ones to provide legal rules which support the external financing of firms. Because firms financed externally are, it is claimed, likely to grow more quickly than those which are not, legal origin should have an influence on the nature of financial systems and, more broadly, on patterns of economic growth and development across countries (La Porta *et al.*, 2007).

Two distinct channels have been posited through which legal origin may influence the quality of law, and hence the real economy (Beck *et al.*, 2003a, 2003b). The first, known as the 'adaptability channel', maintains that the common law, being mostly the product of case law, evolves incrementally to meet the needs of the economy as they change over time. The civil law is, it is argued, more 'rigid', as change can only occur in the event of a fundamental—and hence infrequent—revision of the codes and other statutory texts which constitute the principal source of the law; in civil law jurisdictions, case law does not constitute a formal source of legal rules as it does in the common law. The second is the so-called 'political channel'. This view maintains that common law systems are more effective than their civilian counterparts in reducing opportunities for wasteful rent-seeking. Because, it is thought, legislation plays a more important role in the civil law than in the common law, there is a higher likelihood of regulatory capture in civilian systems. A variant of this argument claims that the tradition of judicial independence in the English common law has given rise to rules which protect individual property rights against expropriation by the

state. The two channels can be seen as complementary, as, for example, implied by Hayek's analysis of the differences between the common law and civil law (Hayek, 1960, 1980; Mahoney, 2001).

Both of the explanations just referred to, while well established in the economic debate over legal origin, presuppose certain 'stylized facts' about the common law and civil law, the veracity of which have been questioned by recent comparative legal scholarship. This body of work has arrived at a more nuanced understanding of the differences between systems than that associated with the works of comparatists of the 1960s who popularized the idea of legal families (David, 1968). Mattei (1997), for example, has shown that the idea that common law judges have discretion to shape rules to changing economic circumstances, while civilian judges are bound to apply, through rigid deductive logic, the strict legal text of the code, is 'dramatically misleading, being based on a superficial and outdated image of the differences between the common law and the civil law'. While it is the case that the drafters of the French civil code sought to limit doctrine of judicial precedent, 'neither before nor after the French codification could any of the civil law systems be fairly characterised as the one described by the French post-revolutionary scholars' (Mattei, 1997: 83). Arguments about whether judicial decisions are a formal 'source' of law in civilian systems aside, Markesinis (2003) has comprehensively mapped the prominent role of judicial decision-making in the civil law world. Teubner (2001) and Pistor (2005) have shown that doctrines which are regarded as being at the core of the distinctive civilian approach to economic regulation, such as the application of the concept of good faith to commercial contracts, were judicial innovations. More fundamentally, Glenn (2007) and Siems (2007b) have questioned whether national legal systems can be neatly categorised into 'families', pointing out that most of them contain hybrid elements drawn from the common law and civil traditions, among others.

Looking beyond the stylized facts assumed by legal origin adherents, it is immediately apparent that the vast majority of rules in the areas of company and labour law are statutory in origin in the common law and civil law alike (Funken, 2003; Armour, 2008). This is a fundamental problem for both the 'adaptability' and 'efficiency' explanations. The growth of companies legislation in the common law world since the middle decades of the twentieth century has meant that common law judges arguably now have less discretion to develop the law than their civilian counterparts. In relation to UK law, a leading authority suggests that:

> 'there are now few of [the] general principles [of the common law]
> which are not affected in some way be the extremely detailed pro-

visions of the [Companies] Act whose bulk astonishes our partners in the European Community. Their legislation is expressed in relatively general terms which the courts are left to interpret purposefully ….. Contrary to what an earlier generation was taught at Law School, in the Civil Law countries judges have greeter freedom to make law (albeit on the basis of codified general priciples) while in the United Kingdom it is increasingly made by statute and judges are inhibited from developing new principles' (Davies, 1997: 8).

In part this is because common law judges have limited room for manoeuvre in interpreting statues, whereas civilian judges have inherent powers to develop the law using 'general clauses', such as good faith, which ameliorate the apparent rigidity of the codes (Pistor, 2005).

The limitations of existing theories have led to a focus on a third possible explanatory mechanism, which has been termed an 'institutional channel' (Ahlering and Deakin, 2007). This accepts that there are differences in regulatory style, or in the 'legal ground rules' (Pistor, 2005), between the common law and civil law, but it is agnostic on whether these can be described as broadly pro- or anti-market. Drawing on the concept of 'functional equivalents' in comparative law (Zweigert and Kötz, 1998) and on the comparative political economy literature on the 'varieties of capitalism' (Hall and Soskice, 2001), it is suggested instead that legal institutions for governing the business enterprise will to a large degree reflect cross-national differences in economic and political structures. Thus legal rules will tend to be *endogenous* to processes of economic and political development at national level.

This endogeneity may be expected to operate in different ways depending on how a system acquired its characteristic legal origin. On the one hand, the rules which developed in 'parent systems'—that is, those jurisdictions from which particular legal 'origins' are sourced—will, at least in relation to the laws governing industrial enterprise, reflect the nature of industrialization in those countries (Ahlering and Deakin, 2007). Because of path dependence, legal approaches to the regulation of enterprise which originated in parent systems may be expected to have had a substantial influence on the global diffusion and transplantation of norms which started at around the point that industrialization was also beginning. As proponents of the legal origins hypothesis have suggested, 'path dependence in the legal and regulatory styles emerges as an efficient adaptation to the previously transplanted legal infrastructure' (Botero *et al.*, 2004: 1346). But it is not possible to be certain *a priori* that this legal origin effect will be stronger than pressures for convergence of systems which may

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come in the form of legal borrowings, inter-jurisdictional competition to attract scarce resources ('regulatory competition') and the harmonisation of norms arising from the activities of international financial and legal institutions or from the role played by multinational companies and law and accounting firms in transmitting 'best practice' (Siems, 2008). Moreover, both the inherited legal origin effect and the effects of more recent legal borrowings and transplantations will be mediated by local forces which will tend to 'endogenise' law, adjusting external legal influences to local economic and political contexts, often with unexpected results: legal 'irritants', rather than 'transplants', are to be expected (Teubner, 2001).

The 'adaptability' and 'political' channels imply a 'strong' version of the legal origins claim, in which the diffusion of legal processes from parent systems exerts a powerful influence over economic development, shaping outcomes according to the degree of efficiency of legal rules. A 'strong' legal origins effect such as this would have to be time-invariant, a point noted by critics of the theory who point to the 'great reversals' which have occurred throughout history with regard to legal and financial development: all systems, including common law ones, restricted capital markets in the period following the depression of the 1930s, and prior to that point it could be argued that France, Germany and Japan had greater capital market liquidity and more dispersed ownership than the USA or Britain (Rajan and Zingales, 2003; Roe, 2006). By contrast, the institutional channel posits a 'weak' legal origin effect: the legacy of parent systems may be one determinant of legal development, but it must be set against opposing trends towards cross-national convergence, and placed in the context of the tendency for legal rules at national level to be shaped according to their immediate economic and political context.

3. 'Leximetrics': the Empirical Basis for Quantifying Legal Rules

3.1 The LLSV Indices

The empirical basis of the legal origins hypothesis consists of indices developed for a range of different aspects of the law relating to the business enterprise. There are now datasets relating to shareholder rights and creditor rights (La Porta *et al.*, 1997, 1998; Djankov *et al.*, 2007) regulations governing firm start-ups; (Djankov *et al.*, 2002) contract enforcement; (Djankov *et al.*, 2003); securities regulation; (La Porta *et al.*, 2006); labour regulation (Botero *et al.*, 2004); public creditor protection mechanisms (overlapping with the earlier creditor rights index) (La Porta *et al.*, 2005); self-dealing rules (overlapping with the earlier 'antidirector rights' index) (Djankov *et al.*, 2005); and bankruptcy procedures (overlapping with the earlier 'creditor rights' index) (Djankov *et al.*,

2006).[1] Together these data sources amount to an impressive body of evidence apparently supporting the core claims of the legal origin effect. However, there are some critical issues to be considered here relating to the way in which the legal data contained in these indices were gathered and collated.[2]

For any index to be a meaningful representation of the effects of legal rules across different jurisdictions, it must contain coding that is transparently accurate and consistent. The values given to the different variables must be applied in a way which corresponds to the state of the law in the different countries under review and which is consistent, taking into account relevant cross-national differences in the operation of legal rules. There is room for differences of view in the way that legal rules are interpreted. It is perhaps not surprising that legal experts have come to different conclusions on the values to give to legal variables than those arrived at the economists responsible for the construction of the principal indices.   There is however a basis for pause for thought in analyses which show that, on a systematic re-coding of the anti-director rights index, most of the claimed effects of the common law/civil law divide disappear (Spamann, 2006). In the light of this finding, some of the original authors of the studies based on the anti-director rights index accepted that this index was not entirely robust (Djankov *et al.*, 2005).

A second problem relates to the selection of variables. A functional theory of how legal rules work in relation to economic variables is needed to guide the selection process. However, as the selection becomes tighter there is a risk that the resulting index will not reflect the variety of rules found in different systems. There is a danger of 'home country bias', according to which the template reflects the experience of one or two paradigmatic cases (such as the 'Anglo-American' model: Berglof and von Thadden, 1999; Armour *et al.*, 2002; Siems, 2005b; Braendle, 2006; Cools, 2006; Lele and Siems, 2007; Ahlering and Deakin, 2007).

Thirdly, there is the issue of weighting. Each index carries with it an implicit weighting in the construction of separate variables to which a given score is allotted. While the scores may be normalized on a 0-1 basis, or some other basis, certain variables may come to acquire a preponderant weight in the index as a whole simply because they deal with an area of law which is particularly complex. This can be avoided by dividing the index into component parts which are then analysed separately, or by constructing composite variables. However, precisely how this is done inevitably involves matters of judgment.   The issue is not whether these judgments can be avoided, but how explicitly they are acknowledged and taken into account in the analysis.

