

## What Works in Securities Laws?

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October 2002

### Abstract

We examine the effect of securities laws on market development in 49 countries. We find that public enforcement of laws benefits securities markets, especially in countries with efficient government bureaucracies. We also find that organization of private enforcement through disclosure and liability rules benefits securities markets in countries with both efficient and inefficient government bureaucracies.

\*We are grateful to the Inter-American Development Bank, the Gildor Foundation, the NSF, and the Doing Business project of the World Bank for financial support, to Alfredo Larrea-Falcony for significant contributions to this work, to Constanza Blanco, John C. Coates IV, Luis Leyva Martinez, Seiji Obata, Carlos Orta Tejeda, Tuffic Miguel Ortega, Jorge Gabriel Taboada Hoyos, Annette L. Nazareth, and Robert Strahota for assistance in developing the questionnaire, to Richard Epstein, Edward Glaeser, Kevin Murphy, Eric Posner, Richard Posner, and Frank Easterbrook for helpful comments, and to Jeffrey Friedman, Mario Gamboa-Cavazos, and Anete Pajuste for excellent research assistance.

## I. Introduction.

In this paper, we examine securities laws of 49 countries, focusing specifically on how these laws regulate the issuance of new equity to the public. Security issuance is subject to the well-known “promoter’s problem” (Mahoney 1995) – the risk that corporate issuers sell bad securities to the public – and as such is covered in all securities laws.<sup>1</sup> We analyze the specific provisions in securities laws governing initial public offerings in each country, and examine the relationship between these provisions and various measures of stock market development. We also interpret these correlations in light of the available theories of securities laws.

We consider the effect of securities laws at three – progressively deeper – levels. At the first level, the question is whether securities laws matter? An important tradition in law and economics, originating in the work of Coase (1960) and Stigler (1964), and most clearly articulated in the context of financial markets by Easterbrook and Fischel (1984) and Macey (1994), holds that securities laws are either irrelevant or damaging. According to this tradition, securities transactions take place between sophisticated issuers and investors. Issuers have reputational as well as legal reasons, grounded in contract and tort law, to credibly disclose accurate information to investors, so as to obtain higher prices for the shares they sell. Investors have an interest to become informed, and to buy securities underwritten by reputable firms, so as to avoid being cheated. These market and general legal mechanisms suffice for securities markets to prosper. Securities law, the argument goes, is either irrelevant (to the extent that it codifies existing market arrangements or can be contracted around), or damaging, in so far as it

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<sup>1</sup>Teoh et al. (1998) and Dechow et al. (1996) present evidence consistent with the view that US firms manipulate accounting figures to raise capital on favorable terms. Leuz et al. (2002) show that earnings’ manipulation is more extensive in countries with weak investor protection.

raises contracting costs and interferes with the functioning of markets

An alternative tradition argues that “law matters”, and in particular securities law is an important market-supporting institution. According to this viewpoint, general law and private contracting are insufficient to keep promoters from cheating investors because the incentives to cheat might be too high for “long run” benefits of honesty to matter, and because private litigation may be too expensive and unpredictable to serve as a deterrent (see, e.g., Djankov et al. 2003). To reduce the enforcement costs and opportunistic behavior, a regulatory and contracting framework dictated by securities laws is required.

This argument has a long tradition in regulatory economics (Landis 1938, Friend and Herman 1964), and has recently been rejuvenated by legal scholars (Coffee 1984, 1989, 2002, Mahoney 1995, Fox 1999, Black 2001, Beny 2002). It also has received some empirical support. Glaeser, Johnson, Shleifer (2001) point to differences in securities laws to explain why securities markets stagnated in the Czech Republic but developed quickly in Poland during the transition from socialism. An extensive literature examines the role of ADRs as a bonding mechanism (Coffee 1999, Siegel 2002, and Stulz 1999) and shows that firms with ADRs are more valuable (Doidge et al. 2001, and Mitton 2002) and have better access to external finance (Reese and Weisbach 2002) than do firms from the same country not listed in the US. Bhattacharya and Daouk (2002) show that the cost of equity in a country decreases significantly after the first enforcement of insider trading laws. The view that law matters is also supported for the case of *corporate* law by La Porta et al. (1997, 1998), who find that countries with better legal protections of investors have better developed financial markets.

Our empirical work aims to directly distinguish the irrelevance hypothesis from the “law

matters” hypothesis in the context of securities laws.

This discussion brings us to the second level of analysis: if securities law does matter, what about it makes a difference for financial markets? Again, there are two views here, both grounded in the proposition that the enforcement of contracts and tort claims through courts or markets is costly, and securities law can reduce these contracting and enforcement costs.

The first view of how securities (or other) law matters holds that private enforcement incentives are often insufficient, and a public enforcer, such as a Securities and Exchange Commission, is needed to support trade. A private plaintiff owns only a few shares, and his potential payoff does not suffice to pay for the lawsuit (without class action). Perhaps as importantly, private plaintiffs are likely to settle, thereby undermining the development of the law through precedent, which can have the public benefit of reducing future litigation costs. A public enforcer can produce and interpret rules and regulations, as well as sanction misconduct either on its own or by bringing suit. A public enforcer might have an advantage over a private plaintiff because it is focused, expert, or can be presented with incentives better reflecting the social benefits of enforcement (Becker 1968, Polinsky and Shavell 2000). The view that the central benefit of securities laws is the creation of a public enforcer has been originally advocated by Landis (1938), and has been recently discussed in both theoretical and empirical work (Glaeser, Johnson, and Shleifer 2001, Glaeser and Shleifer 2001b, Pistor and Xu 2002).

A different view of why securities law matters holds that its principal benefit is not the creation of a public enforcer, but rather the direct reduction in the costs of private contracting and enforcement. According to this view, the law can standardize securities contracts (by, for example, standardizing disclosure in a prospectus), as well as simplify private litigation.

Without standardized contracts, litigation would be governed by contract and tort law, with grave uncertainty about outcomes because such matters as intent and negligence need to be sorted out in court (Easterbrook and Fischel 1984). Securities law can structure contracting and litigation by explicitly describing the obligations of various parties and burdens of proof, thereby reducing the costs to them and to the court of establishing liability (Hay, Shleifer, and Vishny 1996, Glaeser and Shleifer 2001a, 2002, Bergman and Nicolaievsky 2002). With standardized contracts and litigation, the costs of writing and enforcing contracts decline, benefitting markets.

Whether better public or private enforcement is the main benefit of securities law is an open question. The two, of course, are not mutually exclusive. Moreover, it is possible – indeed theoretically plausible – that public enforcement works better in more developed countries, since the enforcers are less likely to be captured or corrupted. Finally, there is the question of whether securities or corporate law makes the difference. Securities laws address information disclosure, while corporate laws specify investor rights. Our empirical work addresses these issues.

At the third and deepest level, within each of the two broad visions of how securities law matters, there is the question of what exactly works to benefit securities market development. Consider the public enforcement hypothesis. There are at least four aspects of such enforcement that one might, theoretically, deem to be important. First, it might be critical that the public enforcer be *independent and focused*, and so better able to pursue social goals in securities markets free from political interference and conflicts of objectives. Second, an important power of such an enforcer could be the ability to *regulate market participants*, so as to control their conduct when the securities law does not cover all the contingencies. Third, a key power of a public enforcer could be the right to *secure information* from issuers and securities market

participants – through subpoena, discovery, or other means – more effectively than private plaintiffs ever could. Finally, an important feature of public enforcement could be the power to impose sanctions, including criminal ones, thereby posing a greater threat to the errant issuers, distributors of securities (e.g., underwriters), and accountants than a private plaintiff ever could. These four possibilities raise the crucial question: what if anything works in public enforcement?

Likewise, a securities law can reduce the costs of private contracting and litigation without reliance on public enforcement. Such a reduction in contracting and litigation costs works primarily through mandatory disclosure of information, as well as organization of litigation when information is not disclosed (Grossman and Hart 1980, Mahoney 1995). First, the law can require that a prospectus containing particular information be made available to prospective investors. Second, the law can mandate that specific information, concerning such matters as ownership, compensation, or self-dealing transactions, be disclosed in the prospectus. Through such mandatory disclosure of specific information in a prospectus, the law can standardize contracts (Mahoney 1995) as well as simplify private enforcement should the information be concealed or disclosed inaccurately. Third, the law can mandate that a residual category of information, known as material information or information of interest to an average investor, be disclosed. If such information is not disclosed, or is disclosed in a misleading way, the law can allocate liability to issuers, as well as to distributors and/or accountants. Fourth, and relatedly, when the securities law assigns liability, it can also establish the burden of proof in the event of a dispute. Any of these restrictions on private contracting could in principle reduce the costs of contracting and litigation, and thereby benefit financial markets.

In our empirical work, we look closely at both the powers of public enforcers and the

restrictions on private contracting, to examine what works in securities laws.

To address these issues, we cooperated with legal scholars and law firms from 49 countries to assemble a data base of specific rules and regulations governing security issuance. We then organized the data to produce quantitative measures of security laws and regulations that reflect the theoretical questions raised above. In the analysis below, we first describe our procedures for data construction and the logic behind the specific variables. We then present some information about the data, including the variation of securities laws and regulations by the level of development and the origin of a country's laws. Finally, we examine in some detail the relationship between specific legal arrangements and measures of securities market development. The results reveal striking evidence that securities laws indeed matter, but perhaps more interestingly, show in what ways they matter and in what ways they do not.

## II. Procedures.

We are interested in the structure of securities laws and in their effects on the development of securities markets. Securities laws cover a wide spectrum of areas including the distribution of securities, takeovers, stock market manipulation, insider trading, stock exchanges, and activities of financial intermediaries (such as brokers, dealers, and investment advisors). We focus on the agency problem between prospective investors in an initial public offering and the “promoter” who offers shares for sale. In modern days, this promoter is usually the owner or founder of a private company acting in concert with his distributors and accountants, but at least some of the law developed historically as a way to control share sales by specialized promoters, who bought companies and then sold their equity to the public (Mahoney 1995).

Our data on the regulation of the promoter's problem is based on answers to a questionnaire by attorneys in the sample of 49 countries with the largest stock market capitalization in 1993 (La Porta et al. 1998). We invited one attorney from each country to answer the questionnaire describing the securities laws (including actual laws, statutes, regulations, binding judicial precedents, and any other rule with force of law) applicable to an offering of shares listed in the country's largest stock exchange in December of 2000. We first approached authors who had published country reports on securities laws in publications such as *International Securities Regulation* and *International Securities Laws*. When countries were not covered in such publications or authors declined our invitation, we searched the *Martindale Law Directory* to identify leading law firms practicing in the area of securities laws and invited them to answer the questionnaire. The respondents received a questionnaire designed by the authors with the help of practicing lawyers in Argentina, Japan, and the United States.

The questionnaire contained five sections: (1) description of the regulator and of its investigative and regulatory powers; (2) prospectus requirements; (3) sanctions for making misleading statements in the prospectus; (4) resources legally available to obtain restitution for investors' losses caused by misleading statements in the prospectus; (5) legal consequences of misleading statements in the prospectus.

All 49 authors returned answered questionnaires. Respondents were required to support their answers by making reference to the relevant legal provision and providing a copy of it. We processed the authors' answers and read the relevant laws. We then sent a second round of questions to the authors aimed at resolving inconsistencies in their answers as well as fine-tuning the definition of some variables. Finally, each author was asked to review and sign a document

integrating all the information that they had provided to us (this process is not yet complete.)

### III. Measurement Framework.

We are interested in studying the possible effect of securities laws on stock market development. We examine this issue through the lense of the “promoter’s problem”: the sale of securities by promoters to investors in initial public offerings. This problems is fraught with potential conflicts of interest: the promoter wants to sell the shares at the highest possible price while concealing bad information about the company and diverting its cash flows and assets to himself. Both the adverse selection and the moral hazard problems are severe, and if not addressed can severely undermine – possibly stop – fund-raising in the stock market.

Grossman and Hart (1980) show, however, that with perfect law enforcement (i.e., automatic criminal sanctions for not telling the truth), promoters have an incentive to reveal everything they know, at least in a particular model. The reason is that, without such revelation, potential investors assume the absolute worst. To the extent that the circumstances of the company are better or conflicts of interest less severe, promoters have every reason to reveal them, and they cannot say anything more optimistic than the truth because of the automatic criminal sanctions. Crucially, Grossman and Hart also point out that, without perfect enforcement, these extremely favorable results for the market solution do not hold.

A consideration of a typical situation with security issuance reveals several problems with these extreme results. In such a typical situation, a promoter sells shares to the public (after providing some information about the business), but then a piece of adverse information comes to light that causes the price of these shares to fall sharply. The question is when and how the

promoter, distributor, and accountant should be held liable. In most legal systems, establishing and enforcing a claim against them is a difficult and expensive matter.

First, there is the problem of allocating responsibility among directors, officers, accountants, and distributors. Second, there is the problem of errors: criminal sanctions often require the proof of intent, and defendants can often claim that they erred rather than deceived even if the information they supplied initially was strictly inaccurate. Third, and most important, severe problems in security issuance arise from the sins of omission, not commission. A promoter can fail to reveal the debts of a company's subsidiary, or special arrangements with another firm he or his family controls. There are no false statements here, just omissions.

With omissions, enforcement becomes a severe problem. Proving criminal intent is difficult. Even in civil cases, it may be extremely costly for the plaintiffs – who after all are new shareholders with only moderate sums invested in the shares – to establish liability of the defendants. The issuer, the accountant, or the distributor might and always do claim that the omitted information was not material, and hence it was not negligent of them to omit its disclosure. A court must then take the position as to whether the omission is material – a decision fraught with delays, uncertainty, and costs to the plaintiffs. The negligence issue is even more extreme for distributors, who usually claim that they relied on what the management told them – and when the news is bad enough, the distributors might be the only ones with resources to compensate investors. The bottom line is that with costly enforcement an investor cannot rely on markets and private litigation to secure accurate disclosure of information.

This enforcement-based reasoning forms the analytical foundation of the case for securities laws. Market mechanisms and litigation supporting private contracting may be too

expensive. Since investors, on average, are not tricked (this is not an issue of market efficiency), they pay lower prices for the equity when they are unprotected, and the amount of equity issued is lower. Financial markets remain underdeveloped (Shleifer and Wolfenzon 2002). Securities laws, in so far as they reduce the cost of contracting and resolving disputes, can encourage equity financing of firms and stock market development.

There are two broad theories of how securities laws can accomplish this goal, which we refer to as the public enforcement theory and the private enforcement theory. The public enforcement theory holds that a public authority with power over security markets is necessary to support private trade (Landis 1938). The private enforcement theory suggests that the benefit of a securities law is not a public enforcer but a set of requirements and restrictions on private contracts that cheapen private enforcement. The two theories are not mutually exclusive, but for theoretical clarity we consider them separately. The variables we use in our empirical analysis are defined in Table 1; below we attempt to motivate them.

### *Public Enforcement*

Consider first the potential roles of a public enforcer. In the context of a securities markets, such an enforcer can be a Securities Commission, a Central Bank, or some other supervisory body. For concreteness, we call the main government agency or official authority in charge of supervising securities markets the Supervisor.

Landis (1938) is concerned with the promoter's and other problems in securities markets, and argues for the need for the Supervisor to intervene in private contracting. He wants such a Supervisor to be independent and specialized – the two dimensions we consider empirically.

One idea is that the Supervisor must be insulated, presumably to prevent Executive interference in its decision making that might force it to side with politically influential, but dishonest, promoters. We measure the political independence of the Supervisor in two ways. First, we look at whether the Executive can appoint the Supervisor unilaterally, without approval from other branches of government. Second, we look at whether the Supervisor can be dismissed at the will of the appointing authority, a sign of a lack of independence. A related idea is that an effective Supervisor must be focused on securities markets, rather than more broadly on both these markets and banking. The idea, along the lines of Holmstrom and Milgrom (1991), is that the payoffs of a focused Supervisor are more closely aligned with the success of financial markets, and therefore its enforcement effort will be greater. Accordingly, we measure whether the Supervisor is focused in its mandate on securities markets alone.

The crucial question from the enforcement perspective is what the powers of the Supervisor are. We consider three broad categories of powers: the power to regulate, the power to investigate, and the power to sanction misconduct. Any of these three powers might be needed in an environment where enforcement of rules is costly.

The powers to regulate have been studied most closely (e.g., Spiller and Ferejohn 1992). The idea is that the legislature writing securities (or any other) laws does not have sufficient information or resources to produce all the desirable rules, especially as the market evolves. It therefore delegates these powers to a regulator, who has the expertise and the resources to change the rules (Landis 1938, Pistor and Xu 2002). It is indeed the case that in some countries the regulatory powers are delegated to the Supervisor or the Minister of Finance, and in other countries they remain with the law-making authority. We measure whether the Supervisor has

the power to regulate primary offerings and/or listing rules on stock exchanges.

The second potentially important power is investigation (Johnson, Glaeser, and Shleifer 2001). Unless the issuer is strictly liable after all adverse news events following security issuance (which almost never happens), the question arises as to why the information was not revealed to investors. Did the promoter have the information? Could he have had it? At what cost? Did the issuer hide the information from the distributor and the accountant? Answering these questions is costly, and could be particularly costly for private plaintiffs pursuing litigation. A Supervisor can be empowered to command documents from issuers, distributors, or accountants, as well as with the power to subpoena the testimony of witnesses. Such powers can in principle enable the Supervisor to ascertain the reasons for omission, which can then – as a public good – become the basis for sanctions, or for criminal or civil litigation.

The third power of the Supervisor – perhaps most directly intended to substitute for the weakness of private enforcement – is that to impose sanctions. These sanctions may involve ordering the directors of a public firm to rectify non-compliance with disclosure requirements, institute changes recommended by outside reviewers, and/or compensate investors for their losses. Such sanctions could be imposed separately on issuers, distributors, and accountants, and we keep track of each category.

A particular form of sanctions where public enforcement is required is criminal charges, and indeed many countries have such provisions in their security laws. These provisions can apply to directors, distributors, or accountants. We keep track of whether criminal sanctions are applicable and to whom when the prospectus omits material information. We distinguish between cases where directors who are unaware of the omission might be criminally liable, cases

where only directors aware of the omission might be liable, and cases where directors cannot be held criminally liable. These variables are of special interest since a popular sentiment in the current discussions of securities laws sees criminal sanctions as essential to enforcing good practices.

### *Private Enforcement*

An alternative view sees the function of the laws, as reducing the costs of private contracting and enforcement (Hay, Shleifer, and Vishny 1996, Hay and Shleifer 1998, Glaeser and Shleifer 2001a, Bergman and Nicolaievsky 2002). How can this be accomplished? Efficiency considerations suggest that the lowest cost provider of information about a security should collect and present this information, and be held accountable if he omits or misleads. This, in fact, is the implication of Grossman - Hart (1980), who show that automatic penalties on promoters lead to accurate disclosure of information. In this instance, the lowest cost providers are not the investors, but the issuers, the distributors, and the accountants.<sup>2</sup> An efficient system would provide them with incentives to collect and present information to investors, and hold them liable if they do not. In securities laws, this strategy generally takes the form of disclosure requirements and liability rules that make it cheaper for investors to recover damages when information is wrong or omitted. We attempt to capture empirically the fundamental features of mandatory disclosure and of private litigation enforcing it.

The first and most basic question is whether promoters can issue securities without

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<sup>2</sup> Two other features of securities markets make “buyer-beware” rules unattractive in the context of an initial public offerings. First, the scope for fraud in the issuance of securities is very large. Second, the damages resulting from investing in reliance of a defective prospectus are much easier to calculate than those that result from, for example, the use of a defective appliance.

delivering a prospectus describing them to potential investors in advance. Since every country requires a prospectus before securities are sold and listed, the operational word here is “delivering.” In some countries, it is possible to sell securities after a prospectus is deposited at the company, or with the Supervisor, without delivering it to investors. Delivering a prospectus to potential investors is an affirmative step in making disclosures *to them*.

The mandated disclosures can be divided into requirements with respect to specific pieces of information, and residual requirements. Begin with the former. There are three important areas that such mandates cover: ownership and compensation, contracts, and transactions between the company and its directors.

First, we keep track of whether the prospectus must disclose such matters as directors share ownership and compensation (individually or in the aggregate) as well as ownership structure. Compensation is an important potential source of self-dealing or tunneling (Johnson et al. 2000). Complicated patterns of cross-ownership are often the means of diverting cash flows from shareholders of public firms to the promoters or related parties (Bertrand et al. 2002).

Second, we keep track of whether the prospectus must disclose contracts entered outside the ordinary course of business. Extraordinary contracts raise serious adverse selection and moral hazard issues (the latter if parties related to the promoter are involved) . In a well-known Polish case, for example, the major national state company gave up a significant share of a new business to an entrepreneur who secured for it a government license, and did not disclose this fact in the prospectus (Johnson et al. 2001).

Third, we keep track of mandatory disclosure of related party transactions. Countries have varying disclosure requirements about transactions between the issuing company and its

directors, officers, and/or large shareholders – such transactions are the major form of tunneling in most of the world (Johnson et al. 2000, La Porta, Lopez-de-Silanes, and Zamarripa 2003). Presumably, the more comprehensive disclosure of such transactions can both limit them and present potential investors with a more accurate picture of what they are buying.

But specific items in the prospectus are not the only, and perhaps even the more important, information required to be disclosed. Nearly every country – including countries with limited lists of specific items that must be disclosed – has a residual requirement that firms must disclose all material information or information of interest to an average investor. When bad news hit after security issuance, the question becomes whether this information was known or knowable to the issuer, the distributor, and/or the accountant and omitted from the prospectus. Recall that, from the efficiency perspective, these parties should be collecting the information and be held automatically responsible when they fail to present it (Grossman and Hart 1980). A central question about the bite of the mandatory disclosure requirements is how investors can recover losses from the omission of material information.

We approach this question in two ways. First, we examine the responsibilities of the distributor, and in particular whether he is required to exercise due diligence in preparing a prospectus. Not all countries have such a due diligence requirement. Second, for issuers, distributors, and accountants separately, we examine the standard in the securities law for establishing liability. Landis recognized that the resources of the Supervisor were limited for its task and believed that making recovery of investors' losses easy was essential to harnessing the incentives of market participants to enforce securities laws (Seligman, 1995). The centrality of the liability regime has largely been lost in the recent legal literature, which has focused instead

on the importance of mandatory disclosure. Here we focus explicitly on the liability regime.

There are basically three liability regimes. In the intermediate “base” case, the standard of liability is the same as in torts, namely negligence: the plaintiff must show that the issuer, the underwriter, or the accountant was negligent in omitting information from the prospectus. Some countries make it even harder for the plaintiffs, who must show that the defendants were grossly negligent (i.e., “drunk”) or intentioned in omitting the information that later comes to light. But perhaps most interestingly, several countries shift the burden of proof from the plaintiffs to the defendants. Sometimes the defendants are strictly liable and thus cannot avoid liability. Alternatively, they must themselves show that they exercised due diligence in preparing the prospectus. This shift in the burden of proof can, in principle, significantly reduce the costs to the plaintiffs of establishing liability.

An example from the Netherlands illustrates this essential point (Velthuyse and Schlingmann 1995). A Dutch Bank, ABN Amro, underwrote some bonds of Coopag Finance BV, a financial company wholly owned by Co-op AG, a diversified German firm. The bonds were guaranteed by Co-op AG. The prospectus was drafted in accordance with the requirements of the Amsterdam Stock Exchange and included audited annual accounts provided by the issuer to ABN Amro. In conformity with the law on annual accounts, the (consolidated) financial statements included in the prospectus omitted 214 affiliated companies of Co-op AG with debts of DM 1.5 billion. Shortly after the issue, Dutch newspapers published negative information about Co-op AG and the bond prices of Coopag Finance BV plummeted. The creditors of Coopag Finance sued the underwriter, ABN Amro, for losses due to its failure to disclose material information about the finances of Co-op AG. The distributor claimed in response that

“the damages, if any, did not result from the alleged misleading nature of the prospectuses...”. In addition, the distributor argued that “an investigation by ABN Amro, however extensive, could not have led to the discovery of deceit, because even the accountants appeared not to have discovered in time that something was wrong...” (Velthuysen and Schlingmann 1995, p. 233). The successive Dutch courts, however, ruled the distributor liable, and recognized explicitly that its duty, in presenting the prospectus to investors, went beyond merely relying on the information provided by the issuer. Instead, to avoid liability, the Supreme Court ruled that a distributor must conduct an independent investigation of the issuer and prove that it cannot be blamed for the damages caused by the misleading prospectus. Critically, the example also shows that solving the promoter’s problem is not only important for equity markets but for debt markets as well.

In our empirical analysis, we quantify the various aspects of public and private enforcement and examine the impact of individual provisions on securities market development. We then construct indices of public and private enforcement, and examine their influence. Finally, we run a horse race between our indices of public and private enforcement, to ask which aspects of securities laws has a greater impact on securities market development.

### *Other Variables*

We are principally interested in understanding the effects of the various provisions in securities laws on financial development. Following La Porta et al. (1997), we use three proxies for the ability of firms in different countries to raise external equity capital. The first variable is the ratio of stock market capitalization to GDP scaled by the fraction of stock market held by

outside investors. We estimate the fraction of equity held by insiders by averaging, for each country, the ownership stake held by the largest three shareholders in each of the top ten publicly-traded firms. The results presented are qualitatively similar for the unadjusted ratio of market capitalization to GDP. The second variable is the number of domestic publicly-traded firms in each country relative to its population. The third variable is the number of initial public offerings in each country, also relative to population. All three variables are five-year averages of yearly data for the period 1996-2000. Theoretically, we believe that the first of the three measures is the most attractive, since in theory better investor protection is associated with both a higher number of listed firms and higher valuation of capital (Shleifer and Wolfenzon 2002).

As in most other studies in this area, the causal effect of securities laws on financial development cannot be established with certainty. The best we can try is to control for several other factors that might contribute to securities market development. The first of these is the level of economic development, which we measure as the (logarithm of) per capita GDP. Economic development is often associated with capital deepening. In addition, richer countries might have higher quality institutions in general, and not just in securities laws (see North 1981, La Porta et al. 1999), and the income control is intended in part to control for this problem.

But there is also an interesting hypothesis associated with development. Specifically, it has been argued that, while having powerful market regulators might be appropriate for economies with strong institutions and bureaucracies, such regulators become a source of abuse and corruption in countries that do not have strong institutions and bureaucracies (e.g., Hay and Shleifer 1998). In light of this hypothesis, we evaluate whether our measures of public enforcement have a differential effect on securities market development in countries with high

and low levels of efficiency of the judiciary.

To further address the concern that the general institutional quality rather than the securities laws per se influence securities market development, we use the measure of the efficiency of the judiciary from the International Country Risk Guide as an additional control.

Our earlier research in corporate law (La Porta et al. 1997, 1998) establishes that investor protection through corporate law is intimately related to legal origin of a country's commercial laws. The commercial laws of most countries originate in one of four legal families: English (common) law, French civil law, German civil law, and Scandinavian law, which have spread throughout the world through conquest, colonization, and occasionally voluntary transplantation. La Porta et al. (1997, 1998) find that investor protection through corporate law is better in common than in civil, particularly French civil law countries. They also find that both common law legal origin, and statutory protections in corporate law, are associated with higher levels of securities market development.

We rely on this prior research in three distinct ways. First, in the next section, we organize our measures of securities laws by legal origin in order to examine which provisions of these laws, if any, are related to legal origin. Second, in the regression analysis, we control for legal origin in order to understand whether a) the provisions of the securities laws matter holding legal origin constant, and b) whether these provisions eliminate the direct effect of legal origin on securities market development. Third, we also check all the results controlling for the explicit shareholder protection (anti-director rights) index from La Porta et al. (1997, 1998) to see whether, in a horse race, corporate or securities law matters.

#### IV. Presentation of the Data.

Table II presents our data on securities laws, with Panel IIA addressing public enforcement and panel IIB private enforcement. Countries are arranged by legal origin, and we report means by legal origin as well as tests of the differences in these means.

As indicated earlier, we examine four dimensions of public enforcement: independence and rule-making power of the Supervisor, its power to investigate, its power to issue orders to avoid or remedy violations of securities laws, and criminal sanctions. In Supervisor independence and power to regulate, there is not much difference among legal origins. Supervisors are almost always (88% of the countries) appointed unilaterally by the Executive and can be dismissed at its will in about half of the countries. Except in Scandinavia, Supervisors are typically focused on securities markets. In 65% of the countries, Supervisors can issue regulations regarding securities in the primary and/or secondary markets. The alternative is that regulations be issued by the Government (typically the Ministry of Finance).

Generally Supervisors have considerable investigative powers. They can command documents from any person when investigating a violation of securities laws in roughly half the sample. In many other countries, they can command documents from issuers and their directors but not from all persons. Supervisors are generally less likely to be empowered to subpoena witnesses than to command documents. For example, the Supervisor can command documents but not subpoena witnesses in eleven countries; the reverse is never true. Supervisors generally have greater powers to command documents and subpoena witnesses in French civil and common law countries than in Scandinavian and German civil law countries.

Turning next to the sanctions that may be imposed on the issuer, we distinguish between

the *orders to stop* activity that violates securities laws, and the *orders to do* specific things. Both types of orders can differ in their scope. We report the average measure of the power to give orders – to stop or to do – for issuers, distributors, and accountants separately.

In practice, the power to give orders is limited. For example, such power is absent in 17 countries and orders may be directed at all participants (issuers, distributors, and accountants) in only ten countries. The power to give orders is generally far more extensive (and statistically significantly so) in common than in civil law countries.

Criminal sanctions are a key component of the public enforcement of securities laws in most countries. Directors/officers, distributors, and accountants may all be criminally liable for a misleading prospectus in roughly half the sample; in most other countries, some but not all of these participants may be criminally liable. Only five countries (Denmark, France, Indonesia, Japan, and Portugal) do not have criminal sanctions at all. Criminal sanctions are most strict in common law and Scandinavian law countries. French legal origin countries have relatively weak criminal liability, especially for directors and accountants. One interesting feature of the data is that, with the exception of Austria and Taiwan, German legal origin countries do not have criminal sanctions for the distributors. This result is suggestive of the possibility that the notorious political power of German banks keeps them safe from liability.

Turning to our measures of private enforcement, we have two broad categories: disclosure requirements and liability rules when investors suffer losses.

Although all countries require a prospectus for initial public offerings, only 43% of them require that the prospectus be actually delivered to investors before a final sale of securities can be made. Common law countries are most likely to require delivery of the prospectus (78%) and

Scandinavian countries least likely (0%). Mandatory delivery of the prospectus is also uncommon in French and German legal origin countries (24% and 33% respectively).

The disclosure requirements for publicly-traded firms are dictated by law and/or stock exchange regulations. We keep track of the disclosure requirements applicable to a publicly-traded firm and ignore their source. Effectively, we take the position that stock exchange regulations are a part of securities laws since Stock Exchanges never have the ability to regulate without the consent of the State (i.e., listing rules must ultimately be approved by the Supervisor, the Central Bank, or a member of the Executive power). Disclosure of officers' and directors' compensation is not required in roughly one quarter of the countries in the sample. Another quarter of the countries require detailed reporting, while the remaining countries require disclosure of compensation of directors and officers as a group. The sample average score for the disclosure of compensation is .51: it is the highest (.67) for common law countries and the lowest for French (.40) and German (.42) legal origin countries.

Roughly half of the countries in the sample (26) do not require disclosing the identity of ultimate over-10% shareholders. Scandinavian countries have the most strict, and French civil law countries the least strict, ownership disclosure requirements. All but 12 mandate reporting of insider ownership. 15 countries require disclosure of the combined ownership of all directors, whereas 22 countries require disclosure of ownership of each director and key officers.