Going further, it is possible to argue that the scores given to particular variables or groups of variables should be weighted on a country by country basis to reflect the comparative law principle of functional equivalents: the same variable may play a completely different functional role in different countries, or different variables may play the same role, with their relative important varying from one context to another (see Zweigert and Kötz, 1998, applied in this context by Ahlering and Deakin, 2007). To take an example: self-regulatory takeover codes are generally thought to play a major role in underpinning minority shareholder rights and encouraging the dispersion of ownership in some common law systems, such as the UK and Australia, but this type of regulation is absent in the United States, where certain specific rules of securities law, the law of fiduciary duties and a more permissive approach to shareholder-led litigation play a similar role (Armour and Skeel, 2007). In principle, the weightings given to these different variables in the countries in question should reflect the different role of the law in practice in each jurisdiction; but this is very hard to do in a convincing way which will avoid subjective judgments (see Ahlering and Deakin, 2007, and Lele and Siems, 2007 for discussion).

However, the most important limitation of the majority of the LLSV indices is that they only provide us with a cross-sectional view of the law. Most of them describe the law as it stood, roughly, in the second half of the 1990s. If legal origin were viewed as time-invariant, this would not matter. If, on the other hand, we want to test a 'weak' version of the legal origins claim in which the effects of legal origins are mediated by a range of other factors, some external to the jurisdiction in question and some indigenous to it, we need to be able to see to what extent the legal origin effect varies over time, if at all. Panel data may also be able to tell us more about the direction of causation in the relationship between legal and economic development. Case studies of the evolution of company law at national level suggest that even for the US and UK, financial market developments preceded legal change, in part because they precipitated the emergence of interest groups prepared to lobby for change in the law (Cheffins, 2001; Coffee, 2001). More fundamentally, they may be able to tell us if a relationship between legal change and stock market development exists at all over time.

1.2 Constructing Longitudinal Datasets

With the above points in mind, we have constructed indices which allow us to study the effects of legal change over time and to analyse their relationship to economic development. Our approach differs from that of LLSV in a number of respects.

Firstly, our indices take into account a wider range of legal information. Whereas LLSV focused almost exclusively on 'positive' legal rules, we include self-regulatory codes and other sources of norms which have *de facto* binding effect. We therefore include norms deriving from takeover codes and corporate governance codes (on this point see Lele and Siems, 2007a) which only feature to a marginal extent in the LLSV indices. We also code for particularly significant judicial decisions. All our legal sources are detailed in the documents constituting our datasets,[3] a practice not followed by LLSV.

This point about the range of sources is related to a second difference: we attempt to code for a wider range of values when considering the effects of a given rule than is the case with most of the LLSV indices. Many of the LLSV codings use binary variables, assuming that a given rule either applies or it does not. However, this does not readily accommodate state-contingent rules—that is, those which have different applications according to particular circumstances. Nor does it take into account the possibility of ambiguity or uncertainty in the interpretation of a legal provision. To reflect these, we introduce the possibility of intermediate scores between 0 and 1 in our variables. These are arrived at on the basis of interpretative judgment by legal experts.[4] As legal analysis involves hermeneutic, or interpretative, judgments, it is inevitable that opinions may differ over the appropriate coding of particular provisions. To counter this, we have made public the entire dataset, along with details of the bases on which every coding judgment was made.[5] This will enable subsequent researchers to compare our coding to their own analyses of the law, and readily to test whether any differences lead to significant differences in econometric results.

Thirdly, we cover a wider range of types of legal norm. In practice, many rules of company law and securities law are 'default rules' which may apply or not depending on how the parties to particular transactions choose to deal with them. The norms of corporate governance codes which follow the 'comply or explain' approach offer an illustration of this: companies have a choice of either conforming to the relevant norm, or disclosing their reasons for not complying with it. But this is also a feature of many statutory rules of core company law. We therefore include each of these within our coding.

Fourthly, and most fundamentally, our indices are all longitudinal.[6] We code for legal rules as they have evolved over time. This is far from being a straightforward process. It means that we have to rely on the tools of legal research to examine the state of law going back a number of years; evidence on the state of law as seen by practising lawyers, a source of information which has usefully supplemented the core LLSV indices (see, for example, Djankov *et al.*, 2006) is

not available on an historical basis. There is the problem of 'backfilling', that is, taking as a benchmark the law as it currently stands; the law of ten or twenty years ago may then appear less extensive simply because the body of regulation has grown in complexity since that point. Thus the template used must be sensitive to possible variations in the body of the law over time.

All these indices – our own and those of LLSV, as well as others working in this field – involve reducing a very complex legal reality to a form which makes quantitative analysis possible (Siems, 2005a). Thus it is not necessarily obvious that an index with 60 variables is necessarily better than one of 10; nor that using graduated values for variables is always preferable to binary ones. However, we follow the principle that an index should get as close as possible to representing the real effect of legal rules in any given jurisdiction, which is consistent with the requirements of quantitative analysis.

1.3 The New Dataset: Description of Basic Features

Four new datasets have been produced to date. Three of them are five-country datasets for the period 1970-2005. They cover the fields of shareholder protection, creditor protection, and labour regulation. The countries concerned are three parent systems (France, Germany, and the UK), the United States, and India. Results from the analysis of these datasets are reported elsewhere (Armour et al., 2007; Lele and Siems, 2007; Deakin, Lele and Siems, 2007; Fagernäs et al., 2007, Sarkar, 2007). Our focus here is on a fourth dataset, which covers the issue of shareholder protection, but does so for a wider range of countries over a shorter period of time. Twenty countries are covered over the period 1995-2005. Those represented are a range of developed systems (Canada, France, Germany, Italy, Japan, UK, Spain, Switzerland, USA); developing countries (Argentina, Brazil, Chile, India, Malaysia, Mexico, South Africa); and 'transition' systems (China, Czech Republic, Latvia). The period was chosen in order to identify a period of time in respect of which all systems were undergoing a general move to liberalise their economies, as part of which legal reforms aimed at strengthening shareholder protection were on the agenda. This would enable us to see whether common law systems and civil law systems diverged in the way in which they responded to a general policy move affecting all countries to a greater or lesser degree.

This index focuses exclusively on the law relating to listed companies. It contains 10 variables (see Table 1). These are drawn primarily from a nation's company law, but also include provisions found in securities laws, or in 'soft law' codes of corporate governance or takeover regulation. The variables were selected using three criteria. First, they are entitlements which, in theory, may

Table 1: Shareholder Protection Index: 10 variables

Variables	*Description and Coding*
1. Powers of the general meeting for de facto changes	If the sale of more than 50 % of the company's assets requires approval of the general meeting it equals 1; if the sale of more than 80 % of the assets requires approval it equals 0.5; otherwise 0.
2. Agenda setting power[7]	Equals 1 if shareholders who hold 1 % or less of the capital can put an item on the agenda; equals 0.75 if there is a hurdle of more than 1 % but not more than 3%; equals 0.5 if there is a hurdle of more than 3 % but not more than 5%; equals 0.25 if there is a hurdle of more than 5% but not more than 10 %; equals 0 otherwise.
3. Anticipation of shareholder decision facilitated	Equals 1 if (1) postal voting is possible or (2) proxy solicitation with two-way voting proxy form[8] has to be provided by the company (*i.e.* the directors or managers); equals 0.5 if (1) postal voting is possible if provided in the articles or allowed by the directors, or (2) the company has to provide a two-way proxy form but not proxy solicitation; equals 0 otherwise.
4. Prohibition of multiple voting rights (super voting rights)[9]	Equals 1 if there is a prohibition of multiple voting rights; equals 2/3 if only companies which already have multiple voting rights can keep them; equals 1/3 if state approval is necessary; equals 0 otherwise.
5. Independent board members[10]	Equals 1 if at least half of the board members[11] must be independent; equals 0.5 if 25 % of them must be independent;[12] equals 0 otherwise
6. Feasibility of director's dismissal	Equals 0 if good reason is required for the dismissal of directors;[13] equals 0.25 if directors can always be dismissed but are always compensated for dismissal without good reason;[14] equals 0.5 if directors are not always compensated for dismissal without good reason but they could have concluded a non-fixed-term contract with the company;[15] equals 0.75 if in cases of dismissal without good reason directors are only compensated if compensation is specifically contractually agreed; equals 1 if there are no special requirements for dismissal and no compensation has to be paid. Note: If there is a statutory limit on the amount of compensation, this can lead to a higher score.
7. Private enforcement of directors duties (derivative suit)[16]	Equals 0 if this is typically excluded (*e.g.*, because of strict subsidiarity requirement, hurdle which is at least 20 %); equals 0.5 if there are some restrictions (*e.g.*, certain percentage of share capital;[17] demand requirement); equals 1 if private enforcement of directors duties is readily possible.
8. Shareholder action against resolutions of the general meeting	Equals 1 if every shareholder can file a claim against a resolution by the general meeting;[18] equals 0.5 if there is a threshold of 10 % voting rights;[19] equals 0 if this kind of shareholder action does not exist.
9. Mandatory bid	Equals 1 if there is a mandatory public bid for the entirety of shares in case of purchase of 30% or 1/3 of the shares; equals 0.5 if the mandatory bid is triggered at a higher percentage (such as 40 or 50 %); further, it equals 0.5 if there is a mandatory bid but the bidder is only required to buy part of the shares; equals 0 if there is no mandatory bid at all.
10. Disclosure of major share ownership	Equals 1 if shareholders who acquire at least 3 % of the companies capital have to disclose it; equals 0.75 if this concerns 5 % of the capital; equals 0.5 if this concerns 10 %; equals 0.25 if this concerns 25 %; equals 0 otherwise

Source: Siems, 2007a.

be understood as responses to basic agency problems in business enterprise that might otherwise undermine the value of investors' expected returns. For example, our variable 6, "feasibility of director's dismissal", reflects the ease with which shareholders can dismiss directors. As a matter of theory, a stronger entitlement may be expected to enable shareholders to exert more control over directors, and thereby to reduce managerial agency costs. Secondly, they are entitlements which are representative, in our assessment, of the range of shareholder protections used in the jurisdictions in our sample. That is, they are likely to feature as important in all, or a significant part, of the jurisdictions we consider.[20] Thirdly, the variables selected were ones which we expected to have exhibited a relatively high degree of change over the period 1995-2005. This was in order to provide the best possible test of hypotheses that legal change varies across legal systems and is associated with stock market development.

La Porta *et al.* used eight principal variables as proxies for shareholder rights in 49 countries in their 1998 study, 'law and finance'. These variables were: 'one share one vote', 'proxy by mail allowed', 'shares not blocked before the meeting', 'cumulative voting', 'oppressed minorities mechanism', 'pre-emptive rights to new issues', 'share capital required to call an extraordinary shareholder meeting' and 'mandatory dividend'. Our ten-variable index includes variables on the power of the general meeting and on who decides about its topics (variables 1 and 2); on how voting takes place (variables 3 and 4); on whether directors take the shareholders interests into account (variables 5 and 6); on which legal actions shareholders can file (variables 7 and 8), and on how shareholders are protected in the event of a change of corporate control (variables 9 and 10). This index is more extensive than that of La Porta *et al.* and is described in more open-ended, functional terms which attempt to take into account cross-national variations, rather than naming particular features of company law which are associated with US practice (such as cumulative voting).[21]

D. The New Dataset: An Illustration of Index Construction

To exemplify the coding methodology employed in our dataset, we set out here, by way of example, how it is applied to the UK. Our first variable, *powers of the general meeting for de facto changes*, relates to the ability of the shareholders as a collective body to control actions by the board which may substantially alter the company's business profile. The company laws of many countries set a restriction based on a proportion of the company's net assets which, if a transaction exceeds, shareholder approval is required. If there is no such restriction, a score of 0 is given. If there is a restriction triggered at a threshold of 50% or lower, then a score of 1 is given. If there is a restriction, but it is triggered at a

net asset threshold that is higher than 50% (e.g. 80%), then a score of 0.5 is given. In the UK, the Listing Rules, which apply to publicly-traded firms, specify that any transaction involving more than 25% of the company's net assets must be approved by the shareholders; moreover, this rule was present for the entire period 1995-2005.[22] Hence a score of 1 is given for each year.

The second variable, *agenda setting power*, relates to the ability of a minority shareholder to have an item put onto the agenda for a shareholders' meeting. The higher the minimum percentage required to have an item put on the agenda, the lower the coded score. For the entire period, the UK's Companies Act 1985 stipulated that a shareholder with 5% or more of the voting rights could have an item put on the agenda for a shareholder meeting.[23] This yields a coding of 0.5 for each year in the period under study.

Our third variable, *anticipation of shareholder decision*, seeks to capture the extent to which the legal regime facilitates participation in shareholder decision-making by those who are unable physically to be present at the meeting. This can be done either by permitting postal voting, or by allowing shareholders to appoint a proxy to represent them in voting at the meeting. Proxy mechanisms can, however, be biased in favour of the board of directors unless the proxies are 'two-way'—that is, they provide for voting both for and against the resolution in question. Moreover, we assume that proxy facilities are more useful to shareholders when accompanied by a 'proxy solicitation'—namely, a circular explaining the background to the particular resolutions in relation to which proxy appointments are sought. In the UK, the Listing Rules required for the entire period under consideration that a two-way proxy form be circulated to shareholders, but there was no requirement that it be accompanied by a proxy solicitation. Hence we code the UK as 0.5 for the entire period.[24]

Fourth, we consider whether, and if so how readily, *multiple voting rights* are permitted—or, put the other way around, whether a one-share-one-vote rule is applied. Multiple voting rights facilitate the aggregation of control in the hands of shareholders with less than equivalent cash-flow rights, and correspondingly disenfranchise shareholders who do not share the enhanced voting capability. In the UK, there has been no legal or other regulatory prohibition of multiple voting rights for the period under consideration, meriting a score of 0.[25]

Our fifth variable relates to the proportion of *independent board members*—that is, who must be free of employment or ownership links to the firm. Independent directors are widely thought to be able to assist shareholders in controlling the actions of managers. We give a score of 1 for jurisdictions in which more than 50% of the board must be independent; a score of 0.5 for jurisdictions in which

more than 25% but less than 50% must be independent, and 0 for no requirement relating to independence. For intermediate positions, the score is derived as the percentage of independent board members divided by two. In the UK, the Cadbury Code of Corporate Governance, introduced in 1992, required listed companies to ensure that at least a majority of their non-executive directors be independent. As there typically half the board would be non-executive directors, we code this as 0.25. The Combined Code of Corporate Governance 2003 raised the threshold, requiring that at least half of all the board members be independent. We therefore code the UK as 1 from the following year (2004) onwards.[26]

The sixth variable relates to the *feasibility of directors' dismissal*—that is, how readily shareholders may remove board members from their positions. The highest score of 1 is given where directors may be dismissed by shareholders at will, and 0 is given where dismissal may only be effected for cause or an important reason (specified in the law). Intermediate scores are given where although directors may be dismissed at will, this may be accompanied by a financial penalty for the company. Such penalties would be higher where there is no limit to the duration of service contracts, for which a score of 0.5 is given, and lower where there is a fixed duration, for which a score of 0.75 is given. Turning to the UK application, no restrictions were imposed on shareholders' ability to remove directors from office during the study period, but it was possible for directors to enter into service contracts with the firm that contained termination payments, thereby subjecting the company to financial liability. From 1992 to 1995, these were subject to a restriction under the Cadbury Code on Corporate Governance that any service contract for more than a 3-year term must be approved by the general meeting. In 1995, this was reduced to an outright restriction on notice periods of more than one year.[27] The position is thus one in which dismissal is fundamentally straightforward, with the possibility of a financial penalty that is capped by the length of the notice period. We code as 0.75 for 1995, and then, to reflect the reduction in the maximum notice period, 0.875 for the remainder of the study period.

Seventh, we consider the ability of minority shareholders to bring an action to enforce breaches of directors' duties—that is, the extent to which *private enforcement* is facilitated. Here we code as 0 those laws which exclude the possibility of a shareholder suit, 0.5 where there are some restrictions—such as a requirement than the shareholder holds some minimum proportion of the voting rights, and 1 where such an action may be brought readily. In the UK, a minority shareholder action does not depend on having a minimum share qualification, but nevertheless is subject to a significant restriction that the wrong must be sufficiently serious as to constitute a 'fraud on the minority'. As a consequence, only particularly egregious breaches of duty may be enforced by a mi-

nority shareholder—misappropriation of assets and the like.[28] We therefore code this as 0.5 for the entire period.

Eighth, we consider the ability of shareholders to file a *personal action* against a resolution of the general meeting—for example, on the basis that it has not been lawfully constituted. Under UK law, every shareholder has the power to bring a personal action,[29] and so a coding of 1 is accorded for the entire period. In other jurisdictions, codings of less than 1 as given where specific percentage thresholds are imposed to bring such actions.

The penultimate variable relates to *mandatory bid* requirements. These compel the purchaser of more than a stipulated proportion of the voting rights of a listed company's share capital to make a tender offer for the remaining shares at a price no lower than what was paid for the initial acquisitions. Such rules are intended to protect minority shareholders by providing them with the option to exit the company—at a price no lower than that which has been paid for the acquisition of a controlling block—rather than be required to continue to participate in the firm under the control of the acquiror. We reason that greater protection is accorded by a lower threshold acquisition level. In the UK, a mandatory bid requirement was triggered under the City Code on Takeovers and Mergers for the entire period following the acquisition of 30% of the voting rights,[30] which we code as 1.

Finally, we consider rules requiring disclosure of share ownership blocks. These allow investors to know who has amassed significant stakes in a firm. We reason that greater transparency in this dimension benefits investors. We give the highest score for a 3% threshold, 0.75 for 5%, 0.5 for 10%, 0.25 for 25% and 0 for anything less. In the UK, disclosure of blocks amounting to 3% or more of the voting rights has been mandatory since 1989, meaning that we code at 1 for the entire period.[31]

4. The Nature and Direction of Legal Changes in Shareholder Protection, 1995-2005[32]

An aggregate of all ten variables for all countries produces twenty curves which indicate the direction of change in the level of protection afforded by the law to shareholders in our sample jurisdictions from 1995 to 2005. This is set out graphically in Figure 1.