One third of the countries do not require disclosure of terms of contracts outside the ordinary course of business. Full disclosure of these terms is required in 90% of common law countries, 50% of German legal origin countries, 19% of French legal origin countries, and never in Scandinavia. Looking at another measure designed to get at tunneling, transactions with

related parties must be disclosed in all but eight – all French legal origin – countries. Reporting requirements regarding related-party transactions are more demanding in common law and German civil law countries than in French and Scandinavian legal origin countries.

In sum, disclosure requirements are consistently high in common law countries, and low in the French legal origin countries. German and Scandinavian countries have relatively strict reporting requirements regarding ownership by insiders and large shareholders.

All countries allow investors to recover losses from directors when the prospectus contains misleading information. All the interesting variation in the data comes from what investors need to prove in order to obtain redress. Three countries – Mexico, Germany, and Turkey – place the highest burden on investors. Mexican investors can only obtain restitution from directors whom they can show have acted with an intent to deceive. In Germany, directors avoid liability by showing that they were not grossly negligent. In Turkey, it suffices for directors to show that they were unaware of misleading information to avoid liability. In 16 countries, securities law follows the tort standard in establishing director liability: investors must prove that the directors were negligent in presenting misleading information in the prospectus, that the news caused the stock price decline, and that they (investors) relied on the misleading information in making the investment. What is perhaps most interesting is that the remaining 30 countries place a lighter burden of proof on investors. In 26 countries, investors must show causality and/or reliance, but do not need to establish directors' negligence. And in 4 countries (Canada, Philippines, Thailand, the U.S.), directors cannot avoid liability when the prospectus contains misleading information.

From this perspective, differences among legal origins are large. Recovering losses is

easiest for investors in common law countries, and hardest in Scandinavian countries. French and German legal origin countries are statistically indistinguishable from each other and from the Scandinavian law countries. Differences across legal origin in liability rules for accountants exhibit a similar pattern and we don't discuss them further.

We capture the role of the distributor by keeping track of whether the law requires that they be involved in the preparation of the prospectus and/or makes them civilly liable for its contents. Distributors are neither required to perform due diligence nor held civilly liable in 39% of the countries. Distributors are most likely to be involved in common law (67%) and German (67%) legal origin countries, and least likely to be involved Scandinavian (25%) legal origin ones.

In many countries, the prospectus liability of distributors depends on their role in the preparation of the prospectus. To make the results comparable across countries, we assume that distributors do not authorize (or sign) the prospectus unless required by law. Under our assumptions, no recovery from the distributor is possible in Argentina, Belgium, New Zealand, Nigeria, and Pakistan. In another 13 countries, investors must prove that the distributor acted with intent or committed a crime. At the other end of the spectrum, distributors face strict liability in Canada, Philippines, and the US. Investors must prove reliance and/or causality to obtain restitution in 19 countries and negligence in the remaining 9 countries. Unlike the case of directors and accountants, the burden of the proof against distributors does not vary systematically across legal origins.

Table IIC summarizes this diverse information on securities laws by presenting sub-indices and indices of various aspects of the law by legal origin. The sub-indices are computed

by simply averaging the scores within each of 6 categories (independence, investigation, orders, criminal sanctions, mandatory disclosure, and liability). The public enforcement score is computed by averaging the first four sub-indices, and the private enforcement one – the last two.

The differences in investor protection through securities law between common law and civil law countries are significant in both the public enforcement and private enforcement dimensions. In the public enforcement area, these differences are relatively smaller in our measures of Supervisor independence (they come from differences in rule-making powers), and relatively greater in our measures of investigative powers, Supervisor orders, and criminal sanctions. In the private enforcement area, common law countries both have more extensive mandatory disclosure coverage, and make it easier for investors to recover damages. In the next section, we examine which dimensions of the security law appear to matter for financial development, but also investigate the roles of securities law, corporate law, and legal origin as determinants of financial development.

#### IV. Securities laws and financial development.

We present the regressions of measures of securities market development in 49 countries on our measures of investor protection in securities laws. We proceed in four steps. First, we run regressions with each of our 22 individual dimensions of securities laws as independent variables included separately. We only report these regressions for the ratio of external capitalization to GDP as the dependent variable, although the results for other measures are similar. In these regressions, we control for legal origin, judicial efficiency, and the logarithm of per capita income.

We then move to using sub-indices capturing various categories of investor protection in securities laws, as well as the public and private enforcement indices. As step two, we report the results for all the indices for all three measures of securities market development. As step three, we consider the hypothesis that public enforcement may work better in countries with more effective institutions than in countries with weaker institutions. Finally, as step four, we run a number of horse races designed to identify which aspect of investor protections, if any, is the best determinant of equity finance.

Table III presents the results of regressions of market capitalization to GDP ratio on the logarithm of per capita income, efficiency of the judicial system, legal origin (common law omitted), and each of our securities law measures. Panel IIIA focuses on public enforcement, and Panel IIIB on private enforcement. Consider them in order. First, richer countries have deeper capital markets, and the result is quantitatively large and significant. Second, controlling for economic development, our measure of judicial efficiency does not enter significantly. Third, consistent with our previous research, French legal origin countries have a 20 percentage point lower ratio of market capitalization to GDP ratio relative to the common law countries, the difference being highly statistically significant. German and Scandinavian law countries also have smaller stock markets than do the common law countries, but the difference is generally statistically insignificant.

With respect to our measures of public enforcement, several results emerge clearly. First, the Supervisor's independence and focus do not appear to matter. The only variable that matters at the 10% significance level is the Supervisor's power to regulate, which is associated with a higher market capitalization to GDP ratio. The Supervisor's power to command

documents is associated with better securities market development, but that to subpoena witnesses is not. There is solid evidence that the Supervisor's power to issue orders is associated with higher market to GDP ratios, and the effect is quantitatively large. At the same time, criminal sanctions are not associated with better securities market development. The reason may have to do with enforcement: proving criminal intent of issuers, distributors, or accountants in omitting information from the prospectus must be difficult, rendering the criminal deterrent ineffective.

Turning next to private enforcement, Table IIIB again shows the benefit of higher levels of economic development for securities market development. The judicial efficiency measures are now more important, but statistically significant in only half the cases. There is still evidence of lower securities market development in French legal origin countries, although the results are not as powerfully consistent as in the public enforcement regressions. The reason for this is pretty obvious: recall that private enforcement measures varied more consistently by legal origin. Indeed, the results in panel IIIB show that private enforcement is a powerful predictor of the stock market to GDP ratio. This is true for most measures of mandatory disclosure, and – strikingly – for all the measures of burden of proof. Even holding legal origin and the level of economic development constant, countries with broader mandatory disclosure, and with lighter burden on investors of establishing issuer, distributor, and accountant liability, have better developed securities markets.

These results suggest the preliminary view of what works, and what does not, in security laws. There is no evidence that such factors as Supervisor's independence or focus work. There is also – dramatically – no evidence that criminal sanctions work. There is stronger evidence

that, from the perspective of public enforcement, the ability of the Supervisor to issue rules, subpoena documents, and impose sanctions on issuers, distributors, and accountants is associated with higher valuation of security markets. The results on private enforcement are even stronger. Mandatory disclosure of compensation, insider ownership, identity of major shareholders, and related transactions is associated with higher market value to GDP ratios, as is the relatively lower burden of proof on investors in recovering damages from omissions of material information in the prospectus. At least at first glance, some forms of public enforcement, and disclosure-related private enforcement, appear to work extremely well.

In the remainder of this section, we explore these preliminary findings from a range of perspectives. To reduce the number of regressions, we focus on sub-indices measuring various dimensions of enforcement, as well as the overall indices of public and private enforcement. Since all of our private enforcement variables work reasonably well, aggregating them into sub-indices and indices is not a problem. Since some dimensions of public enforcement do not appear to matter, aggregation here is more controversial. When we come to our ultimate results, we look not just at the overall public enforcement index, but also on sub-indices that capture the strongest effects of public enforcement on the development of securities markets.

In Table IV, we present the results for this smaller set of independent variables, but with all three dependent measures of finance we described: external capitalization to GDP ratio, number of listed firms per million people, and the pace of IPO activity. The results basically confirm the findings of Table III. Panel IVA, where the dependent variable is the ratio of external market capitalization to GDP, confirms that Supervisor characteristics and criminal sanctions do not matter, that other elements of public enforcement as well as the public

enforcement index do matter, but typically not strongly enough to eliminate French legal origin, and finally that our private enforcement variables all benefit securities market development enough to knock out the statistical significance of the French legal origin effect. The economic magnitude of the effect of enforcement on the development of securities markets is large. For example, a two-standard deviation increase in public enforcement (roughly the difference between the United States and New Zealand) is associated with an increase of 0.19 in the external capitalization ratio. Similarly, a two-standard deviation increase in private enforcement (approximately the difference between the United States and Switzerland) is associated with an increase of 0.40 in the external capitalization ratio.

In Panels IVB and IVC, the dependent variables are the number of listed domestic firms per million people and the pace of IPO activity. In both panels, the results are similar to those in Panel IVA. Supervisor characteristics do not matter, criminal sanctions matter marginally, and other measures of public enforcement, including the index, have a significant positive effect on securities market development, but not strong enough to knock out the French legal origin dummies. Our private enforcement measures including the index are again highly statistically significant, and sharply reduce or eliminate the effect of the French legal origin. As in the case of market capitalization, the economic significance of both enforcement coefficients is large. The estimated coefficients predict that a two-standard deviation increase in public enforcement is associated with an increase of 19 firms per million population (roughly the difference between the United States and Germany) and 1.35 IPOs per million population (roughly the difference between the United States and Ireland). Similarly, the estimates predict that a two-standard deviation increase in private enforcement is associated with an increase of 15 firms per million

population approximately the difference between the United States and Spain or South Africa) and 1.17 IPOs per million population (roughly the difference between the United States and Austria). The consistency of results across such different measures of stock market development is encouraging.

In Table V, we address the question of whether the effect of the public and private enforcement variables is different for countries with high versus low efficiency of the judiciary. The argument would suggest that efficiency of the judiciary, as a measure of bureaucratic quality (and also as an input into sanctions), should determine the efficacy of public enforcement especially. More specifically, countries with higher efficiency of the judiciary should exhibit greater benefits of public enforcement for securities market development. Similarly, a simple procedure to obtain restitution may be particularly valuable in countries with inefficient courts.

The results in Table V generally support this hypothesis. The results are the clearest for the market capitalization to GDP ratio, where private enforcement measures matter in both high and low judicial efficiency countries, whereas public enforcement measures matter only in the high efficiency of the judiciary countries. The results domestic firms and IPO activity variables generally point in the same direction (in low-judicial efficiency countries, the only significant component of public enforcement is ordering sanctions in the regression for IPOs).

Finally, in Table VI, we present the results of the horse races between the measure of investor protection in corporate law (anti-director rights index from La Porta et al. 1997, 1998), the public and private enforcement indices in securities law, and legal origin. To relate our new findings to the previous work, in panel VIA we present results very similar to La Porta et al. (1997) on the anti-director rights index and the legal origin dummies. The results show that,

when included by itself, either the anti-director rights or the French legal origin is a statistically significant predictor of each of the three measures of securities market development. In a horse race, the anti-director index knocks out the French legal origin dummy when the dependent variable is the ratio of market capitalization to GDP, but is itself knocked out by the French legal origin (loses magnitude and statistical significance) in the listed firms and IPO regressions.

Panel VIB presents the results of a horse race between our securities laws measures and the anti-director rights index with and without legal origin controls. There are two central results. First, for all three dependent variables the securities laws measures knock out the anti-director rights index. This is so, in particular, for the market capitalization to GDP ratio, where the anti-director rights index works well by itself (panel VIA). Thus securities law knocks out corporate law as the predictor of securities market development. Moreover, French legal origin remains significant only in the regression for domestic firms. Second, as before, we find that the private enforcement measure predicts the external capitalization to GDP ratio, that the public enforcement measure does relatively better in predicting the number of listed firms and IPO activity. Thus we cannot conclude unambiguously whether public or private enforcement carries the ultimate benefit of securities laws for finance.

There are several points regarding these results. First, the anti-director rights index was created several years ago as a rough measure of the stance of corporate law toward investor protection (La Porta et al. 1998). Unlike the securities laws measures presented in this paper, the theoretical justification of the anti-director rights index was slight. In addition, corporate law and securities laws may rely on similar rules (e.g., regarding the burden-of-the-proof in civil cases). For example, the US system of mandatory disclosure evolved out of common law

principles applicable to agents dealing adversely with their principals (Mahoney 1995). In fact, the correlation coefficient between the anti-director index and private enforcement is 0.51 (see Appendix A). As a consequence, the conclusion that investor protections through securities laws dwarf those from corporate law in encouraging equity finance might come from our having a cruder measure of corporate law protections. This caveat cautions against drawing strong conclusions as to which law matters.

Second, as we have indicated, the horse race between our measures of public and private enforcement is inconclusive. The private enforcement index works best for our preferred measure of securities market development – the external capitalization to GDP ratio – but this is scarcely definitive. We must consider the possibility raised earlier that the public enforcement index is relatively noisy because it includes two sub-indices (Supervisor independence and criminal sanctions) that are not correlated with securities market development. Accordingly, in Panel VIC, we use the orders sub-index and the investigative power sub-index in place of the public enforcement index. The results are similar to those for the overall public enforcement index, except that now the private enforcement index enters significantly in nearly every regression. Alternative proxies for public enforcement thus do not eliminate the role of the private enforcement variable. At least at this point, then, we cannot go beyond the finding that both public and private enforcement matter.

Third, we cannot conclude from this evidence that good securities laws cause financial development. It is possible that, in countries with buoyant financial markets, governments adopt better securities laws, perhaps because there are fixed costs of doing so. As we argued in many papers, this argument is undermined by the systematic differences in investor protection across

legal origins. Reverse causality is also undermined by the fact that the two dimensions of the law that are expensive to implement – having an independent and a focused regulator – do not seem to matter. On the contrary, what matters is legal rules that are cheap rather than expensive to enforce. A second reverse causality argument holds that regulators swarm toward large securities markets, because there are bigger rents to secure from regulating them. This argument is also undermined by the fact that it is precisely the regulations that render the regulators unimportant, namely those that standardize private contracting and litigation, that have the tightest association with securities market development. All this does not prove causality unambiguously, but we see no logical argument against legal reforms that move countries to the rules associated with better stock market development. Moreover, nothing in our results implies that securities markets would not benefit from strengthening contract law to reduce private contracting costs as well as support better disclosure requirements (e.g., through stock-exchange listing rules).

## V. Conclusion.

In the introduction, we described the three levels at which our empirical research relates to economic theory. On each of these levels, our findings allow for some tentative conclusions.

First, our findings bear on the question of whether “law matters.” The answer to this question is a definite yes. Our findings corroborate the earlier research that shows that investor protections provided in corporate law matter for securities markets, by showing that investor protections provided by the securities law also matter – perhaps even more so. Indeed, in virtually all specifications our measures of protection through securities laws knock out the

French legal origin dummy as a predictor of the securities market development. These results, then, provide further evidence that the reason for the relative financial underdevelopment in the French legal origin countries is the lack of legal investor protections.

Second, our findings bear on the question of whether securities laws matter because they provide for public regulatory enforcement or because they reduce the costs of private enforcement. Generally speaking, the evidence suggests that investor protection delivered by both public regulation and private enforcement is associated with better securities market development. For our preferred measure of securities market development – the ratio of stock market capitalization to GDP – the private enforcement provisions of securities law matter more, but this is not so for other measures.

We also find some evidence suggesting that public enforcement benefits securities market development only in countries with well-developed bureaucracies, as measured by the efficiency of the judiciary, whereas private enforcement appears to matter in all countries. This evidence cautions against the quick resort to regulation in developing countries, and points to the potential benefit of standardizing contracts and litigation to facilitate private enforcement.