Figure 1: Shareholder Protection in 20 Countries 1995-2005
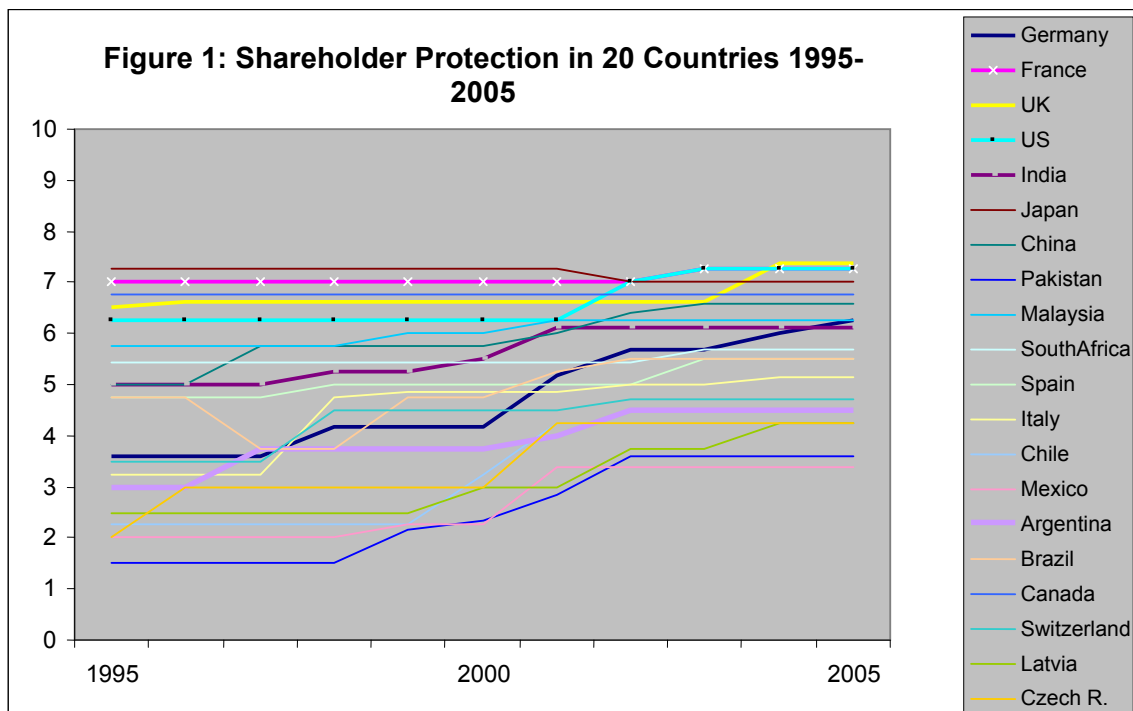
We can see that the countries with the lowest scores have slightly improved their position over time. In 1995 the lowest score was 1.8 while in 2005 it was 3.4. Similarly, most other countries move constantly upwards. Brazil's score has gone down and then up. The systems with the highest level of protection have not gone up very much. Few systems go above a normalised score of 7.5 on a 10-point scale, possibly indicating that there can be such a thing as too much shareholder protection.[33] This implies a degree of overall convergence in the legal protection of shareholders in our sample countries.

For more specific observations on particular countries it is useful to present the aggregate data in a different format (Figures 2 and 3).

Figure 2: Shareholder Protection in 20 Countries 1995

Figure 3: Shareholder Protection in 20 Countries 2005
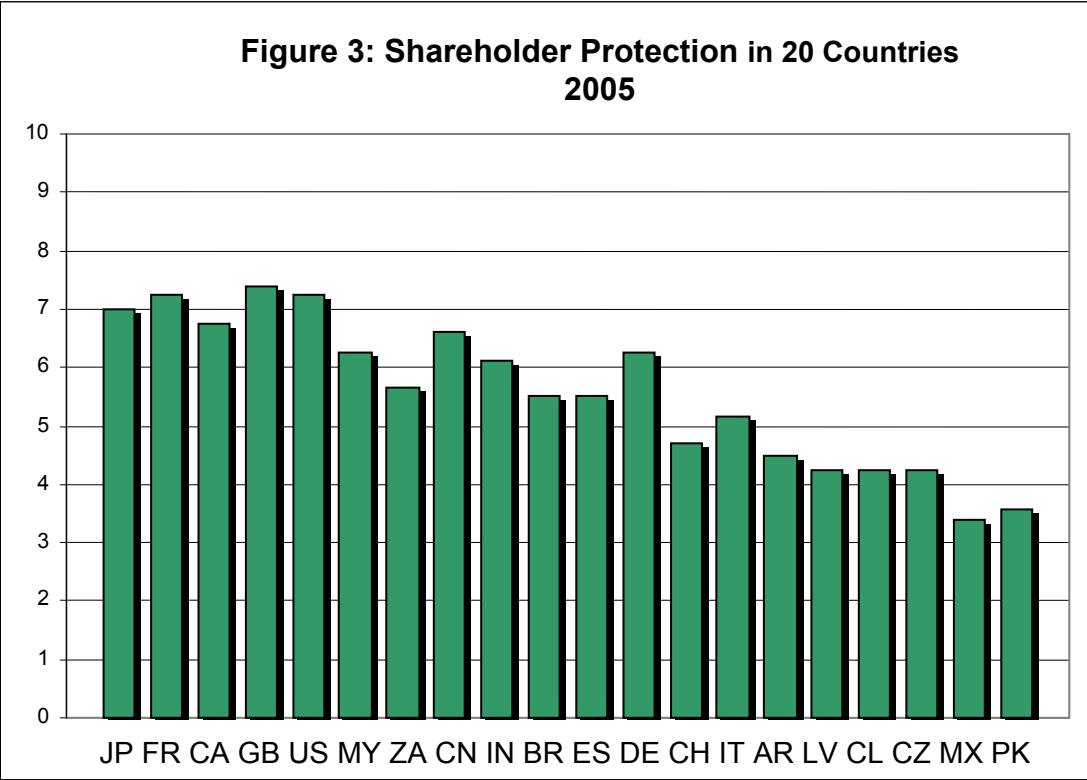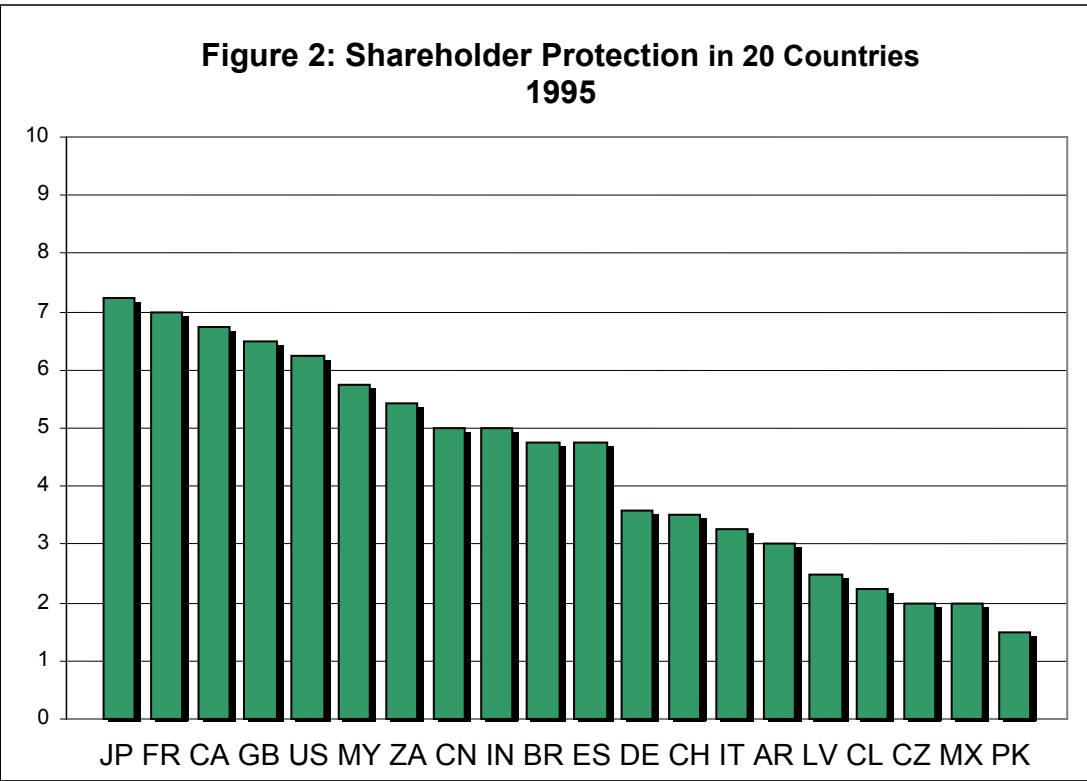
Note to Figures 2 and 3: the following abbreviations are used: AR (Argentina), BR (Brazil), CA (Canada), CH (Switzerland), CL (Chile), CN (China), CZ (Czech Republic), DE (Germany), ES (Spain), FR (France), GB (United Kingdom), IN (India), IT (Italy), JP (Japan), LV (Latvia), MX (Mexico), MY (Malaysia), PK (Pakistan), US (USA), ZA (South Africa). Source: Siems (2007a).