Third, at the deepest level, we try to understand very specifically what works in securities laws. As a start, we find some clear evidence on some aspects of securities laws that do not appear to matter. Specifically, having an independent and/or focused regulator does not appear to matter. Far more importantly, there is no evidence that criminal sanctions contribute to securities market development – contrary to the post-Enron stance of the U.S. reforms.

On the other hand, we find affirmative evidence that the investigative powers of the securities Supervisor and the power to issue orders are associated with better stock market

development, especially in countries with high efficiency of the judiciary. Perhaps most interestingly from the theoretical perspective, we find strong evidence that standardization of private contracting and enforcement – through mandatory disclosure requirements and placement of the burden of proof for misleading statements in the prospectus on issuers, distributors and accountants – is strongly associated with securities market development. These results point to clear strategies for how specific legal change can encourage finance.

At the most general level, these results support the proposition that understanding legal and regulatory institutions from the perspective of *enforcement* – both public and private – of contracts and rules is a fruitful strategy. We have gone to some length to quantify securities laws and regulations from this enforcement perspective, and the quantitative measures we so obtained in many instances turned out to be strong predictors of securities market development. These results offer encouragement that many other problems raised by Coase's (1960) analysis of the role of law in securing property rights can be also understood from the enforcement perspective.

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**Table I**  
**Description of the Variables**

This table describes the variables in the paper. The *supervisor* is the main government agency in charge of supervising securities markets. The *issuer* is a domestic corporation that raises capital through an initial public offering of common shares. The newly-issued shares will be listed on the country's largest stock exchange. The *distributor* sells the newly-issued shares to investors and advises the *issuer* on the preparation of the prospectus. The *accountant* audits the financial statements and documents that accompany the prospectus. Unless otherwise specified, the source for the variables is the questionnaire of law firms and the laws of each country.

Variable	Description
<i>1.1 Characteristics of the Supervisor of Securities Markets</i>	
Appointment	Equals one if the Executive power does not unilaterally appoint a majority of the members of the <i>Supervisor</i> ; equals zero otherwise.
Tenure	Equals one if members of the <i>Supervisor</i> cannot be dismissed at the will of the appointing authority; equals zero otherwise.
Focus	Equals one if separate government agencies or official authorities are in charge of supervising commercial banks and securities markets; equals zero otherwise.
Rules	Equals one if the <i>Supervisor</i> can generally issue regulations regarding primary offerings and/or listing rules on stock exchanges; equals zero otherwise.
Supervisor characteristics index	The index of characteristics of the Supervisor equals the arithmetic mean of: (1) Appointment; (2) Tenure; (3) Focus; and (4) Rules.
<i>1.2 Investigative Powers of the Supervisor of Securities Markets</i>	
Document	An index of the power of the <i>Supervisor</i> to command documents when investigating a violation of securities laws. Equals one if the <i>Supervisor</i> can generally issue an administrative order commanding all persons to turn over documents; equals one-half if the <i>Supervisor</i> can generally issue an administrative order commanding publicly-traded corporations and/or their directors to turn over documents; equals zero otherwise.
Witness	An index of the power of the <i>Supervisor</i> to subpoena the testimony of witnesses when investigating a violation of securities laws. Equals one if the <i>Supervisor</i> can generally subpoena all persons to give testimony; equals one-half if the <i>Supervisor</i> can generally subpoena the directors of publicly-traded corporations to give testimony; equals zero otherwise.
Investigative powers index	The index of investigative powers equals the arithmetic mean of: (1) Document; and (2) Witness.
<i>1.3 Sanctions</i>	
Orders issuer	An index aggregating orders to stop actions of the issuer and to direct the issuer to perform actions under securities laws. The index is formed by averaging the sub-indexes of orders to stop and to do. The sub-index of orders to stop equals one if issuers may be ordered to refrain from <u>any</u> activity; equals 0.5 if issuers may only be ordered to desist from a <u>specific</u> action; equals 0 otherwise. The sub-index of orders to do equals if issuers may be ordered to perform <u>any</u> action to rectify the violation; equals 0.5 if issuers may only be ordered to perform <u>specific</u> actions; equals 0 otherwise.
Orders distributor	An index aggregating orders to stop actions of the distributor and to direct the distributor to perform actions under securities laws. The index is formed by averaging the sub-indexes of orders to stop and to do. The sub-index of orders to stop equals one if distributors may be ordered to refrain from <u>any</u> activity; equals 0.5 if distributors may only be ordered to desist from a <u>specific</u> action; equals 0 otherwise. The sub-index of orders to do equals if distributors may be ordered to perform <u>any</u> action to rectify the violation; equals 0.5 if distributors may only be ordered to perform <u>specific</u> actions; equals 0 otherwise.

Variable	Description
Orders accountant	An index aggregating orders to stop actions of the accountant and to direct the accountant to perform actions under securities laws. The index is formed by averaging the sub-indexes of orders to stop and to do. The sub-index of orders to stop equals one if accountants may be ordered to desist from <u>any</u> activity; equals 0.5 if accountants may only be ordered to desist from a <u>specific</u> action; equals 0 otherwise. The sub-index of orders to do equals one if accountants may be ordered to perform <u>any</u> action to rectify the violation; equals 0.5 if distributors may only be ordered to perform <u>specific</u> actions; equals 0 otherwise.
Orders index	The index of orders equals the arithmetic mean of: (1) orders issuer; (2) orders distributor; and (3) orders accountant.
Criminal director/officer	An index of criminal sanctions applicable to directors and officers of newly-listed firms when the prospectus omits material information. We create separate sub-indexes for directors and officers and average their scores. The sub-index for directors equals zero when directors cannot be held criminally liable when the prospectus is misleading. Equals one-half if directors can be held criminally liable when <u>aware</u> that the prospectus is misleading. Equals one if directors can <u>also</u> be held criminally liable when <u>unaware</u> that the prospectus is misleading. The sub-index for officers is constructed analogously.
Criminal distributor	An index of criminal sanctions applicable to underwriters for misleading statements in the prospectus. Equals zero if underwriters cannot be held criminally liable when the prospectus is misleading. Equals one-half if underwriters can be held criminally liable when <u>aware</u> that the prospectus is misleading. Equals one if underwriters can <u>also</u> be held criminally liable for <u>negligent</u> conduct by dist.
Criminal accountant	An index of criminal sanctions applicable to auditors if the financial statements that accompany a prospectus are misleading. Equals zero if auditors cannot be held criminally liable when the financial statements included in the prospectus are misleading. Equals one-half if auditors can be held criminally liable when <u>aware</u> that the financial statements included in the prospectus are misleading. Equals one if auditors can <u>also</u> be held criminally liable for <u>negligent</u> conduct.
Criminal index	The index of criminal sanctions equals the arithmetic mean of: (1) criminal director; (2) criminal distributor; and (3) criminal accountant.
<i>II.1 Disclosure requirements</i>	
Prospect	Equals one if the law prohibits selling securities that are going to be listed on the largest stock exchange of the country without delivering a prospectus to potential investors; equals zero otherwise.
Compensation	An index of prospectus disclosure requirements regarding directors' compensation. Equals one if the law or the listing rules require that the compensation of <u>each</u> director be reported in the prospectus of a newly-listed firm; equals one-half if only the <u>aggregate</u> compensation of all directors must be reported in the prospectus of a newly-listed firm; equals zero when there is no requirement to disclose directors' compensation in the prospectus for a newly-listed firm.
Shareholders	An index of disclosure requirements regarding the issuer's ownership structure. Equals one if the law or the listing rules require disclosing the name and ownership stake of each shareholder who, directly or indirectly, controls ten percent or more of the voting securities in a newly-listed firm; equals one-half if the reporting threshold for large shareholders is higher than ten percent and/or only direct ownership stakes need to be reported; equals zero when the law does not require disclosing the name and ownership stake of large shareholders in a newly-listed firm. No distinction is drawn between large-shareholder reporting requirements imposed on firms and those imposed on large shareholders themselves.
Inside ownership	An index of prospectus disclosure requirements regarding directors' shareownership in a newly-listed firm. Equals one if the law or the listing rules require that the ownership of <u>each</u> directors in a newly-listed firm be disclosed in the prospectus; equals one-half if only the <u>aggregate</u> number of shares owned by directors in a newly-listed firm must be disclosed in the prospectus; equals zero when the ownership of directors in a newly-listed firm need not be disclosed in the prospectus.
Contracts Irregular	An index of prospectus disclosure requirements regarding contracts outside the ordinary course of business. Equals one if the law or the listing rules require that the terms of material contracts made by the issuer outside the ordinary course of its business be disclosed in the prospectus; equals 0.5 if the terms of only <u>some</u> material contracts made outside the ordinary course of business must be disclosed; equals zero otherwise.

Variable	Description
Transactions	An index of the prospectus disclosure requirements regarding transaction between a newly-listed firm and its directors, officers, and/or large shareholders (i.e., “related parties”). Equals one if the law or the listing rules require that <u>all</u> transactions in which related parties have, or will have, an interest be disclosed in the prospectus; equals one-half if <u>only some</u> transactions with related parties must be disclosed in the prospectus; equals zero if transactions with related parties need not be disclosed in the prospectus.
Disclosure index	The index of disclosure equals the arithmetic mean of: (1) Prospect; (2) Compensation; (3) Shareholders; (4) Inside ownership; (5) Contracts Irregular; (6) and Transactions.
<i>II.2 Burden of Proof</i>	
Role distributor	Equals one if the <i>distributor</i> of securities in an initial public offering is legally required to perform a due diligence review of the contents of the prospectus and/or civilly liable for its contents; equals zero otherwise.
Burden director	Index of the difficulty of recovering losses from the issuer’s directors in a civil liability case for losses due to misleading statements in the the prospectus. Equals one when directors are strictly liable. Equals two-thirds when investors must only prove that they relied on the prospectus and/or that their loss was caused by the misleading statement. Equals one-third if investors must prove that directors acted with negligence. Equals zero when restitution is either not available or requires that investors prove that directors committed a crime or acted with gross negligence, knowledge, or intent to deceive.
Burden distributor	Index of the difficulty of recovering losses from the issue’s <i>distributor</i> in a civil liability case for losses due to misleading statements in the the prospectus. Equals one when the <i>distributor</i> is strictly liable. Equals two-thirds when investors must only prove that they relied on the prospectus and/or that their loss was caused by the misleading statement. Equals one-third if investors must prove that the <i>distributor</i> acted with negligence. Equals zero when restitution is either not available or requires that investors prove that the <i>distributor</i> committed a crime or acted with gross negligence, knowledge, or intent to deceive.
Burden accountant	Index of the difficulty of recovering losses from the auditors responsible for the issuer’s financial statements in a civil liability case for losses due to misleading statements in the prospectus. Equals one if the accountant is strictly liable. Equals two-thirds if investors must only prove that they relied on the prospectus and/or that their loss was caused by the misleading statement. Equals one-third if investors must prove that the accountant acted with negligence. Equals zero if restitution is either not available or requires that investors prove that the accountant committed a crime or acted with gross negligence, knowledge, or intent to deceive.
Burden of proof index	The index of burden of proof equals the arithmetic mean of: (1) Role of distributor; (2) Burden director; (3) Burden distributor; and (4) Burden accountant.
<i>II.3 Summary Indices of Enforcement</i>	
Public enforcement index	The index of public enforcement equals the arithmetic mean of: (1) Supervisor characteristics index; (2) Investigative powers index; (3) Orders index; and (4) Criminal index.
Private enforcement index	The index of private enforcement equals the arithmetic mean of: (1) Disclosure Index; and (2) Burden of proof index.
<i>III. Outcome Variables</i>	
External cap / GDP	Average of the ratio of stock market capitalization held by minorities to gross domestic product for the period 1996-2000. The stock market capitalization held by minorities is computed as the product of the aggregate stock market capitalization and the average percentage of common shares not owned by the top three shareholders in the ten largest non-financial, privately-owned domestic firms in a given country. A firm is considered privately-owned if the State is not a known shareholder in it. <i>Source: La Porta et al. (1999), African equities for Kenya, Bloomberg and various annual reports for Ecuador, Jordan, and Uruguay.</i>
Domestic firms / pop	Average of the ratio of the number of domestic firms listed in a given country to its population (in millions) for the period 1996-2000.
IPOs / pop	Average of the ratio of the number of initial public offerings of equity in a given country to its population (in million) for the period 1996-2000. <i>Source: Securities Data Corporation.</i>

Variable	Description
<i>IV. Control Variables</i>	
Legal Origin	Identifies the legal origin of the company law or commercial code of each country. <i>Source: La Porta, et al. (1999).</i>
Efficiency of the judiciary	Assessment of the “efficiency and integrity of the legal environment as it affects business, particularly foreign firms” produced by the country risk rating agency International Country Risk (ICR). It may be “taken to represent investors’ assessment of conditions in the country in question.” Average between 1980 and 1983. Scale from 0 to 10, with lower scores representing lower efficiency levels. <i>Source: International Country Risk Guide.</i>
Log GDP per capita	Logarithmic of per capita Gross Domestic Product (in US dollars) in 2000.
Antidirector Rights	This index of antidirector rights is formed by adding one when: (1) the country allows shareholders to mail their proxy vote; (2) shareholders are not required to deposit their shares prior to the General Shareholders’ Meeting; (3) cumulative voting or proportional representation of minorities on the board of directors is allowed; (4) an oppressed minorities mechanism is in place; (5) the minimum percentage of share capital that entitles a shareholder to call for an Extraordinary Shareholders’ Meeting is less than or equal to ten percent (the sample median); or (6) when shareholders have preemptive rights that can only be waved by a shareholders meeting. The range for the index is from zero to six. <i>Source: La Porta et al. (1998).</i>

**Table IIA: Regulation of Securities Markets (Public Enforcement)**

This table shows the variables for each country covering the areas of: (1) characteristics of the supervisor; (2) investigative powers of the supervisor; and (3) sanctions. All variables are described in Table 1.