**Figure 4: Rule of Law in 20
Countries 1995**

CH GB DE CA US FR JP CL ES IT MY CZ ZA AR LV IN MX BR PK CN

**Figure 5: Rule of Law in 20
Countries 2005**

CH GB DE CA US FR JP CL ES IT MY CZ ZA AR LV IN MX BR PK CN
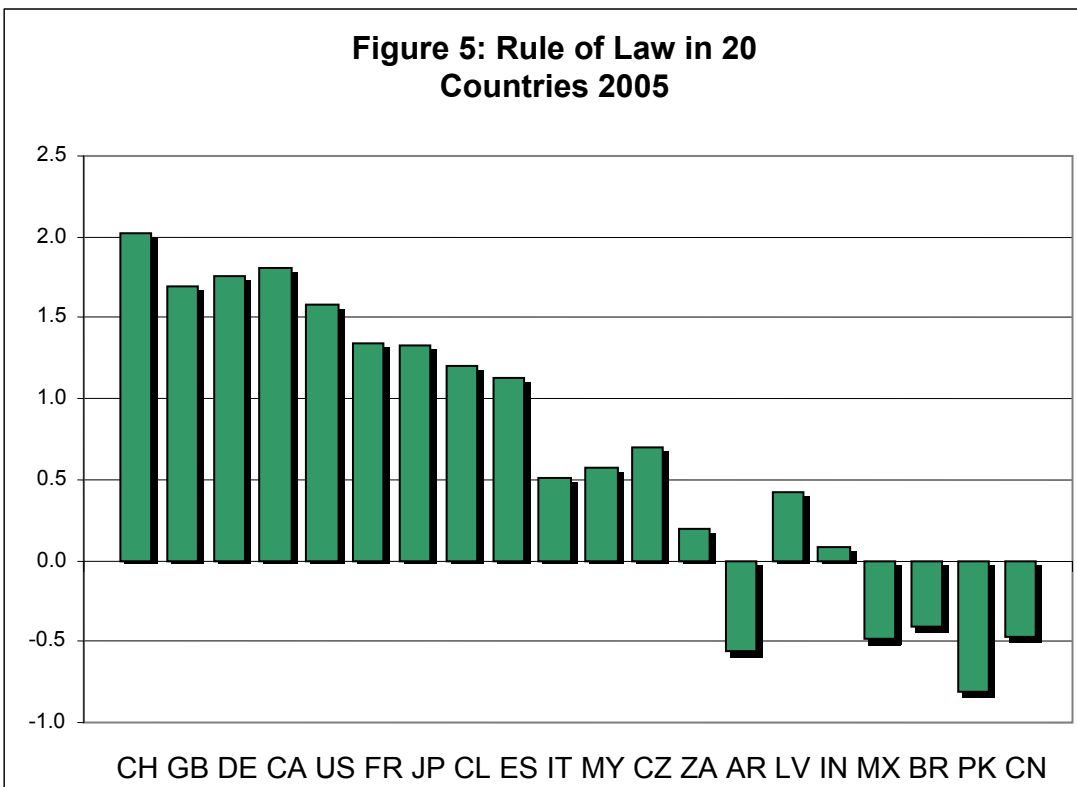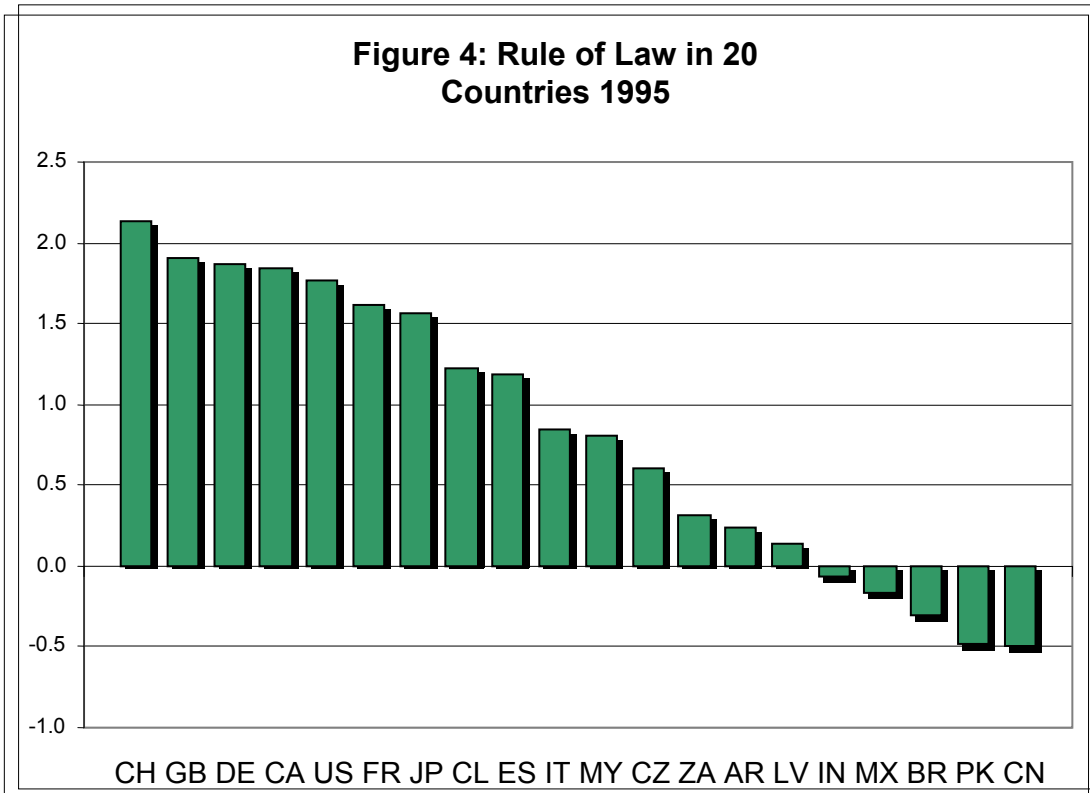
Note to Figures4 and 5: the following abbreviations are used: AR (Argentina), BR (Brazil), CA (Canada), CH (Switzerland), CL (Chile), CN (China), CZ (Czech Republic), DE (Germany), ES (Spain), FR (France), GB (United Kingdom), IN (India), IT (Italy), JP (Japan), LV (Latvia), MX (Mexico), MY (Malaysia), PK (Pakistan), US (USA), ZA (South Africa). Source: World Bank Governance Indicators. Available at: http://www.worldbank.org/wbi/governance/govdata/.

Comparing 1995 and 2005 we observe, firstly, that most countries have increased their scoring. This concerns above all some of the transition and developing countries which are now catching up with the developed world. For example, the scores of Pakistan, Mexico, the Czech Republic and Latvia have gone up slightly. Significant upward movement in the level of protection has also been made by China. Secondly, however, the overall 'ranking' of the countries and thus the lead of developed countries has remained relatively unchanged. The 'top' five countries of 1995 – all of them developed countries (Japan, France, Canada, UK, US) – are also at the 'top' in 2005. Germany and Italy have also made some improvements in their scores. Third, some countries have not changed or have even dropped a little in their scores. Apart from the 'top' performers, Japan and Canada, this is the case with Switzerland in particular. The strong Chinese and the weak Swiss performance in the 2005 index are perhaps surprising. However, this result does not necessarily mean that shareholders in Switzerland are more at risk than in China since the efficiency of courts also has to be taken into account. Thus, it is useful to consider a 'rule of law' ranking which is based on the World Bank Governance Indicators (Figures 4 and 5).[34]

As we might expect, these figures show that developed countries perform better than developing countries. It is also interesting to see how the countries with low scores have changed over time. In contrast to the shareholder index, where most countries have moved up, changes have here not been consistent. Whereas the Indian, Latvian and Czech scores have improved, the Pakistani, Mexican and Argentine scores have got worse. A likely explanation for this is that copying legal rules is easier than addressing more deep rooted features of the court system (Siems 2008).

Can we identify a legal origin effect? If we divide the sample by legal origin (English common law versus the rest), and by whether a country is developing or developed, we see that we have three common law systems in the developed country group (the UK, USA and Canada) and four in the developing country group (Malaysia, South Africa, India and Pakistan). Of the remaining thirteen civil law countries in the sample, six are in the developed (high-income OECD) country category (France, Germany, Italy, Japan, Spain, Switzerland) and seven are categorised as developing (Argentina, Brazil, Chile, China, Czech Republic, Latvia, Mexico). In Table 2, the average state of shareholder protection in each of these categories is shown. The data in Table 2 are plotted in Figure 6. These show that in each year, the overall state of shareholder protection is higher in the 'common law' origin countries than that in the 'other' countries in both the two groups, developed and developing.[35]

Table 2: Shareholder Protection Index 1995-2005, Group Averages

Year	English-origin developed	Other developed	English-origin less developed	Other less developed
1995	6.67	4.76	4.29	3.07
1996	6.71	4.76	4.29	3.21
1997	6.71	4.76	4.29	3.29
1998	6.71	5.39	4.35	3.29
1999	6.71	5.34	4.50	3.46
2000	6.71	5.34	4.69	3.68
2001	6.71	5.50	5.03	4.30
2002	6.96	5.60	5.22	4.58
2003	7.04	5.77	5.28	4.60
2004	7.29	5.85	5.28	4.68
2005	7.29	5.89	5.28	4.68
Mean	6.86	5.36	4.77	3.89
Change 1995-2005	0.62	1.13	0.99	1.61

Source: Siems (2007a).

Figure 6: Shareholder Protection, 1995-2005: English Law Origin Systems vs. Others
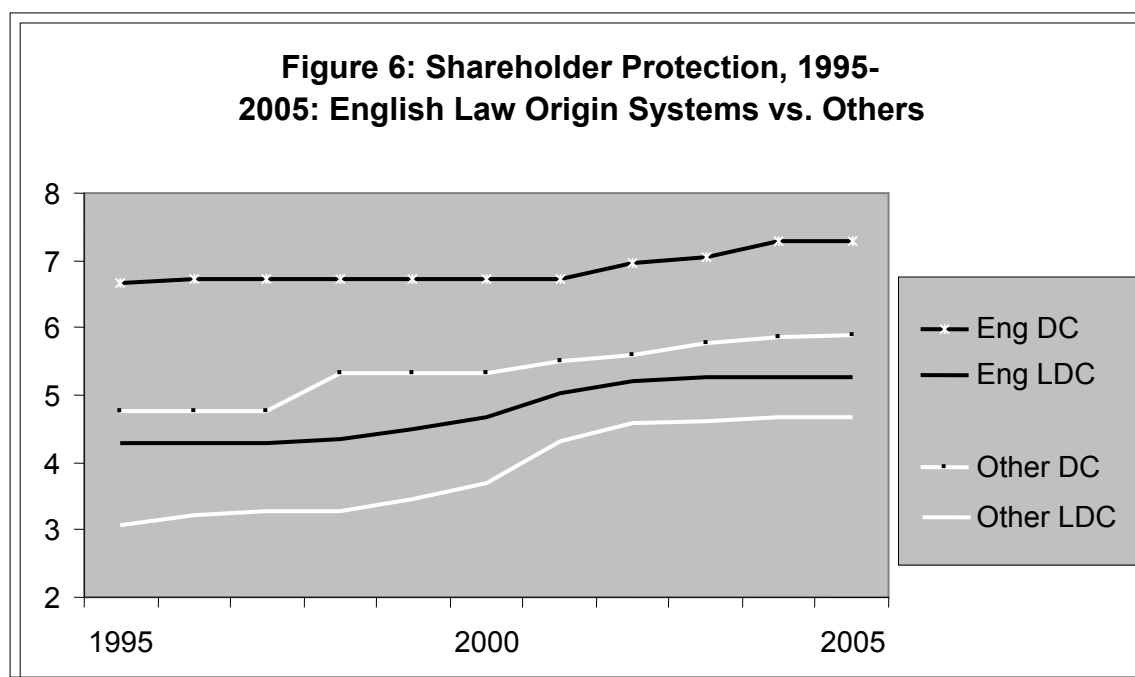
Source: Siems, 2007a.