Characteristics of the supervisor of securities markets				Supervisor's Investigative powers		Sanctions						
Appointment	Tenure	Focus	Rules	Document	Witness	Orders			Criminal			
						Issuer	Distributor	Accountant	Director/officer	Distributor	Accountant	
<i>English legal origin</i>												
Australia	0	1	1	1	1	1	1	1	1	1	1	0
Canada	0	1	1	1	1	1	1	1	1	0.50	1	1
Hong Kong	0	0	1	1	1	1	1	1	1	1	1	0.50
India	0	0	1	1	1	1	1	0	0.50	1	1	1
Ireland	0	0	0	0	0	0	0	0	0.25	0	0	0
Israel	0	1	1	0	1	1	1	1	1	1	1	1
Kenya	0	1	1	1	1	0	1	1	0.50	0.50	1	1
Malaysia	0	0	1	1	1	1	1	1	0.50	1	1	1
New Zealand	0	0	1	0	1	1	0	0	1	0	0	0
Nigeria	0	1	1	1	0	0	0	0	0.50	0	1	1
Pakistan	0	1	1	1	1	1	0.50	0	0.25	0	0	0
Singapore	0	1	0	1	1	1	1	1	1	1	1	1
South Africa	0	0	1	0	0.50	0.50	0	0	0.25	0.50	0.50	0.50
Sri Lanka	0	0	1	1	1	0	0	0	0.25	0.50	0	0
Thailand	0	1	1	1	1	1	0.50	0.25	0.25	0	0	1
United Kingdom	0	0	0	1	1	1	1	1	0.25	0.50	0.50	0.50
United States	1	1	1	1	1	1	1	1	0.50	0.50	0.50	0.50
Zimbabwe	1	1	1	0	0	0	0.25	0	0	1	1	1
<b>Mean</b>	<b>0.11</b>	<b>0.56</b>	<b>0.83</b>	<b>0.72</b>	<b>0.81</b>	<b>0.69</b>	<b>0.63</b>	<b>0.57</b>	<b>0.50</b>	<b>0.58</b>	<b>0.58</b>	<b>0.61</b>
<i>French legal origin</i>												
Argentina	0	1	1	1	1	1	0.25	0	0	0.50	0	0
Belgium	0	0	0	0	0.50	0	0	0	0.25	0	0.50	0.50
Brazil	0	0	1	1	0.50	0.50	0.75	1	1	0.50	0.50	0
Chile	0	0	1	1	0.50	1	1	0.50	0.50	0.50	0.50	0.50
Colombia	0	0	1	1	0.50	1	0.75	0	0	0.50	0	0.50
Ecuador	1	1	1	0	0.50	0	0.25	0	0	0.25	0.50	0.50
Egypt	0	1	1	0	0.50	0	0	0.25	0	0.25	0.50	0.50
France	1	1	1	0	1	1	1	1	1	0	0	0
Greece	0	1	1	0	0.50	0.50	0	1	0	0.50	0.50	0.50
Indonesia	0	0	1	1	1	1	0.75	0	0	0	0	0
Italy	0	1	1	1	1	1	0	0	0	1	1	1
Jordan	0	0	1	0	1	1	1	0	1	0.50	0	0
Mexico	0	0	0	1	0	0	0	0	0	0.50	0	0.50
Netherlands	0	0	1	1	1	0	0	0	0	0.50	0	0
Peru	0	1	1	1	0.50	1	0.50	0.50	0.50	0.50	0.50	0.50
Philippines	0	1	1	1	1	1	0.75	1	0.75	0.50	0.50	0.50
Portugal	0	1	1	1	1	1	0.25	0.25	0.25	0	0	0
Spain	0	1	1	1	0.50	0	0	0	0	0.50	0	0
Turkey	0	1	1	1	1	1	0	0	0	0.50	0.50	0.50
Uruguay	1	1	0	0	0.50	0	0	0	0	0.25	0.50	0.50
Venezuela	0	0	1	1	1	1	0.25	0	0	0.50	0	0.50
<b>Mean</b>	<b>0.14</b>	<b>0.57</b>	<b>0.86</b>	<b>0.67</b>	<b>0.71</b>	<b>0.62</b>	<b>0.36</b>	<b>0.26</b>	<b>0.24</b>	<b>0.40</b>	<b>0.26</b>	<b>0.33</b>
<i>German legal origin</i>												
Austria	0	0	1	0	0	0	0	0	0	0.25	0.50	0.50
Germany	0	0	1	0	0	0	0	0	0	0.50	0	0.50
Japan	0	0	0	0	0	0	0	0	0	0	0	0
Korea	0	1	0	1	1	1	1	0	0	0.50	0	0.50
Switzerland	0	1	0	1	0.50	0	0	0	0	0.50	0	0
Taiwan	0	0	1	1	0.50	0	0	0.50	0	1	0.50	1
<b>Mean</b>	<b>0.00</b>	<b>0.33</b>	<b>0.50</b>	<b>0.50</b>	<b>0.33</b>	<b>0.17</b>	<b>0.17</b>	<b>0.08</b>	<b>0.00</b>	<b>0.46</b>	<b>0.17</b>	<b>0.42</b>
<i>Scandinavian legal origin</i>												
Denmark	0	0	0	1	0.50	0.50	0.50	0.50	0	0	0	0
Finland	1	1	0	0	0.50	0	0	1	0	0.50	1	1
Norway	0	0	0	0	0	0	0	0	0	1	1	1
Sweden	0	0	0	1	0	0	1	1	0	0.75	0.50	0.50
<b>Mean</b>	<b>0.25</b>	<b>0.25</b>	<b>0.00</b>	<b>0.50</b>	<b>0.25</b>	<b>0.13</b>	<b>0.38</b>	<b>0.63</b>	<b>0.00</b>	<b>0.56</b>	<b>0.63</b>	<b>0.63</b>
<b>Mean for all countries</b>	<b>0.12</b>	<b>0.51</b>	<b>0.74</b>	<b>0.65</b>	<b>0.66</b>	<b>0.55</b>	<b>0.43</b>	<b>0.38</b>	<b>0.29</b>	<b>0.49</b>	<b>0.40</b>	<b>0.47</b>
<i>Tests of means (t-stats)</i>												
English vs. Civil Law	0.18	-0.48	-1.18	-0.76	-2.02 <sup>b</sup>	-1.62	-2.43 <sup>b</sup>	-2.27 <sup>b</sup>	-2.80 <sup>a</sup>	-1.71 <sup>c</sup>	-2.65 <sup>b</sup>	-2.01 <sup>b</sup>
English vs. French	0.29	0.10	0.20	-0.37	-0.83	-0.50	-1.97 <sup>c</sup>	-2.14 <sup>b</sup>	-1.82 <sup>c</sup>	-2.02 <sup>c</sup>	-2.74 <sup>a</sup>	-2.37 <sup>b</sup>
English vs. German	-0.83	-0.92	-1.66	-0.98	-2.55 <sup>b</sup>	-2.50 <sup>b</sup>	-2.18 <sup>b</sup>	-2.30 <sup>b</sup>	-2.35 <sup>b</sup>	-0.82	-2.23 <sup>b</sup>	-0.97
English vs. Scandinav.	0.71	-1.09	-4.26 <sup>a</sup>	-0.84	-2.68 <sup>b</sup>	-2.38 <sup>b</sup>	-0.99	0.20	-1.91 <sup>c</sup>	-0.11	0.17	0.06
French vs. German	-0.96	-1.01	-1.91 <sup>c</sup>	-0.73	-2.54 <sup>b</sup>	-2.13 <sup>b</sup>	-1.04	-1.05	-1.50	0.46	-0.70	0.58
French vs. Scandinav.	0.52	-1.16	-4.70 <sup>a</sup>	-0.62	-2.86 <sup>a</sup>	-2.02 <sup>c</sup>	0.08	1.62	-1.22	1.09	2.02 <sup>c</sup>	1.67
German vs. Scandinav.	1.26	-0.25	-1.79	0.00	-0.35	-0.18	0.74	2.51 <sup>b</sup>	.	0.44	1.99 <sup>c</sup>	0.77

a=significant at 1% level; b=significant at 5% level; c=significant at 10% level.

**Table IIB: Regulation of Securities Markets (Private Enforcement)**

This table classifies countries by legal origin and shows the variables for each country covering the areas of: (1) disclosure requirements; (2) private enforcement; and (3) efficiency of the courts. All variables are described in Table 1.

	Disclosure requirements						Burden of Proof			
	Prospect	Compensation	Shareholders	Inside ownership	Contracts irregular	Transactions	Role distributor	Burden director	Burden distributor	Burden accountant
<i>English legal origin</i>										
Australia	1	0.50	1	1	0	1	1	0.66	0.66	0.66
Canada	1	1	1	0.50	1	1	1	1	1	1
Hong Kong	1	1	1	1	1	1	1	0.66	0.66	0.66
India	0	0.50	0	0	1	0.50	1	0.66	0.66	0.66
Ireland	0	1	1	0.50	0.5	0.50	0	0.66	0	0.66
Israel	1	0.50	1	1	1	0.50	1	0.66	0.66	0.66
Kenya	1	0.50	0	0.50	1	1	1	0.66	0	0.66
Malaysia	1	0.50	1	1	1	1	1	0.66	0.66	0.66
New Zealand	0	0.50	0	0	1	1	0	0.66	0	0.66
Nigeria	1	0	0	0	1	0.50	0	0.66	0	0.66
Pakistan	1	0.50	0	0	1	0.50	0	0.66	0	0.66
Singapore	1	1	1	1	1	1	1	0.66	0.66	0.66
South Africa	1	1	0	1	1	0.50	1	0.66	0.66	0.66
Sri Lanka	1	0.50	0	0.50	1	1	0	0.66	0	0.66
Thailand	1	0.50	1	1	1	1	1	1	0	0
United Kingdom	0	1	1	1	1	1	1	0.66	0.66	0.66
United States	1	1	1	1	1	1	1	1	1	1
Zimbabwe	1	0.50	0	0	1	0.50	0	0.66	0.33	0.66
<b>Mean</b>	<b>0.78</b>	<b>0.67</b>	<b>0.56</b>	<b>0.61</b>	<b>0.92</b>	<b>0.81</b>	<b>0.67</b>	<b>0.72</b>	<b>0.42</b>	<b>0.66</b>
<i>French legal origin</i>										
Argentina	0	0.50	1	1	0	0.50	0	0.33	0	0.33
Belgium	0	0.50	0	0.50	0	0.50	0	0.33	0	0.33
Brazil	0	0	0	0	0	0	1	0.33	0.33	0.33
Chile	1	0	0	0	0	0	1	0.33	0.33	0.33
Colombia	0	0	0	0	0	1	1	0.33	0.33	0.33
Ecuador	0	0	0	0	0.5	0	0	0.33	0	0.33
Egypt	0	1	0	1	0	0	0	0.33	0	0.33
France	1	0.50	0	0.50	0.5	1	1	0.66	0.66	0.66
Greece	0	0.50	0	1	1	0.50	1	0.66	0.66	0.33
Indonesia	1	0	0	0.50	0.5	1	1	0.66	0.66	0.66
Italy	0	1	1	1	0.5	1	0	0.33	0	0.33
Jordan	1	1	0	1	0	1	0	0.33	0	0.33
Mexico	0	0.50	0	1	1	1	1	0	0	0.33
Netherlands	0	0.50	1	0.50	0.5	0.50	1	0.66	0.66	0.66
Peru	1	0	0	0	0	0	1	0.66	0.66	0.66
Philippines	0	1	1	1	1	1	1	1	1	1
Portugal	0	0.50	1	0.50	0.5	0.50	1	0.66	0.66	0.66
Spain	0	0.50	1	1	0	0.50	1	0.66	0.66	0.66
Uruguay	0	0	0	0	0	0	0	0.33	0	0
Venezuela	0	0	0	0	1	0	0	0.33	0	0.33
<b>Mean</b>	<b>0.25</b>	<b>0.40</b>	<b>0.30</b>	<b>0.53</b>	<b>0.35</b>	<b>0.50</b>	<b>0.60</b>	<b>0.46</b>	<b>0.33</b>	<b>0.45</b>
<i>German legal origin</i>										
Austria	0	0.50	0	0.50	0	0.50	0	0.33	0	0
Germany	0	0.50	0	0.50	0	0.50	1	0	0	0
Japan	1	0	1	0.50	1	0.50	1	0.66	0.66	0.66
Korea	0	0	1	1	1	1	1	0.66	0.66	0.66
Switzerland	0	0.50	1	0.50	0	1	0	0.66	0.66	0.66
Taiwan	1	1	0	1	1	1	1	0.66	0.66	0.66
<b>Mean</b>	<b>0.33</b>	<b>0.42</b>	<b>0.50</b>	<b>0.67</b>	<b>0.50</b>	<b>0.75</b>	<b>0.67</b>	<b>0.50</b>	<b>0.44</b>	<b>0.44</b>
<i>Scandinavian legal origin</i>										
Denmark	0	0.50	0	0.50	0	0.50	0	0.33	0.33	0.33
Finland	0	0.50	1	0.50	0	0.50	1	0.33	0.33	0.33
Norway	0	0.50	1	1	0.5	0.50	0	0.33	0.33	0.33
Sweden	0	0.50	1	1	0.5	0.50	0	0.33	0.33	0.33
<b>Mean</b>	<b>0.00</b>	<b>0.50</b>	<b>0.75</b>	<b>0.75</b>	<b>0.25</b>	<b>0.50</b>	<b>0.25</b>	<b>0.33</b>	<b>0.33</b>	<b>0.33</b>
<b>Mean for all countries</b>	<b>0.43</b>	<b>0.51</b>	<b>0.47</b>	<b>0.60</b>	<b>0.57</b>	<b>0.63</b>	<b>0.61</b>	<b>0.54</b>	<b>0.38</b>	<b>0.52</b>
<i>Tests of means (t-stats)</i>										
English vs. Civil	-4.37 <sup>a</sup>	-2.55 <sup>b</sup>	-0.91	-0.12	-5.11 <sup>a</sup>	-2.69 <sup>a</sup>	-0.59	-4.70 <sup>a</sup>	-0.72	-3.64 <sup>a</sup>
English vs. French	-3.89 <sup>a</sup>	-2.39 <sup>b</sup>	-1.39	-0.45	-5.17 <sup>a</sup>	-2.85 <sup>a</sup>	-0.30	-4.35 <sup>a</sup>	-0.82	-3.30 <sup>a</sup>
English vs. German	-2.10 <sup>b</sup>	-1.67 <sup>c</sup>	-0.23	0.29	-2.56 <sup>b</sup>	-0.46	0.00	-2.71 <sup>b</sup>	0.11	-1.97 <sup>c</sup>
English vs. Scandinavian	-3.57 <sup>a</sup>	-1.10	0.69	0.60	-4.60 <sup>a</sup>	-2.39 <sup>b</sup>	-1.55	-5.97 <sup>a</sup>	-0.48	-3.30 <sup>a</sup>
French vs. German	0.45	0.07	0.72	0.62	0.72	1.46	0.21	0.48	0.72	0.00
French vs. Scandinavian	-1.07	0.50	1.57	0.87	-0.52	0.11	-1.36	-0.90	0.00	-0.99
German vs. Scandinavian	-1.26	0.43	0.73	0.48	-0.83	-1.79	-1.27	-1.17	-0.63	-0.63

a=significant at 1% level; b=significant at 5% level; c=significant at 10% level.

**Table IIC: Indices of Regulation of Securities Markets**

This table classifies countries by legal origin and shows the indices of securities laws for each country covering the areas of: (1) characteristics of the supervisor; (2) investigative powers of the supervisor; (3) orders to issuers, distributors, and accountants; (4) criminal sanctions applicable to issuers, distributors, and accountants; (5) public enforcement; (6) disclosure requirements; (7) burden of the proof; (8) private enforcement; and (9) securities laws. All variables are described in Table I.

	Supervisor attributes	Investigative powers	Orders	Criminal sanctions	Public enforcement	Disclosure requirements	Burden of proof	Private enforcement
<i>English legal origin</i>								
Australia	0.75	1	1	0.67	0.85	0.75	0.75	0.75
Canada	0.75	1	1	0.83	0.9	0.92	1.00	0.96
Hong Kong	0.5	1	1	0.83	0.83	1	0.75	0.88
India	0.5	1	0.67	0.83	0.75	0.33	0.75	0.54
Ireland	0	0	0	0.08	0.02	0.58	0.33	0.46
Israel	0.5	1	1	1	0.88	0.83	0.75	0.79
Kenya	0.75	0.5	1	0.67	0.73	0.67	0.58	0.63
Malaysia	0.5	1	1	0.83	0.83	0.92	0.75	0.83
New Zealand	0.25	1	0	0.33	0.4	0.42	0.33	0.38
Nigeria	0.75	0	0	0.5	0.31	0.42	0.33	0.38
Pakistan	0.75	1	0.17	0.08	0.5	0.5	0.33	0.42
Singapore	0.5	1	1	1	0.88	1	0.75	0.88
South Africa	0.25	0.5	0	0.42	0.29	0.75	0.75	0.75
Sri Lanka	0.5	0.5	0	0.25	0.31	0.67	0.33	0.50
Thailand	0.75	1	0.25	0.42	0.6	0.92	0.50	0.71
United Kingdom	0.25	1	1	0.42	0.67	0.83	0.75	0.79
United States	1	1	1	0.5	0.88	1	1.00	1.00
Zimbabwe	0.75	0	0.08	1	0.46	0.5	0.42	0.46
<b>Mean</b>	<b>0.56</b>	<b>0.75</b>	<b>0.57</b>	<b>0.59</b>	<b>0.62</b>	<b>0.72</b>	<b>0.62</b>	<b>0.67</b>
<i>French legal origin</i>								
Argentina	0.75	1	0.08	0.17	0.5	0.5	0.17	0.33
Belgium	0	0.25	0	0.25	0.13	0.25	0.17	0.21
Brazil	0.5	0.5	0.92	0.33	0.56	0	0.50	0.25
Chile	0.5	0.75	0.67	0.5	0.6	0.17	0.50	0.33
Colombia	0.5	0.75	0.25	0.33	0.46	0.17	0.50	0.33
Ecuador	0.75	0.25	0.08	0.42	0.38	0.08	0.17	0.13
Egypt	0.5	0.25	0.08	0.42	0.31	0.33	0.17	0.25
France	0.75	1	1	0	0.69	0.58	0.75	0.67
Greece	0.5	0.5	0.33	0.5	0.46	0.5	0.67	0.58
Indonesia	0.5	1	0.25	0	0.44	0.5	0.75	0.63
Italy	0.75	1	0	1	0.69	0.75	0.17	0.46
Jordan	0.25	1	0.67	0.17	0.52	0.67	0.17	0.42
Mexico	0.25	0	0	0.33	0.15	0.58	0.33	0.46
Netherlands	0.5	0.5	0	0.17	0.29	0.5	0.75	0.46
Peru	0.75	0.75	0.5	0.5	0.63	0.17	1.00	0.92
Philippines	0.75	1	0.83	0.5	0.77	0.83	0.75	0.63
Portugal	0.75	1	0.25	0	0.5	0.5	0.75	0.63
Spain	0.75	0.25	0	0.17	0.29	0.5	0.75	0.63
Turkey	0.75	1	0	0.5	0.56	0.5	0.42	0.46
Uruguay	0.5	0.25	0	0.42	0.29	0	0.08	0.04
Venezuela	0.5	1	0.08	0.33	0.48	0.17	0.17	0.17
<b>Mean</b>	<b>0.56</b>	<b>0.67</b>	<b>0.29</b>	<b>0.33</b>	<b>0.46</b>	<b>0.39</b>	<b>0.46</b>	<b>0.43</b>
<i>German legal origin</i>								
Austria	0.25	0.00	0.00	0.42	0.17	0.25	0.08	0.17
Germany	0.25	0.00	0.00	0.33	0.15	0.25	0.25	0.25
Japan	0	0.00	0.00	0.00	0.00	0.67	0.75	0.71
Korea	0.5	1.00	0.33	0.33	0.54	0.67	0.75	0.71
Switzerland	0.5	0.25	0.00	0.17	0.23	0.50	0.50	0.50
Taiwan	0.5	0.25	0.17	0.83	0.44	0.83	0.75	0.79
<b>Mean</b>	<b>0.33</b>	<b>0.25</b>	<b>0.08</b>	<b>0.35</b>	<b>0.25</b>	<b>0.53</b>	<b>0.51</b>	<b>0.52</b>
<i>Scandinavian legal origin</i>								
Denmark	0.25	0.5	0.33	0	0.27	0.25	0.25	0.25
Finland	0.5	0.25	0.33	0.83	0.48	0.42	0.50	0.46
Norway	0	0	0	1	0.25	0.58	0.25	0.42
Sweden	0.25	0	0.67	0.58	0.38	0.58	0.25	0.42
<b>Mean</b>	<b>0.25</b>	<b>0.19</b>	<b>0.33</b>	<b>0.60</b>	<b>0.35</b>	<b>0.46</b>	<b>0.31</b>	<b>0.39</b>
<b>Mean for all countries</b>	<b>0.51</b>	<b>0.61</b>	<b>0.37</b>	<b>0.45</b>	<b>0.48</b>	<b>0.54</b>	<b>0.51</b>	<b>0.52</b>
<i>Tests of means (t-stats)</i>								
English vs. Civil Law	-1.11	-1.93 <sup>c</sup>	-2.81 <sup>a</sup>	-2.62 <sup>a</sup>	-3.24 <sup>a</sup>	-4.52 <sup>a</sup>	-2.23 <sup>b</sup>	-3.73 <sup>a</sup>
English vs. French	0.05	-0.70	-2.14 <sup>b</sup>	-3.04 <sup>a</sup>	-2.18 <sup>b</sup>	-4.39 <sup>a</sup>	-1.92 <sup>c</sup>	-3.61 <sup>a</sup>
English vs. German	-1.96 <sup>b</sup>	-2.71 <sup>a</sup>	-2.43 <sup>b</sup>	-1.75 <sup>c</sup>	-3.05 <sup>a</sup>	-1.83 <sup>c</sup>	-0.92	-1.45
English vs. Scandinavian	-2.26 <sup>b</sup>	-2.72 <sup>a</sup>	-0.93	0.06	-1.99 <sup>b</sup>	-2.24 <sup>b</sup>	-2.57 <sup>a</sup>	-2.68 <sup>b</sup>
French vs. German	-2.36 <sup>b</sup>	-2.53 <sup>b</sup>	-1.42	0.12	-2.51 <sup>b</sup>	1.20	0.41	0.90
French vs. Scandinavian	-2.74 <sup>a</sup>	-2.62 <sup>a</sup>	0.26	1.86 <sup>c</sup>	-1.30	0.51	-1.01	-0.37
German vs. Scandinavian	-0.63	-0.29	1.94 <sup>c</sup>	1.14	0.82	-0.50	-1.29	-0.98

a=significant at 1% level; b=significant at 5% level; c=significant at 10% level.

**Table IIIA**  
**Securities Regulation and Market Capitalization / GDP (OLS Regressions)**

Ordinary least squares regressions of the cross-section of countries. Robust standard errors in parentheses. All variables are described in Table I.

Independent variables:								
Securities regulation index:	Securities regulation variable	French legal origin	German legal origin	Scandinavian legal origin	Efficiency judicial system	Log GDP per capita	Constant	N [R <sup>2</sup> ]
<i>Panel A: Characteristics of the supervisor</i>								
Appointment	0.0774 (0.1120)	-0.2308 <sup>b</sup> (0.0950)	-0.1074 (0.2244)	-0.2015 (0.2087)	0.0355 (0.0263)	0.1174 <sup>a</sup> (0.0293)	-0.7799 <sup>a</sup> (0.2112)	49 [0.46]
Tenure	-0.0040 (0.1026)	-0.2256 <sup>b</sup> (0.0995)	-0.1155 (0.2371)	-0.1925 (0.2235)	0.0371 (0.0295)	0.1161 <sup>a</sup> (0.0314)	-0.7714 <sup>a</sup> (0.2328)	49 [0.45]
Focus	-0.0256 (0.1403)	-0.2246 <sup>b</sup> (0.0959)	-0.1194 (0.2235)	-0.2084 (0.2319)	0.0373 (0.0255)	0.1137 <sup>a</sup> (0.0321)	-0.7339 <sup>b</sup> (0.3062)	49 [0.45]
Rules	0.2080 <sup>c</sup> (0.1046)	-0.1843 <sup>c</sup> (0.1048)	-0.0598 (0.1978)	-0.1082 (0.2410)	0.0553 <sup>c</sup> (0.0303)	0.1062 <sup>a</sup> (0.0324)	-0.9894 <sup>a</sup> (0.2599)	49 [0.51]
<i>Panel B: Investigative powers of the supervisor</i>								
Document	0.2265 <sup>b</sup> (0.0984)	-0.1855 <sup>c</sup> (0.0923)	0.0145 (0.2148)	-0.0551 (0.2125)	0.0486 <sup>c</sup> (0.0257)	0.0993 <sup>a</sup> (0.0270)	-0.9084 <sup>a</sup> (0.2270)	49 [0.49]
Witness	0.0792 (0.0744)	-0.2100 <sup>b</sup> (0.0912)	-0.0610 (0.2151)	-0.1400 (0.2195)	0.0428 (0.0260)	0.1073 <sup>a</sup> (0.0276)	-0.8006 <sup>a</sup> (0.2062)	49 [0.46]
<i>Panel C: Sanctions</i>								
Orders issuer	0.1922 <sup>b</sup> (0.0947)	-0.1846 <sup>c</sup> (0.0934)	-0.0318 (0.2187)	-0.1407 (0.2039)	0.0308 (0.0263)	0.1210 <sup>a</sup> (0.0259)	-0.8834 <sup>a</sup> (0.2098)	49 [0.49]
Orders distributor	0.2393 <sup>b</sup> (0.0905)	-0.1618 (0.0976)	0.0234 (0.2119)	-0.1697 (0.1718)	0.0305 (0.0277)	0.1041 <sup>a</sup> (0.0282)	-0.7548 <sup>a</sup> (0.2140)	49 [0.52]
Orders accountant	0.2198 <sup>b</sup> (0.0988)	0.1906 <sup>b</sup> (0.0889)	0.0131 (0.2157)	-0.0403 (0.2166)	0.0227 (0.0266)	0.1084 <sup>a</sup> (0.0239)	-0.7016 <sup>a</sup> (0.2116)	49 [0.50]
Criminal director/ officer	0.0024 (0.1663)	-0.2248 <sup>b</sup> (0.0947)	-0.1140 (0.2242)	-0.1912 (0.2188)	0.0374 (0.0260)	0.1159 <sup>a</sup> (0.0290)	-0.7751 <sup>a</sup> (0.2187)	49 [0.45]
Criminal distributor	0.0741 (0.1223)	-0.2061 <sup>b</sup> (0.0943)	-0.0835 (0.2285)	-0.1904 (0.2149)	0.0345 (0.0272)	0.1166 <sup>a</sup> (0.0296)	-0.7995 <sup>a</sup> (0.2138)	49 [0.46]
Criminal accountant	-0.0250 (0.1192)	-0.2322 <sup>b</sup> (0.1002)	-0.1174 (0.2238)	-0.1888 (0.2188)	0.0373 (0.0249)	0.1148 <sup>a</sup> (0.0299)	-0.7488 <sup>a</sup> (0.2372)	49 [0.45]

a=significant at 1 percent level; b=significant at 5 percent level; c=significant at 10 percent level

**Table IIIB**  
**Securities Regulation and Market Capitalization / GDP (OLS Regressions)**

Ordinary least squares regressions of the cross-section of countries. Robust standard errors in parentheses. All variables are described in Table I.

Independent variables:								
Securities regulation index:	Securities regulation variable	French legal origin	German legal origin	Scandinavian legal origin	Efficiency judicial system	Log GDP per capita	Constant	N [R <sup>2</sup> ]
<i>Panel A: Disclosure requirements</i>								
Prospect	0.1605 (0.0974)	-0.1390 (0.0962)	-0.0573 (0.2139)	-0.0837 (0.2299)	0.0375 (0.0230)	0.1249 <sup>a</sup> (0.0284)	-0.9752 <sup>a</sup> (0.2281)	49 [0.48]
Compensation	0.2883 <sup>a</sup> (0.0982)	-0.1424 (0.0854)	0.0023 (0.2220)	-0.0950 (0.2105)	0.0407 <sup>c</sup> (0.0236)	0.0869 <sup>a</sup> (0.0260)	-0.7498 <sup>a</sup> (0.1993)	49 [0.50]
Shareholders	0.2345 <sup>b</sup> (0.1075)	-0.1334 (0.1149)	-0.0068 (0.2179)	-0.1552 (0.1954)	0.0594 <sup>c</sup> (0.0323)	0.0506 (0.0437)	-0.5365 <sup>a</sup> (0.1846)	49 [0.51]
Inside ownership	0.2019 <sup>b</sup> (0.0883)	-0.1761 <sup>b</sup> (0.0808)	-0.0710 (0.2130)	-0.15448 (0.2242)	0.0550 <sup>b</sup> (0.0230)	0.0805 <sup>a</sup> (0.0240)	-0.7503 <sup>a</sup> (0.2001)	49 [0.49]
Contracts Irregular	0.0807 (0.1181)	-0.1634 (0.1120)	-0.0865 (0.2011)	-0.1286 (0.2264)	0.0408 (0.0252)	0.1173 <sup>a</sup> (0.0287)	-0.8854 <sup>a</sup> (0.2651)	49 [0.46]
Transactions	0.2245 <sup>b</sup> (0.1081)	-0.1427 (0.1070)	-0.0822 (0.2087)	-0.1060 (0.2165)	0.0422 <sup>c</sup> (0.0249)	0.1023 <sup>a</sup> (0.0288)	-0.8795 <sup>a</sup> (0.2145)	49 [0.49]
<i>Panel B: Burden of Proof</i>								
Role distributor	0.1701 <sup>c</sup> (0.0924)	-0.1994 <sup>b</sup> (0.0882)	-0.0979 (0.2279)	-0.1215 (0.1995)	0.0535 <sup>b</sup> (0.0237)	0.0955 <sup>a</sup> (0.0308)	-0.8384 <sup>a</sup> (0.1979)	49 [0.50]
Burden director	0.1591 <sup>a</sup> (0.0559)	-0.0704 (0.1165)	0.0136 (0.2182)	0.0020 (0.2294)	0.0506 <sup>c</sup> (0.0270)	0.0988 <sup>a</sup> (0.0308)	-1.0827 <sup>a</sup> (0.2299)	49 [0.51]
Burden distributor	0.1547 <sup>a</sup> (0.0301)	-0.1694 <sup>b</sup> (0.0833)	-0.0591 (0.1827)	-0.0813 (0.2037)	0.0436 <sup>c</sup> (0.0239)	0.0740 <sup>b</sup> (0.0298)	-0.6710 <sup>a</sup> (0.1759)	49 [0.60]
Burden accountant	0.1786 <sup>a</sup> (0.0523)	-0.1148 (0.1106)	0.0126 (0.1987)	0.0042 (0.2233)	0.0319 (0.0276)	0.1123 <sup>a</sup> (0.0320)	-1.0555 <sup>a</sup> (0.2306)	49 [0.54]

a=significant at 1 percent level; b=significant at 5 percent level; c=significant at 10 percent level

**Table IV**  
**Indices of Securities Regulation and Financial Development**

Ordinary least squares regressions of the cross-section of countries. Robust standard errors in parentheses. All variables are described in Table I.