Table 3:   Shareholder Protection, 1995-2005: Dummy Variable Analysis

a	Dummy for Developed Countries (DC)	Dummy for English Law Origin Countries (Eng)	Dummy for 4 Latin American Countries (Latin)	R-Sq.
4.21**	1.64**			0.26
4.57**		1.1		0.11
5.27**			-1.59	0.16
3.79**	1.68**	1.16*		0.38
4.52**	1.34*		-0.84	0.3

Source: Siems (2007a).

*   Significant at 5 per cent level.
**   Significant at 1 per cent level.

Notes:

1. The following regression equation has been fitted:

SP = a + b.Eng +c.DC + d.Latin

where SP is the aggregate shareholder protection index, Eng is the dummy variable = 1 for English law-origin countries and zero for other countries, DC is the dummy variable = 1 for developed countries and zero for other countries and Latin is the dummy variable = 1 for Latin American countries and zero for other countries. The Breusch-Pagan Lagrange Multiplier (LM) test statistic supports the random-effect model (RE) model in every case. All estimates are from RE model.

What is clear from Figure 6 can also be more rigorously demonstrated (Table 3). Considering all the 20 countries and 11 years we have a panel dataset of 220 observations. We have used the dummy variables for English law origin countries and developed countries (Eng and DC respectively) and fitted the following regression:

$$SP = a + b.ENG +c.DC$$

where SP is the 10-variable shareholder protection index, ENG is the dummy variable = 1 for English law-origin countries and zero for other countries, DC is the dummy variable = 1 for developed countries and zero for other countries. We also inserted a dummy for the four Latin American countries ('Latin') covered in our sample to see if they were driving the result. The dummy is negative

but not significant irrespective of whether we control for the developed countries in the sample. From the estimates of the parameters (see Table 3), it can be observed that both the dummies are positive and highly significant. This implies that in our sample English law origin countries tend to have a significantly high shareholder protection if we take into account the fact that the developed countries tend to have a higher level of shareholder protection. However, as Figure 6 also shows, the gap between English law systems and the rest is narrowing over the period in question.

How should we interpret this result?[36] As explained above, the index is weighted towards variables which were changing over time. The variables on independent board members and on the mandatory bid in takeover contests (variables 5 and 9) are those which changed most substantially, although the independent board member variable is still among the lowest scoring on average in the sample. The requirement of independent board membership is one of the core elements of Anglo-American style corporate governance codes, and the mandatory bid rule is a basic feature of the characteristically British institution of the self-regulatory takeover code (Armour and Skeel, 2007). Thus these results are telling us that in respect of variables which form the core of the common law approach to shareholder protection, a legal origin effect can be discerned in respect to changes over time in the period 1995-2005.[37]

5. The Impact of Shareholder Protection on Stock Market Development and the Financing of Corporate Growth 1995-2000

This section reports the results of two further tests: one of the impact of legal change on stock market development and the other on whether legal origin affects the financing of corporate growth.

5.1. Shareholder Protection and Stock Market Development

We measure stock market development by four different series commonly used for this purpose in the literature: stock market capitalisation as a percentage of GDP ('MKAP'), the value of stock trading as a percentage of GDP, ('VTRD'), the stock market turnover ratio ('TURN'),[38] and the number of domestic companies listed in the stock market per million of population ('LISTPOP').[39] We use a panel data analysis which enables us to test whether countries with good shareholder protection are 'rewarded' by having more developed capital markets. It is of course the case that a number of other factors contribute to the development of stock markets. Therefore we control here for the dot-com bubble,

the legal origin of a country, whether a country is a 'transition' (or ex-socialist) economy, and the quality of legal enforcement.

To elaborate in more precise terms, we use STATA to consider two alternative types of panel regression analysis looking at the relationship between each of the four indicators of stock market development and the shareholder protection index: these are the country-fixed effects model (FE) and the random-effects model (RE). The FE model is designed to control for omitted variables that differ across countries but are constant over time. This is equivalent to generating dummy variables for each country-case and including them in a standard linear regression to control for fixed country-effects. The RE model is used if there is a reason to believe that some omitted variables may be constant over time but vary between cases, and others may be fixed between cases but vary over time. The Breusch-Pagan Lagrange multiplier test has been conducted to choose the appropriate model. It strongly supports the RE model in all the cases.

All the estimates are reported in Table 4. These show that there is no significant positive relationship between the various stock market development indicators and the shareholder protection index.[40] The period of our study (1995-2005) is marked by the bursting of the dotcom bubble – the bubble started in the first half of our period of study and ended in the middle (in 2001), and was followed by downwards adjustments in the volume stock market trading and in stock market capitalisation. We therefore introduce a dummy (DOTCOM) which assumes the value zero during 1995-2000 and 1 during 2001-2005. We also introduce a dummy for English law origin countries ('Eng') to check whether these countries had a different experience from the rest. We also use a dummy (TR) for the two ex-socialist countries (Czech Republic and Latvia) and China. To tackle the problem of non-linearity we add a squared SP value to the regression. We also consider the role of the 'rule of law' variable (the 2005 rule of law index[41]: 'RULE'), for each country, based on World Bank measures. This is higher in developed countries with a well functioning infrastructure for the enforcement of law, and it has a very high correlation with per capita GDP. We therefore replace per capita GDP with the RULE variable and observe that this variable has a significant and positive coefficient in almost every equation. A variable (RCBR) interacting the rule of law with shareholder protection is also used in the analysis. RCBR is the CBR index multiplied by the World Bank Rule of Law Index for 2005.

Table 4: Shareholder Protection and Stock Market Development: Panel Data Analysis[1], 1995-2005

Variables	Stock Market Development Indicators				
Shareholder protection measures [2]	Stock market capitalisation as % of GDP	Shares traded as % of GDP	Ratio of shares traded to real market capitalisation	Number of listed companies	Number of listed companies per million of population
CBR					
SP	0.09	0.4	0.3	-0.59**	-0.59**
SPSQ	0.01	-0.02	-0.03	0.06**	0.05*
DOTCOM	0.04	0.1	0.06	0.09	0.15*
ENG	0.21	0.68	0.47	1.36**	0.9**
TR	-1.03*	-0.96	0.07	-0.6	0.22
RULE	0.36*	0.52**	0.17	0.39*	1.14**
A	-1.62**	-3.18**	-1.54**	7.09**	2.91**
R-Sq	0.58	0.51	0.07	0.41	0.69
LM	417.73	435.66	496.57	520.99	455.92
RCBR					
SP	0.08	0.05	-0.05	-0.02	-0.007
SPSQ	-0.002	0.01	0.01	0.003	-0.003
DOTCOM	0.19	0.23**	0.04	-0.001	-0.005
ENG	0.35	0.65	0.29	1.34**	0.89**
TR	-1.1	-1.01	0.04	-0.77	0.22
A	0.93	-1.83	-0.85	6.04**	1.38**
R-Sq	0.49	0.41	0.07	0.4	0.67
LM	544.36	496.56	497.83	697.12	370.45

Source: Siems (2007a).

* Significant at 5 per cent level (based on robust standard errors).
** Significant at 1 per cent level (based on robust standard errors).

Notes:

1. The following regression equation has been fitted:

$$Y = a + b. SP + c. SPSQ + d.DOTCOM + e.ENG + f.TR + g. RULE$$

where SP is the aggregate shareholder protection index, SPSQ is the squared SP, RULE is the 2005-rule of law index, DOTCOM is dummy variable = 1 for the post-dotcom bubble period, 2001-2005 and zero for the other period (1995-2000), ENG is the dummy variable = 1 for English law-origin countries and zero for other countries, TR is the dummy = 1 for China and two ex-Socialist countries, Czech Republic and Latvia and zero for other countries and Y is the alternative index of stock market development indicators, log of real stock market capitalisation as percentage of GDP (LMKAP), log

of the value of stock trading as percentage of GDP (LVTRD), log of turnover ratio (the ratio between market capitalisation and value of stock trading), LTURN, log of the number of listed domestic companies in the stock market (LLIST and log of the number of listed domestic companies in the stock market per million population (LLISTPOP). The Breusch-Pagan Lagrange Multiplier (LM) test statistic is calculated in each case and reported in the LM row; it supports the random-effect model (RE) model in every case. All the estimates are from RE model.

2. Two sets of shareholder protection index are used – CBR (original data compiled by CBR based on the law of books) and RCBR (an interactive index, CBR index multiplied by World Bank Index of Rule of Law, 2005).

Interestingly, for the number of listed companies we get a negative relationship – the higher the degree of protection, the lower the number of listed firms per million of population. Instead of taking the number of firms listed in the stock market per million of population we have also considered the absolute number of listed firms. But our conclusion remains unaffected. This could be a reflection of delisting: in the stock exchanges of many countries, smaller firms are driven out to preserve the stock market for major firms--stock exchanges themselves are normally profit-making institutions and must endeavour to keep down their overhead costs. For example, in the 1980s, there were 8,000 companies listed on the Bombay Exchange, the largest number of companies second only to the US. However, a large proportion of these companies were never traded at all and subsequently many were delisted from the Exchange. It is therefore arguable that the number of listed companies is not a good indicator of stock market development.

The overall results in Table 4 indicate hardly any statistically significant coefficients, and a number of these coefficients have negative signs. Despite relatively small samples which may affect the significance level of the coefficients, the results do not indicate a long-run positive equilibrium relationship between legal protection of shareholders and stock market development. Nor do we find any evidence—save in the case of number of listed firms, which is equivocal for the reasons discussed above—that legal origin is associated with differences in the level of stock market development.

B. Financing of Corporate Growth

Our new dataset makes it possible to say something about the relationship between legal origin and firms' reliance on external finance. In an earlier study, Glen and Singh (2003) analysed the financing of corporate growth in 23 developed countries and 17 developing countries using microeconomic accounting data on individual firms.[42] Seventeen of these countries are included in the present 20 country study of shareholder protection. Table 5 reports the results of the analysis of the financing of corporate growth in these seventeen countries

according to their legal origin and level of development. The results are inconclusive because of the relatively small sample sizes, but nevertheless striking. They indicate that, contrary to expectation, external finance constituted a lower proportion of corporate growth in common law countries (67.2% of total sources) than in the case of civil law countries (72 per cent).[43] On the other hand, in line with *a priori* expectations, common law countries financed a greater proportion of their growth in total assets from the stock market (17.8%) than civil law countries (12.3 per cent). However, in this period civil law developing countries raised a greater proportion of their financing from the stock market (22.2%) in contrast with common law countries (11%).

Table 5: Internal Financing and Stock Market Finance as a Proportion of Total Financing in Common Law and Civil Law Countries (percentages)

	Common law countries		Civil law countries	
	Internal	*Stock Market*	*Internal*	*Stock Market*
Developed countries	23.7	24.7	33.7	4.0
Less developed countries	42.0	11.0	26.4	22.2
All	32.8	17.8	28.0	12.3

Note: Of the seventeen countries in the sample, nine were developed and eight were developing countries. Of the nine developed countries, six were civil law and three were common law countries. Of the eight developing countries, five were civil law and three were common law.

Source: Glen and Singh (2003).

6. Assessment and Conclusions

In this paper we have subjected the legal origins hypothesis to tests using newly created panel data which present longitudinal evidence on legal change in the area of shareholder protection. We found some support for the idea that a country's legal origin affects the content of its substantive law, in the sense that for a sample of 20 developed and developing countries, we observed that common law systems had stronger shareholder protection over the period 1995-2005. However, we also found that civilian systems were catching up with their common law counterparts over the same period: that is, the aggregate differences between civil and common law jurisdictions declined over this period. We then tested for the existence of a link between shareholder protection and stock market development. In our sample of twenty countries we failed to find such a link, thereby casting doubt on the claim that the strength of shareholder protec-

tion matters for financial development. There was no such link even across the English-law origin countries and the developed countries, which have higher levels of shareholder protection than civil law systems and developing countries respectively.

The dataset which we have analysed here focuses on a range of variables which, while broadly representative of company law, were changing over time in the period 1995-2005. This is a period during which all systems were moving to liberalise their economies and all were adjusting in some way to the growing global pressure for compliance with a 'shareholder value' norm based on Anglo-American practice (Hansmann and Kraakman, 2001). It also covered the period (the late 1990s) to which the LLSV datasets on shareholder protection relate, so making a more or less direct comparison with their analysis possible.

At the first stage of our analysis, which was confined to looking at the trajectory of legal change, we found a clear difference between the common law and civil law systems. This can be interpreted as supporting the claim that legal origin makes a difference to the state of a country's laws. It is compatible with studies of the diffusion of corporate governance codes, which show that in roughly the same period that we were studying, common law countries had a higher rate of adoption of such codes than civilian ones (Aguilera and Cuervo-Cazurra, 2004). We have, however, significantly added to this finding, by showing that while common law countries were ahead in terms of the strength of shareholder protection provided, civil law countries were catching up with them.

Our results need to be interpreted in the light of the implicit weighting in the index we used. The variables comprising the index were in part selected for their propensity to reflect legal change over the period 1995-2005. During this time, the most substantial changes took place in respect of two particular variables – independent board members and a mandatory bid rule in takeover contests – which epitomise the common law (and above all the UK) approach to shareholder protection. Thus, in this period, common law systems, both developed and developing, were more likely to have adopted core elements of the 'global' standard in corporate governance and company law – stressing the role of boards and the market for corporate control in disciplining managers of listed companies – than their civilian counterparts. While we also saw that, over this period, civil law systems were increasing the level of shareholder protection at a faster rate than common law ones in both the developed and developing country categories, this was not sufficient to overcome the initial advantage enjoyed by common law countries across the variables coded in our data.

This finding is compatible with what we have called the 'institutional channel' explanation for legal origin. Systems with a common law background have been quicker to adopt aspects of a model which essentially originates in the practice of the common law 'parent' system, namely the UK. But this legal origins effect also needs to be considered alongside the role of other factors influencing the diffusion of legal rules. The period under review was one in which international corporate governance standards were being widely disseminated as a result of the attention given to the OECD's corporate governance guidelines, the codes and principles of institutional investor bodies such as the International Corporate Governance Network, and the tendency for international legal services and financial service firms to assist the propagation of similar standards (Hansmann and Kraakman, 2001; Siems 2008). Under these circumstances, can it be said that civil law legal origin is much an obstacle to the adoption of additional measures of shareholder protection? It would seem not: as we have seen, civilian systems were also moving towards this model in the period in question. This implies an overall tendency towards convergence in shareholder protection. In keeping with this trend, the differences in our data between common and civil law countries' shareholder protection laws have decreased over time.

The second stage of our analysis looked at the possibility of a link between shareholder protection and stock market development. Our analysis failed to find such a link, even after controlling for legal origin, state of development, level of per capita GDP, and countries' positions on the World Bank 'rule of law' index. Time series data on stock market development are limited; we used those which are widely relied on this field of research (stock market capitalisation as a percentage of GDP, the value of stock trading as a percentage of GDP, the stock market turnover ratio, and the number of listed companies). These are good measures if we are seeking to determine the level of stock market activity in a given system. It may be that other indicators can be developed or exploited for all or parts of a sample and that different results may be obtained. However, we have at least a preliminary finding that while legal origin may affect the structure of legal rules, the extent of legal protection of shareholders, and consequently legal origin, did not affect financial development for the countries and period under review here.

How can we explain such a result, which goes against the generally prevailing view in the field of law and finance? It is possible that our dataset is less robust than the one prepared by LLSV, or somehow did not identify the most important variables. This seems unlikely, however: as numerous critiques have pointed out, the LLSV dataset contains numerous coding errors and suffers from country-specific biases in the construction of the index. It does not effectively cite the legal sources on which it claims to rely, making assessment of its scores

problematic.[44]   Our index has been constructed so as to avoid variables which are country-specific in favour of broad, functional descriptions and it fully cites its sources, which are publicly available and can be inspected online.[45]

There are a number of reasons why a change in the law governing shareholder protection might not straightforwardly lead to an increase in financial development as measured by the level of stock market activity. One is that the law, in conferring additional protections on shareholders, may be counter-productive. Our index is meant to capture the strength of laws and functionally equivalent rules protecting shareholders. A score of '1', indicating maximum protection at the level of the formal rules, is not necessarily one which translates into optimal regulation for shareholders in practice. Laws purporting to protect shareholder interests may not have their intended effect, in particular where they are perceived by managers as imposing unnecessary costs. It is recognised that corporate governance reforms can be 'too much of a good thing' (Bruno and Claessens, 2007). A perception of excessive regulation can lead to de-listings, as appears to have been the case with the Sarbanes-Oxley Act (Litvak, 2007). This is an explanation which merits further exploration in particular country contexts.

A second possible explanation for our result is that laws derived from transnational corporate governance standards, or which are thought to represent international best practice, do not work well when transplanted into contexts removed from those of the systems in which they originated. The two variables which changed most substantially in the period under review were those relating to independent board members and the mandatory bid rule; as explained above, they both originated in the common law, and specifically in British practice. While they may be well fitted to a dispersed ownership regime, they may work less well in systems with concentrated ownership. Independent directors do little to ameliorate majority-minority agency costs where they are appointed by the majority shareholder; similarly, the mandatory bid rule can, in this context, make it more difficult for acquirers to purchase a company, by forcing the bidder to share the control premium paid to the blockholder with minority shareholders. Where that is the case the mandatory bid rule will do little to encourage bids, and may indeed stymie them. The relatively rapid adoption of both types of rule in concentrated ownership regimes may therefore be explained by the fact that they either benefit, or at least do not harm, incumbent blockholders (Ventoruzzo, 2008). If this is correct, they may simply be reinforcing the status quo in those systems, and so contributing little to the development of their stock markets.

A third and more general explanation is that legal change does not have the linear causal impact with regard to economic outcomes which the strong-form version of the legal origins effect assumes it to have. According to the predominant explanations in the law and finance field – the 'adaptability' and 'political' channels – common law systems should be producing more efficient rules and should be correlated to a higher rate of stock market development than their civilian counterparts. These explanations posit an exogenous legal origins effect, influencing the process of economic development. As we have seen, the 'weak' legal origins effect predicted by the institutional channel is agnostic on the efficiency implications of the common law/civil law divide and does not assume a linear relationship of cause and effect between legal change and economic development; instead, legal change is endogenous to particular economic contexts. The legacy of legal origin may, by virtue of path dependence, shape the path of both legal and economic change in a particular country, but it is also possible that external influences, such as regulatory competition and transnational convergence, may play a role, the relative weight of which must be studied empirically. Factors endogenous to a particular country, related to its stage of economic development and to its particular industrial trajectory, may mediate the impact of the law. Thus legal change in the area of shareholder protection may be out of synch with financial development or even inversely correlated with it; we observe greater increases, over our period of study, in shareholder protection in less developed countries, which also have lower levels of stock market development. Again, this is a question which can benefit from further research which, at country level, can identify more precisely the particular forces influencing the growth of stock markets, including but not confined to the law.