Securities regulation index:	Independent variables:							
	Securities regulation variable	French legal origin	German legal origin	Scandinavian legal origin	Efficiency judicial system	Log GDP per capita	Constant	N [R <sup>2</sup> ]
<i>Panel A: External cap / GDP</i>								
Supervisor characteristics	0.3128 (0.2026)	-0.2043 <sup>c</sup> (0.1034)	-0.0486 (0.2306)	-0.1194 (0.2070)	0.0512 (0.03165)	0.1149 <sup>a</sup> (0.0306)	-1.0522 <sup>a</sup> (0.3167)	49 [0.48]
Investigative powers	0.1657 <sup>c</sup> (0.0876)	-0.1949 <sup>b</sup> (0.0914)	-0.0114 (0.2143)	-0.0877 (0.2167)	0.0471 <sup>c</sup> (0.0264)	0.1008 <sup>a</sup> (0.0262)	-0.8507 <sup>a</sup> (0.2130)	49 [0.47]
Orders	0.2676 <sup>b</sup> (0.1080)	-0.1687 <sup>c</sup> (0.0927)	0.0270 (0.2132)	-0.0985 (0.1919)	0.0258 (0.0266)	0.1108 <sup>a</sup> (0.0243)	-0.7881 <sup>a</sup> (0.2066)	49 [0.51]
Criminal sanctions	0.0267 (0.1613)	-0.2192 <sup>b</sup> (0.0977)	-0.1082 (0.2240)	-0.1914 (0.2177)	0.0368 (0.0264)	0.1163 <sup>a</sup> (0.0297)	-0.7887 <sup>a</sup> (0.2285)	49 [0.45]
Public enforcement	0.4049 <sup>b</sup> (0.1796)	-0.1563 (0.0979)	0.0466 (0.2176)	-0.0693 (0.1981)	0.0409 (0.0266)	0.1060 <sup>a</sup> (0.0257)	-0.9695 (0.2446)	49 [0.50]
Disclosure requirements	0.6432 <sup>a</sup> (0.1503)	0.0423 (0.0963)	0.1021 (0.1891)	0.0426 (0.2048)	0.0693 <sup>a</sup> (0.0235)	0.0516 <sup>b</sup> (0.0256)	-0.9480 <sup>a</sup> (0.1999)	49 [0.56]
Burden of Proof	0.5788 <sup>a</sup> (0.1122)	-0.1009 (0.0833)	0.0038 (0.1932)	0.0289 (0.1884)	0.0554 <sup>b</sup> (0.0234)	0.0757 <sup>b</sup> (0.0284)	-0.9431 <sup>a</sup> (0.1857)	49 [0.58]
Private enforcement	0.8378 <sup>a</sup> (0.1394)	0.0389 (0.0771)	0.1123 (0.1845)	0.1205 (0.1854)	0.0712 <sup>a</sup> (0.0198)	0.0440 (0.0212)	-1.0095 <sup>a</sup> (0.1836)	49 [0.62]
<i>Panel B: Domestic Firms / Mill. Population</i>								
Supervisor characteristics	9.3280 (14.1770)	-21.0931 <sup>a</sup> (6.8388)	-28.4784 <sup>a</sup> (9.7896)	-19.1172 <sup>c</sup> (10.8395)	3.6251 <sup>c</sup> (1.8528)	7.7003 <sup>a</sup> (2.6760)	-63.1933 <sup>a</sup> (23.1968)	49 [0.57]
Investigative powers	18.6130 <sup>a</sup> (5.6306)	-18.3208 <sup>a</sup> (5.6834)	-18.8759 <sup>b</sup> (7.5239)	-9.6110 (8.7544)	4.2925 <sup>a</sup> (1.4731)	6.0364 <sup>b</sup> (2.2770)	-63.4696 <sup>a</sup> (15.9936)	49 [0.62]
Orders	20.7508 <sup>a</sup> (7.0452)	-17.3393 <sup>a</sup> (5.4132)	-19.4737 <sup>b</sup> (7.1880)	-14.0525 (9.5421)	2.3103 <sup>c</sup> (1.2064)	7.3362 <sup>a</sup> (2.2562)	-55.9608 <sup>a</sup> (15.5591)	49 [0.64]
Criminal sanctions	20.9150 <sup>c</sup> (11.7608)	-17.1169 <sup>a</sup> (6.1283)	-25.6302 <sup>a</sup> (8.1400)	-21.1952 <sup>c</sup> (10.9970)	2.7126 (1.8326)	8.0584 <sup>a</sup> (2.8017)	-65.9660 <sup>a</sup> (19.2716)	49 [0.61]
Public enforcement	39.9689 <sup>a</sup> (10.7901)	-14.9258 <sup>a</sup> (4.7522)	-14.5544 <sup>a</sup> (5.2790)	-9.2007 (8.5654)	3.5568 <sup>b</sup> (1.4030)	6.7565 <sup>a</sup> (2.2794)	-74.1564 <sup>a</sup> (18.5333)	49 [0.66]
Disclosure requirements	27.8156 <sup>a</sup> (9.8784)	-10.1495 (6.5478)	-21.0754 <sup>b</sup> (8.3601)	-11.1407 (9.4899)	4.5926 <sup>a</sup> (1.5412)	4.8873 <sup>b</sup> (2.0684)	-62.4177 <sup>a</sup> (16.7373)	49 [0.61]
Burden of Proof	19.0522 <sup>b</sup> (8.3937)	-17.6258 <sup>b</sup> (6.7238)	-26.5490 <sup>a</sup> (9.0688)	-14.0103 (10.1727)	3.8061 <sup>b</sup> (1.7265)	6.4063 <sup>b</sup> (2.5421)	-60.4640 <sup>a</sup> (17.1152)	49 [0.59]
Private enforcement	31.3362 <sup>a</sup> (10.9988)	-11.8381 <sup>c</sup> (6.6116)	-21.9657 <sup>b</sup> (8.3873)	-9.5959 (9.4372)	4.4770 <sup>b</sup> (1.6585)	5.0403 <sup>b</sup> (2.2561)	-63.7040 <sup>a</sup> (17.3111)	49 [0.61]

a=significant at 1 percent level; b=significant at 5 percent level; c=significant at 10 percent level

**Table IV (continued)**  
**Indices of Securities Regulation and Financial Development**

Ordinary least squares regressions of the cross-section of countries. Robust standard errors in parentheses. All variables are described in Table I.

Securities regulation index:	Independent variables:							N [R <sup>2</sup> ]
	Securities regulation variable	French legal origin	German legal origin	Scandinavian legal origin	Efficiency judicial system	Log GDP per capita	Constant	
<i>Panel C: Initial Public Offerings / Mill. Population</i>								
Supervisor characteristics	1.2657 (0.8776)	-1.1556 <sup>b</sup> (0.4835)	-1.4414 <sup>c</sup> (0.7684)	-1.0349 (0.8847)	0.2045 <sup>c</sup> (0.1089)	0.5261 <sup>a</sup> (0.1660)	-5.0360 <sup>a</sup> (1.5847)	49 [0.44]
Investigative powers	0.8923 <sup>c</sup> (0.4647)	-1.0771 <sup>b</sup> (0.4463)	-1.1530 <sup>c</sup> (0.6453)	-0.7677 (0.7867)	0.2006 <sup>c</sup> (0.1038)	0.4489 <sup>a</sup> (0.1498)	-4.3229 <sup>a</sup> (1.2462)	49 [0.44]
Orders	1.5134 <sup>a</sup> (0.5481)	-0.9208 <sup>b</sup> (0.3968)	-0.9076 (0.5657)	-0.8003 (0.7798)	0.0829 (0.0689)	0.5014 <sup>a</sup> (0.1491)	-3.9891 <sup>a</sup> (1.1290)	49 [0.51]
Criminal sanctions	1.6933 <sup>c</sup> (0.9600)	-0.8676 <sup>b</sup> (0.3927)	-1.3180 <sup>b</sup> (0.5945)	-1.3207 (0.8025)	0.1082 (0.0901)	0.5567 <sup>a</sup> (0.1709)	-4.8075 <sup>a</sup> (1.5591)	49 [0.48]
Public enforcement	2.8129 <sup>a</sup> (0.9918)	-0.7621 <sup>b</sup> (0.3195)	-0.5894 (0.4414)	-0.4773 (0.6019)	0.1730 <sup>b</sup> (0.0831)	0.4616 <sup>a</sup> (0.1343)	-5.2669 <sup>a</sup> (1.4863)	49 [0.52]
Disclosure requirements	2.2600 <sup>b</sup> (0.9858)	-0.3002 (0.5234)	-0.9466 (0.6416)	-0.5038 (0.7231)	0.2608 <sup>b</sup> (0.1245)	0.2992 <sup>c</sup> (0.1597)	-4.5224 <sup>a</sup> (1.2753)	49 [0.48]
Burden of Proof	1.4697 <sup>b</sup> (0.5447)	-0.9245 <sup>c</sup> (0.4936)	-1.4073 (0.7453)	-0.7667 (0.8376)	0.1945 <sup>b</sup> (0.0913)	0.4280 <sup>b</sup> (0.1583)	-4.3408 <sup>a</sup> (1.2092)	49 [0.45]
Private enforcement	2.4819 <sup>a</sup> (0.8962)	-0.4577 (0.4564)	-1.0363 (0.6612)	-0.4021 (0.7197)	0.2489 <sup>b</sup> (0.1014)	0.3171 <sup>b</sup> (0.1370)	-4.6089 <sup>a</sup> (1.2795)	49 [0.48]

a=significant at 1 percent level; b=significant at 5 percent level; c=significant at 10 percent level

**Table V**  
**Securities Regulation in Low and High Judicial Efficiency Countries**

Ordinary least squares regressions of the cross-section of countries. Robust standard errors in parentheses. All variables are described in Table I.

Securities regulation index:	Independent variables:								
	Securities regulation variable	Securities regulation variable	French legal origin	German legal origin	Scandinavian legal origin	Efficiency judicial system	Log GDP per capita	Constant	N [R <sup>2</sup> ]
	Low Efficiency of Judiciary	High Efficiency of Judiciary							
<i>Panel A: External Capitalization / GDP</i>									
Supervisor characteristics	0.0880 (0.2126)	0.4111 <sup>c</sup> (0.2089)	-0.1851 <sup>c</sup> (0.1039)	-0.0301 (0.2361)	-0.0883 (0.2077)	0.0087 (0.0365)	0.1275 <sup>a</sup> (0.0310)	-0.8116 <sup>b</sup> (0.3458)	49 [0.50]
Investigative powers	-0.0102 (0.1093)	0.2671 <sup>b</sup> (0.1080)	-0.1944 <sup>b</sup> (0.0926)	0.0416 (0.2127)	-0.0155 (0.2278)	-0.0042 (0.0387)	0.1144 <sup>a</sup> (0.0277)	-0.5690 <sup>b</sup> (0.2621)	49 [0.49]
Ordering sanctions	0.0886 (0.1069)	0.3538 <sup>b</sup> (0.1333)	-0.1469 (0.0879)	0.0905 (0.2128)	-0.0529 (0.1879)	0.0100 (0.0317)	0.1016 <sup>a</sup> (0.0224)	-0.6097 <sup>b</sup> (0.2362)	49 [0.53]
Criminal sanctions	0.0111 (0.1852)	0.0370 (0.2018)	-0.2161 <sup>c</sup> (0.1081)	-0.1037 (0.2372)	-0.1914 (0.2200)	0.0345 (0.0301)	0.1171 <sup>a</sup> (0.0298)	-0.7799 <sup>a</sup> (0.2329)	49 [0.45]
Public enforcement	0.1928 (0.2081)	0.4769 <sup>b</sup> (0.1908)	-0.1425 (0.0981)	0.0830 (0.2249)	-0.0392 (0.1991)	0.0077 (0.0331)	0.1127 <sup>a</sup> (0.0258)	-0.7599 <sup>a</sup> (0.2823)	49 [0.51]
Disclosure requirements	0.4832 <sup>a</sup> (0.1698)	0.8212 <sup>a</sup> (0.1948)	0.0549 (0.1067)	0.1654 (0.2065)	0.1007 (0.2147)	0.0223 (0.0293)	0.0555 <sup>b</sup> (0.0265)	-0.6724 <sup>a</sup> (0.2119)	49 [0.58]
Burden of proof	0.4944 <sup>a</sup> (0.1363)	0.6561 <sup>a</sup> (0.1649)	-0.0917 (0.0884)	0.0343 (0.2086)	0.0641 (0.1940)	0.0347 (0.0280)	0.0781 <sup>b</sup> (0.0290)	-0.8194 <sup>a</sup> (0.2133)	49 [0.59]
Private enforcement	0.7119 <sup>a</sup> (0.1647)	0.9455 <sup>a</sup> (0.1808)	0.0463 (0.0812)	0.1530 (0.2016)	0.1625 (0.1895)	0.0395 (0.0237)	0.0485 <sup>b</sup> (0.0200)	-0.8223 <sup>a</sup> (0.1837)	49 [0.63]
<i>Panel B: Domestic Firms / Mill. Population</i>									
Supervisor characteristics	10.0295 (14.9840)	9.0213 (15.6270)	-21.1531 <sup>a</sup> (6.9726)	-28.5361 <sup>a</sup> (9.9940)	-19.2144 <sup>c</sup> (11.1817)	3.7579 (2.5964)	7.6610 <sup>a</sup> (2.7285)	-63.9439 <sup>b</sup> (25.4378)	49 [0.57]
Investigative powers	8.7133 (6.4633)	24.3198 <sup>a</sup> (7.7638)	-18.2945 <sup>a</sup> (5.6589)	-15.8922 <sup>b</sup> (7.5397)	-5.5426 (8.8917)	1.4092 (2.0582)	6.8009 <sup>a</sup> (2.3299)	-47.6142 <sup>b</sup> (18.4739)	49 [0.64]
Ordering sanctions	9.0955 (6.3427)	26.3650 <sup>a</sup> (9.3195)	-15.9215 <sup>a</sup> (5.3850)	-15.3396 <sup>b</sup> (7.2457)	-11.0841 (9.6742)	1.2822 (1.1364)	6.7340 <sup>a</sup> (2.1799)	-44.3451 <sup>a</sup> (14.4736)	49 [0.66]
Criminal sanctions	7.0370 (11.2150)	30.0661 <sup>b</sup> (13.9835)	-14.3173 <sup>b</sup> (5.6676)	-21.5654 <sup>b</sup> (8.5663)	-21.1555 <sup>c</sup> (11.7825)	0.6469 (2.0037)	8.7650 <sup>a</sup> (2.8032)	-58.1228 <sup>a</sup> (18.7188)	49 [0.64]
Public enforcement	29.7089 <sup>b</sup> (13.2337)	43.4492 <sup>a</sup> (12.2890)	-14.2587 <sup>a</sup> (4.8880)	-12.7930 <sup>b</sup> (5.7838)	-7.7470 (8.7992)	1.9499 (1.9897)	7.0768 <sup>a</sup> (2.3011)	-64.0221 <sup>a</sup> (21.1103)	49 [0.67]
Disclosure requirements	15.9347 <sup>c</sup> (9.2639)	41.0312 <sup>a</sup> (13.5774)	-9.2101 (6.2099)	-16.3812 <sup>c</sup> (8.2875)	-6.8298 (9.0240)	1.1021 (2.0656)	5.2843 <sup>b</sup> (2.1432)	-41.9520 <sup>b</sup> (16.4759)	49 [0.63]
Burden of proof	21.8459 <sup>a</sup> (7.2568)	16.4909 (12.2729)	-17.9297 <sup>b</sup> (6.8954)	-27.5586 <sup>a</sup> (9.4112)	-15.1769 (10.7955)	4.4941 <sup>b</sup> (2.2183)	6.3268 <sup>b</sup> (2.5475)	-64.5615 <sup>a</sup> (17.7565)	49 [0.59]
Private enforcement	26.8403 <sup>b</sup> (9.9638)	35.1833 <sup>b</sup> (14.6523)	-11.5742 <sup>c</sup> (6.6985)	-20.5055 <sup>b</sup> (8.5769)	-8.0973 (9.4027)	3.3452 (2.1892)	5.2011 <sup>b</sup> (2.3315)	-57.0159 <sup>a</sup> (17.1947)	49 [0.62]

a=significant at 1 percent level; b=significant at 5 percent level; c=significant at 10 percent level

**Table V (continued)**  
**Securities Regulation in Low and High Judicial Efficiency Countries**

Ordinary least squares regressions of the cross-section of countries. Robust standard errors in parentheses. All variables are described in Table I.