Our results, which are based on the most systematic approach to longitudinal coding to date, do not necessarily contradict the core legal origins claim as summarised in La Porta *et al.* 2007, but they do qualify some of the empirical results associated with it, and they point to the need for deeper reflection on its theoretical foundations. The adaptability and political channels do not stand up well as explanations in the light of our analysis. As Aguilera and Cuervo-Cazurra (2004) put it, it may be legitimacy as much as efficiency that is driving the worldwide push to adopt improved corporate governance standards. Pressures for convergence exist in the form of the growing influence of globally-orientated institutional investors in countries which until recently had little or no tradition of shareholder activism or which had relatively illiquid capital markets (Hansmann and Kraakman, 2001). In the developing world, corporate governance reforms acquired a high profile in the wake of the Asian crisis of 1997, the cause of which were widely thought to be traceable to governance failures (Greenspan, 1998; Summers, 1998; IMF, 1998).[46] Developing countries were

encouraged to adopt the Anglo-Saxon model of corporate governance, which largely formed the basis for the OECD and World Bank recommendations on governance reforms, as part of structural adjustment packages (Singh, Singh and Weiss, 2003). These factors most likely account for the large observed activity in legal changes relating to corporate governance that we have reported here. However, whether they have had a tangible effect on stock market development is quite another matter.

Notes

[1] See also the World Bank's *Doing Business* Reports, available at http://www.doingbusiness.org/, which draw on the same methodology as the LLSV studies.

[2] Our focus here is on the area of shareholder rights (and hence the LLSV anti-director rights index and their index on self-dealing). We discuss elsewhere the validity of LLSV labour regulation and creditor rights indices (see Deakin, Lele and Siems, 2007; Armour, Deakin, Lele and Siems, 2007).

[3] These datasets are available online. See http://www.cbr.cam.ac.uk/research/programme2/project2-20.htm.

[4] To be precise: the coding is *not* based on questionnaires or surveys of lawyers, as is the case with some other indices (e.g. La Porta *et al.*, 2005). The data on legal systems were collated with the assistance of colleagues referred to in the acknowledgements, above, but the coding was reviewed and finalised by the main author of the dataset (see Siems, 2007a) and then discussed with colleagues, in order to ensure consistency of coding across the sample as a whole.

[5] See footnote 3.

[6] Other longitudinal indices exist in the legal origins literature. In particular, Pagano and Volpin (2006) construct panel data for legal indices for the period 1993 to 2001 by extending the original scores in La Porta *et al.* (1998). This is done through questionnaires sent to legal experts and business practitioners. For the reasons set out above (see section II), the methods used to construct the index reported in La Porta *et al.* (1998) suffer from a number of deficiencies and the results it generated cannot necessarily be treated as reliable.

[7] If the law of a country does not provide the right to put an item on the agenda of a general meeting (including the annual general meeting), the right to call an extraordinary general meeting was coded, provided the minority shareholders can utilize this right to discuss any agenda.

[8] A two-way proxy form refers to a form which can be used in favour and against a proposed resolution.

[9] This can also be regulated in securities law (including listing requirements).

[10] This can also be regulated in a corporate governance code. If there is no 'comply or explain' requirement, this may, however, justify a lower score.

[11] Notes: (1) In a two-tier system this concerns only member of the supervisory board (not the management board). (2) If the law of a country did not require that a certain percentage of the board must be 'independent', however, if it provided that the members of some special committees of the board needed to be independent (e.g., compensation and audit committee), so that it indirectly prescribed that some of the board members were 'independent', a lower score was assigned.

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

[13] For two-tier-systems both the management and the supervisory board were addressed.

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

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

[16] Variables 7 and 8 only concern the law on the books and not the efficiency of courts in general.

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

[18] The substantive requirements for a lawful decision of the general meeting have not been coded.

[19] We have also given intermediate scores, e.g., 0.25 for a 33 % hurdle and 0.375 for a 20 % hurdle.

[20] In the five-country index for shareholder rights referred to above, there were sixty variables. Whereas the sixty-variable index was intended to cover the full range of rules making up the body of law protecting shareholders across systems, the ten-variable index focuses on one aspect of that larger index, designed to bring out the differences between systems that were changing over time in response to a global move towards the strengthening of shareholder rights. Another way of putting this is to say that the second index involves a weighting in favour of those variables where we would expect to see differences across systems at a time of change (for further details see Siems 2007a).

[21] It is of course the case that all 'synthetic' indices of this type depend on value judgments which are not present in datasets which draw directly on more objectively verifiable sources of information, such as the index of securities market regulation developed by Jackson and Roe (2007). This is not a criticism which is specific to our approach; it affects the LLSV indices, those developed by the World Bank as part of its *Doing Business* series, and the OECD's employment protection index (OECD, 2004), among others. Our view is that if we are to get a measure of otherwise intangible variables such as those relating to legal change, 'synthetic' techniques must be used; the issue is whether these tech-

niques can be improved over time to produce more reliable indicators. We think that they can.

[22] UK Listing Rules 1984 (in force since 1985), s. 6.3.4: major class 1 transactions; Listing Rules, 1993 para. 10.37: super class 1 transactions.

[23] Companies Act 1948, s. 140; Companies Act 1985, ss. 376, 377.

[24] Listing Rules 1984, s. 5.36; Listing Rules, para 13.28(a),(b).

[25] On the admissibility (in principle) of multiple voting rights, see *Bushell v. Faith* [1970] A.C. 1099. Multiple voting rights are rarely observed in UK listed companies, but this appears to be the result of a widely observed social norm which reflects institutional investor opinion on the issue, rather than any legal rule.

[26] Cadbury Committee, Code of Best Practice 1992, s. 2.2 (majority of non-executive directors must be independent); Combined Code 2003, A.3.2 (at least half the board members must be independent).

[27] This provision originated in the 1995 version of the Code drawn up by the Greenbury Committee, and became part of the Combined Code drawn up by the Hampel Committee in 1998 (s. B.1.6).

[28] For an overview of this complex area, see Boyle (2002).

[29] See e.g. *Edwards v. Halliwell* [1950] 2 All E.R. 1064, 1067.

[30] City Code on Takeovers and Mergers, rule 9.1.

[31] Companies Act 1985, s. 199(2)(a) as amended by the Companies Act 1989.

[32] This section draws on Siems 2007a.

[33] See Lele and Siems, 2007a: 34.

[34] Available at http://www.worldbank.org/wbi/governance/govdata/. The 'rule of law' index measures 'the extent to which agents have confidence in and abide by the rules of society, in particular the quality of contract enforcement, the police, and the courts, as well as the likelihood of crime and violence'.

[35] We accept that a problem with this approach is that the classification of countries by reference to legal origins is not always clear. Some comparative lawyers argue that that the notion of legal origins (or legal families) is no more than a didactic device (see the discussion in Siems 2007b). One reason for this is that in reality most legal systems are hybrids. For instance, South African law derives from both civil law and by common law traditions; Japanese company law used to be based on the German model but since the 1950s has been heavily influenced by US law; Swiss company law is influenced by UK company law; and, due to the influence of the EU, UK law itself has become more 'continental'. Siems (2007b) therefore suggests using more precise criteria than the mere distinction between common law and civil law countries: for instance, the categories 'colonizing power' and 'language'. In the present paper, we provide an analysis of systems by reference to the distinction between English-origin sys-

tems and the rest which captures the fundamental bifurcation between common and civil law systems that lie at the core of the legal origins literature, in order to make it possible to test the claims of that literature. We do not necessarily assume that the division of legal systems by reference to families is an accurate picture of the comparative evolution of legal systems, viewed from the perspective of the comparative law literature.

[36] It may be noted that the legal origin effect we refer to here is not identifiable in the 60-variable index, in part because that index covers far fewer countries (5), and also because that index is not weighted, as the 10-variable index is, towards variables which were changing over time; it was more broadly representative. See Lele and Siems (2007) and Fagernas, Sarkar and Singh (2007) for analyses of the 60-variable index. A discussion of the different methods employed to construct the difference indices in the CBR set is the subject of a separate paper (work in progress) by the authors.

[37] It is also possible to identify a distinction between systems of origin and transplant systems: see Siems 2007a.

[38] In the World Bank Financial Structure Dataset, the following definitions are used:

MKAP: the value of listed shares to GDP is calculated using the following deflator: $\{(0.5)*[F_t/P\_e_t + F_{t-1}/P\_e_{t-1}]\}/[GDP_t/P\_a_t]$ where F is stock market capitalization, P_e is end-of period CPI, and P_a is average annual CPI;

VTRD: total shares traded on the stock market exchange to GDP;

TURN: the ratio of the value of total shares traded to average real market capitalization. This is calculated using the following method: $T_t/P\_a_t/\{(0.5)*[M_t/P\_e_t+ M_{t-1}/P\_e_{t-1}]\}$ where T is total value traded, M is stock market capitalization, P_e is end-of period CPI, P_a is average annual CPI.

[39] This is calculated from the data available from the World Bank *World Development Indicators*.

[40] Econometric analysis of 60-variable index, reported in another study from this project, also fails to find any link between changes in the law relating to shareholder protection and stock market development: Fagernäs, Sarkar and Singh (2007). These 'negative' findings do not of course rule out the possibility that a link exists; it simply indicates that, using the widely relied-on time-series measures of financial development, no link can be found. It could be that the existing measures are not effective to capture the effect. Better data may emerge, or be constructed, for example, from company-level datasets. Time series data on ownership concentration, if it existed, would enable us to test the separate hypothesis that changes in the law governing shareholder protection lead over time to more dispersed ownership and hence, in that sense, to more liquid capital markets. These are all issues which can be pursued in future research

[41] Data for other years are unlikely to lead to any fundamental change in our result.

[42] The Worldscope dataset was used. Its main features are fully described in Glen and Singh (2003).

[43] The accounting identity underlying these calculations is that growth of total assets is equal to growth of total sources of finance, consisting of internal finance (retained profits) plus external finance. External finance, in turn, consists of finance raised through the stock market and that due to short and long-term liabilities. The figure of 67.2 per cent of total sources of finance given in the text for developed countries is derived by subtracting the internal financing figure 23.7 per cent shown in the table from 100, and similarly for other external financing ratios derivable from that table.

[44] See our discussion in section III, above.

[45] See footnote 3.

[46] For a critical analysis of Greenspan and Summers thesis see Glen and Singh (2005).

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