Securities regulation index:	Independent variables:								
	Securities regulation variable	Securities regulation variable	French legal origin	German legal origin	Scandinavian legal origin	Efficiency judicial system	Log GDP per capita	Constant	N
	Low Efficiency of Judiciary	High Efficiency of Judiciary							[R <sup>2</sup> ]
<i>Panel C: Initial Public Offerings</i>									
Supervisor characteristics	1.0238 (0.9588)	1.3714 (0.9532)	-1.1350 <sup>b</sup> (0.4991)	-1.4215 <sup>c</sup> (0.7896)	-1.0014 (0.9174)	0.1588 (0.1673)	0.5397 <sup>a</sup> (0.1663)	-4.7771 <sup>b</sup> (1.8105)	49 [0.44]
Investigative powers	0.3831 (0.4284)	1.1858 <sup>b</sup> (0.5559)	-1.0758 <sup>b</sup> (0.4528)	-0.9995 (0.6431)	-0.5584 (0.8081)	0.0522 (0.1201)	0.4883 <sup>a</sup> (0.1543)	-3.5074 <sup>a</sup> (1.2866)	49 [0.45]
Ordering sanctions	0.7946 <sup>c</sup> (0.4110)	1.8596 <sup>b</sup> (0.7004)	-0.8333 <sup>b</sup> (0.3985)	-0.6527 (0.5579)	-0.6173 (0.7748)	0.0195 (0.0734)	0.4643 <sup>a</sup> (0.1474)	-3.2727 <sup>a</sup> (1.0621)	49 [0.52]
Criminal sanctions	0.7562 (0.7509)	2.3113 <sup>c</sup> (1.2156)	-0.6786 <sup>c</sup> (0.3508)	-1.0435 <sup>c</sup> (0.5526)	-1.3180 (0.8119)	-0.0313 (0.1103)	0.6044 <sup>a</sup> (0.1828)	-4.2778 <sup>a</sup> (1.3989)	49 [0.51]
Public enforcement	2.1297 <sup>b</sup> (0.9996)	3.0447 <sup>a</sup> (1.0862)	-0.7177 <sup>b</sup> (0.3290)	-0.4721 (0.4596)	-0.3805 (0.6076)	0.0659 (0.1288)	0.4829 <sup>a</sup> (0.1381)	-4.5921 <sup>a</sup> (1.5757)	49 [0.53]
Disclosure requirements	1.1535 (0.7322)	3.4908 <sup>b</sup> (1.3705)	-0.2127 (0.5404)	-0.5094 (0.6415)	-0.1023 (0.6833)	-0.0643 (0.1387)	0.3361 <sup>c</sup> (0.1777)	-2.6163 <sup>b</sup> (1.0058)	49 [0.52]
Burden of proof	1.1749 <sup>b</sup> (0.5573)	1.7400 <sup>b</sup> (0.7549)	-0.8924 <sup>c</sup> (0.5133)	-1.3007 (0.8142)	-0.6436 (0.9038)	0.1219 (0.1274)	0.4364 <sup>a</sup> (0.1578)	-3.9084 <sup>a</sup> (1.4170)	49 [0.46]
Private enforcement	1.6816 <sup>b</sup> (0.7743)	3.1667 <sup>a</sup> (1.1160)	-0.4107 (0.4455)	-0.7763 (0.6711)	-0.1354 (0.6915)	0.0474 (0.1290)	0.3457 <sup>b</sup> (0.1385)	-3.4183 <sup>a</sup> (1.2311)	49 [0.50]

a=significant at 1 percent level; b=significant at 5 percent level; c=significant at 10 percent level

**Table VI**  
**Public Versus Private Enforcement**

*Panel A: Development of Securities Markets and Corporate Law*

Dependent variable	French LO	German LO	Scandinavian LO	Antidirectors	Efficiency judiciary	Log GDP	Constant	Adj R <sup>2</sup>
External cap/ GDP	-0.2251 <sup>b</sup> (0.0933)	-0.1144 (0.2225)	-0.1915 (0.2160)		0.0375 (0.0251)	0.1159 <sup>a</sup> (0.0288)	-0.7746 <sup>a</sup> (0.2088)	0.4515
External cap/ GDP				0.0941 <sup>a</sup> (0.0314)	0.0469 <sup>b</sup> (0.0238)	0.0992 (0.0243)	-1.1096 <sup>a</sup> (0.2145)	0.4906
External cap/ GDP	-0.0774 (0.0910)	0.0479 (0.2110)	-0.0864 (0.2207)	0.0852 <sup>a</sup> (0.0297)	0.0404 (0.0272)	0.1024 <sup>a</sup> (0.0289)	-1.0264 <sup>a</sup> (0.2195)	0.5045
Domestic firms/ pop	-21.7131 <sup>a</sup> (6.9607)	-30.4385 <sup>a</sup> (10.0948)	-21.2655 <sup>b</sup> (10.6315)		3.2152 <sup>c</sup> (1.6723)	7.7298 <sup>a</sup> (2.6094)	-54.9163 <sup>a</sup> (16.1260)	0.5607
Domestic firms/ pop				5.1939 <sup>b</sup> (2.0872)	5.0990 <sup>a</sup> (1.6335)	3.8476 <sup>b</sup> (1.6915)	-65.7168 <sup>a</sup> (16.2184)	0.4615
Domestic firms/ pop	-20.3818 <sup>a</sup> (7.5910)	-28.9765 <sup>a</sup> (11.1729)	-20.3184 <sup>c</sup> (11.3161)	0.7681 (2.2939)	3.2418 <sup>c</sup> (1.6731)	7.6081 <sup>a</sup> (2.6375)	-57.1857 <sup>a</sup> (17.3125)	0.5616
IPOs/ pop	-1.2398 <sup>b</sup> (0.5027)	-1.7073 <sup>b</sup> (0.7849)	-1.3264 (0.8983)		0.1489 (0.0914)	0.5301 <sup>a</sup> (0.1664)	-3.9129 <sup>a</sup> (1.1640)	0.4129
IPOs/ pop				0.3513 <sup>a</sup> (0.1349)	0.2406 <sup>b</sup> (0.1016)	0.3170 <sup>a</sup> (0.0855)	-4.6529 <sup>a</sup> (1.1512)	0.3615
IPOs/ pop	-1.0193 <sup>c</sup> (0.5570)	-1.4652 <sup>c</sup> (0.8472)	-1.1696 (0.9210)	0.1272 (0.1130)	0.1533 <sup>c</sup> (0.0900)	0.5100 <sup>a</sup> (0.1699)	-4.2886 <sup>a</sup> (1.1714)	0.4186

a=significant at 1 percent level; b=significant at 5 percent level; c=significant at 10 percent level

*Panel B: Public versus Private Enforcement and the Development of Securities Markets*

Dependent Variable	Public enforcement	Private enforcement	French LO	German LO	Scandinavian LO	Antidirectors	Efficiency judiciary	Log GDP	Constant	Adj R <sup>2</sup>
External cap/ GDP	-0.0424 (0.2052)	0.8641 <sup>a</sup> (0.1941)	0.0400 (0.0779)	0.1024 (0.1829)	0.1175 (0.1863)		0.0719 <sup>a</sup> (0.0193)	0.0428 <sup>c</sup> (0.0231)	-0.9965 <sup>a</sup> (0.2099)	0.6215
External cap/ GDP	-0.1087 (0.2146)	0.7529 <sup>a</sup> (0.1799)				0.0288 (0.0313)	0.0630 <sup>a</sup> (0.0194)	0.0634 <sup>a</sup> (0.0188)	-1.0655 <sup>a</sup> (0.1965)	0.6217
Domestic firms/ pop	34.9525 <sup>a</sup> (11.8559)	9.6891 (9.7754)	-12.7244 <sup>b</sup> (5.2565)	-13.9281 <sup>a</sup> (5.0282)	-7.1066 (8.7098)		3.9041 <sup>a</sup> (1.4509)	6.0471 <sup>a</sup> (2.3317)	-74.4588 <sup>a</sup> (18.7739)	0.6670
Domestic firms/ pop	37.3523 <sup>a</sup> (13.3313)	19.0667 <sup>c</sup> (9.7774)				0.5416 (1.9102)	5.6553 <sup>a</sup> (1.3280)	3.6105 <sup>b</sup> (1.7436)	-81.9932 <sup>a</sup> (18.0700)	0.6361
IPOs/ pop	2.2491 <sup>b</sup> (1.0147)	1.0890 (0.6659)	-0.5147 (0.3694)	-0.5191 (0.4430)	-0.2420 (0.6243)		0.2120 <sup>a</sup> (0.0796)	0.3819 <sup>a</sup> (0.1393)	-5.3009 <sup>a</sup> (1.5023)	0.5317
IPOs/ pop	2.3053 <sup>b</sup> (1.0641)	1.4262 <sup>b</sup> (0.6895)				0.0399 (0.1243)	0.2804 <sup>a</sup> (0.0994)	0.2911 <sup>a</sup> (0.0940)	-5.6584 <sup>a</sup> (1.4385)	0.5216

a=significant at 1 percent level; b=significant at 5 percent level; c=significant at 10 percent level

*Panel C: Orders and Investigative Powers versus Private Enforcement*

Dependent variable	Orders	Investigative power	Private enforcement	French LO	German LO	Scandinavian LO	Antidirector	Efficiency Judiciary	Log GDP	Constant	Adj R <sup>2</sup>
External cap/ GDP	0.0172 (0.1214)		0.8190 <sup>a</sup> (0.1950)	0.0366 (0.0820)	0.1162 (0.1805)	0.1195 (0.1882)		0.0697 <sup>a</sup> (0.0216)	0.0453 <sup>c</sup> (0.0246)	-1.0051 <sup>a</sup> (0.1837)	0.6214
External cap/ GDP	-0.0131 (0.1253)		0.7005 <sup>a</sup> (0.1800)				0.0274 (0.0311)	0.0629 <sup>a</sup> (0.0214)	0.0672 <sup>a</sup> (0.0187)	-1.1134 <sup>a</sup> (0.1823)	0.6191
External cap/ GDP		-0.0204 (0.0797)	0.8526 <sup>a</sup> (0.1574)	0.0399 (0.0785)	0.1035 (0.1865)	0.1132 (0.1798)		0.0706 <sup>a</sup> (0.0206)	0.0446 <sup>b</sup> (0.0213)	-1.0043 <sup>a</sup> (0.1920)	0.6215
External cap/ GDP		-0.0613 (0.0933)	0.7347 <sup>a</sup> (0.1528)				0.0286 (0.0318)	0.0590 <sup>a</sup> (0.0209)	0.0676 <sup>a</sup> (0.0201)	-1.0775 <sup>a</sup> (0.1848)	0.6221
Domestic firms/ pop	16.7743 <sup>b</sup> (7.6155)		13.0069 (10.3755)	-14.0786 <sup>b</sup> (5.9314)	-18.0580 <sup>a</sup> (6.8467)	-10.5910 (9.5903)		3.0074 <sup>b</sup> (1.3962)	6.2953 <sup>a</sup> (2.2734)	-59.4082 <sup>a</sup> (16.6058)	0.6496
Domestic firms/ pop	17.2473 <sup>b</sup> (8.2307)		25.4280 <sup>b</sup> (11.6524)				0.6587 (1.8667)	4.8742 <sup>a</sup> (1.3145)	3.2110 <sup>c</sup> (1.6382)	-64.4900 <sup>a</sup> (15.1664)	0.6065
Domestic firms/ pop		13.9850 <sup>a</sup> (5.0379)	21.2029 <sup>b</sup> (10.2098)	-12.4826 <sup>b</sup> (5.6718)	-16.0179 <sup>b</sup> (6.6793)	-4.6128 (8.2923)		4.8784 <sup>a</sup> (1.5008)	4.6376 <sup>b</sup> (2.0605)	-67.2889 <sup>a</sup> (17.1609)	0.6340
Domestic firms/ pop		15.3181 <sup>a</sup> (5.6106)	29.6502 <sup>a</sup> (11.5631)				0.7782 (1.9443)	6.7378 <sup>a</sup> (1.5500)	2.1012 (1.5331)	-74.5990 <sup>a</sup> (15.9992)	0.6069
IPOs/ pop	1.1332 <sup>b</sup> (0.5159)		1.2437 <sup>c</sup> (0.6655)	-0.6090 (0.4119)	-0.7723 (0.5529)	-0.4694 (0.7432)		0.1496 <sup>b</sup> (0.0750)	0.4019 <sup>a</sup> (0.1454)	-4.3187 <sup>a</sup> (1.1977)	0.5195
IPOs/ pop	1.1442 <sup>b</sup> (0.5338)		1.7462 <sup>b</sup> (0.8436)				0.0447 (0.1209)	0.2270 <sup>b</sup> (0.0902)	0.2721 <sup>a</sup> (0.0934)	-4.5717 <sup>a</sup> (1.0955)	0.5029
IPOs/ pop		0.4164 (0.4227)	2.1802 <sup>b</sup> (0.9108)	-0.4768 (0.4557)	-0.8592 (0.5953)	-0.2538 (0.6731)		0.2608 <sup>b</sup> (0.1064)	0.3051 <sup>b</sup> (0.1346)	-4.7156 <sup>a</sup> (1.3194)	0.4898
IPOs/ pop		0.5451 <sup>b</sup> (0.4590)	2.3799 <sup>a</sup> (0.9614)				0.0651 (0.1215)	0.3279 <sup>a</sup> (0.1258)	0.1950 <sup>b</sup> (0.0843)	-4.9744 <sup>a</sup> (1.2567)	0.4740

a=significant at 1 percent level; b=significant at 5 percent level; c=significant at 10 percent level

**Appendix A—Table of Correlations**

	Supervisor characteristics	Investigative powers index	Orders index	Criminal index	Public enforcement index	Disclosure requirements	Burden of proof index	Private enforcement index	English legal origin	French legal origin	German legal origin	Scandinavian legal origin	Antidirectors	Efficiency judicial system	Log GDP per capita	External cap/ GDP	Domestic firms/ pop	IPOs/pop	
Supervisor characteristics	1																		
Investigative	0.4592	1																	
Orders index	0.2796	0.5350 <sup>b</sup>	1																
Criminal sanctions	0.1635	0.0567	0.3533	1															
Public enforcement	0.6158 <sup>a</sup>	0.7812 <sup>a</sup>	0.8277 <sup>a</sup>	0.5291 <sup>b</sup>	1														
Disclosure requirements	0.1441	0.3673	0.4423	0.3547	0.4892 <sup>c</sup>	1													
Burden of Proof	0.3361	0.4295	0.5825 <sup>a</sup>	0.1612	0.5616 <sup>a</sup>	0.5667 <sup>a</sup>	1												
Private enforcement	0.2708	0.4499	0.5786 <sup>a</sup>	0.2920	0.5934 <sup>a</sup>	0.8862 <sup>a</sup>	0.8839 <sup>a</sup>	1											
English legal origin	0.1605	0.2715	0.3787	0.3570	0.4269	0.5350 <sup>b</sup>	0.3091	0.4774 <sup>c</sup>	1										
French legal origin	0.1968	0.1286	-0.1779	-0.3445	-0.0792	-0.4657	-0.1754	-0.3629	-0.6599 <sup>b</sup>	1									
German legal origin	-0.2679	-0.3328	-0.2670	-0.1313	-0.3618	-0.0112	0.0004	-0.0061	-0.2846	-0.3235	1								
Scandinavian legal	-0.3175	-0.3121	-0.0255	0.1512	-0.1752	-0.0868	-0.2278	-0.1774	-0.2272	-0.2582	-0.1114	1							
Antidirectors	0.1482	0.2558	0.4335	0.2240	0.3981	0.3761	0.5245 <sup>b</sup>	0.5084 <sup>b</sup>	0.5890 <sup>a</sup>	-0.4463	-0.1925	0.0000	1						
Efficiency judicial system	-0.4311	-0.1955	0.2411	0.2429	-0.0139	0.1650	0.0303	0.1107	0.1826	-0.4742 <sup>c</sup>	0.1611	0.3428	0.2113	1					
Log GDP per capita	-0.3713	-0.1090	0.0573	0.0187	-0.1100	0.2091	0.1007	0.1753	-0.1967	-0.1815	0.3078	0.3059	0.0349	0.6618 <sup>a</sup>	1				
External cap/GDP	-0.0995	0.0747	0.3763	0.1689	0.2175	0.5277 <sup>b</sup>	0.4626	0.5596 <sup>a</sup>	0.2041	-0.4058	0.1828	0.1552	0.3909	0.5771 <sup>a</sup>	0.5646 <sup>a</sup>	1			
Domestic firms/pop	-0.1192	0.2586	0.5288 <sup>b</sup>	0.4352	0.4383	0.5201 <sup>b</sup>	0.3411	0.4870 <sup>c</sup>	0.4060	-0.4430	-0.0528	0.1490	0.3614	0.6149 <sup>a</sup>	0.5043 <sup>b</sup>	0.5120 <sup>b</sup>	1		
IPOs/pop	-0.0332	0.1918	0.4947 <sup>b</sup>	0.4222	0.4134	0.5027 <sup>b</sup>	0.3432	0.4783 <sup>c</sup>	0.3199	-0.3623	-0.0197	0.1152	0.3340	0.5185 <sup>b</sup>	0.4668	0.5877 <sup>a</sup>	0.7321 <sup>a</sup>	1	

a=significant at 1 percent level; b=significant at 5 percent level; c=significant at 10 percent level