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# **The Law and Economics of Self-Dealing**

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### Abstract

We present a new measure of legal protection of minority shareholders against expropriation by corporate insiders: the anti-self-dealing index. Assembled with the help of Lex Mundi law firms, the index is calculated for 72 countries based on legal rules prevailing in 2003, and focuses on private enforcement mechanisms, such as disclosure, approval, and litigation, governing a specific self-dealing transaction. This theoretically-grounded index predicts a variety of stock market outcomes, and generally works better than the previously introduced index of anti-director rights.

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## **1. *Introduction.***

Over the last twenty years, both academic and practical approaches to corporate governance have increasingly focused on the problem of investor expropriation, sometimes also referred to as self-dealing or tunneling. Specifically, those who control a corporation, whether they are managers, controlling shareholders, or both, can use their power to divert corporate wealth to themselves, without sharing it with the other investors. Various forms of such self-dealing include executive perquisites to excessive compensation, transfer pricing, taking of corporate opportunities, self-serving financial transactions such as directed equity issuance or personal loans to insiders, and outright theft of corporate assets (Shleifer and Vishny 1997).

The new emphasis on self-dealing is reflected in both theoretical and empirical work. Earlier research on corporate governance has focused on such problems as managerial consumption of perquisites (Jensen and Meckling 1976), managerial effort (Holmstrom 1979), and over-investment in pursuit of growth (Baumol 1959, Jensen 1986). Modern theory of corporate finance instead focuses on the ability of corporate insiders to divert corporate wealth to themselves, reflected in the diplomatically named “private benefits of control” (Grossman and Hart 1988, Hart 1995, Zingales 1994). Empirically, such diversion of resources from firms to their controllers has been investigated in several contexts, including the U.S. savings and loans crisis (Akerlof and Romer 1993), the Mexican and Asian financial crises (La Porta, Lopez-de-Silanes, and Zamarripa 2003, Johnson et al. 2000a), legal disputes over tunneling (Johnson et al. 2000b), and corporate governance during the transition from socialism (Glaeser, Johnson, and Shleifer 2001). The extent of diversion has also been measured by estimating the private benefits of control from the market pricing of shares with superior voting rights and from the treatment of controlling shareholders in takeovers (Nenova 2003, Dyck and Zingales 2004).

Parallel to this recognition of the importance of corporate self-dealing, economists have followed legal scholars (Clark 1986) in emphasizing the crucial role played by the law in its control. Initial research in this area argues theoretically and shows empirically that differences in legal investor protection across countries shape the ability of insiders to expropriate outsiders, and thus determine investor confidence in markets and consequently their development (Shleifer and Vishny 1997, La Porta et al. 1997, 1998, Shleifer and Wolfenzon 2002). Yet while this research presents several empirical measures of investor protection that predict financial outcomes, it does not focus on self-dealing explicitly. In this paper, we rectify this omission.

What should be the role of the law in addressing corporate self-dealing? One approach is to do nothing, and to count on market forces to sort out the problem. Virtually no society uses this approach: the temptation to “take the money and run” in an unregulated environment is just too great. At the other extreme, a society can prohibit conflicted transactions altogether: all dealings between a corporation and its controllers – or any other entity these controllers also control – could be banned by law. Yet no society finds it practical to use this approach either, perhaps because in many instances related-party transactions actually make economic sense. So what do societies actually do?

In this paper, we explore this question empirically. To this end, we describe a hypothetical self-dealing transaction between two firms controlled by the same person, which can in principle be used to improperly enrich this person. We then ask attorneys from Lex Mundi law firms in 102 countries to describe in detail how each country’s legal system regulates this transaction. In principle, several approaches can be used. One approach is to facilitate private enforcement of good behavior. This approach emphasizes extensive disclosure (sunshine as the best disinfectant), approval procedures for transactions, and facilitation of private litigation

when self-dealing is suspected. In this approach, the government moves beyond laissez-faire and regulates the contracting framework, but leaves enforcement to private parties. Another approach is to rely on public enforcement, including fines and prison terms for self-dealing. From the detailed answers supplied by Lex Mundi attorneys, we construct numerical measures of the intensity of regulation of self-dealing along a variety of dimensions, covering both public and private enforcement. The anti-self-dealing indices are constructed for 72 countries. These data enable us to address three broad sets of questions concerning the regulation of corporate self-dealing in different societies.

First, we ask what factors determine the structure of the regulation of self-dealing in different countries. In previous work, we have argued that the country's legal origin, including the common law, French civil law, German civil law, Scandinavian law, and Socialist law, is an important determinant of the country's strategy for protecting investors. We found systematic differences among legal origins in the protection of both minority shareholders and creditors through corporate and bankruptcy laws (La Porta et al. 1997, 1998, Djankov et al. 2007) and in the regulation of security issuance through security laws (La Porta, Lopez-de-Silanes, and Shleifer 2006). In this paper, we develop measures of investor protection more directly aimed at the control of self-dealing, and examine their variation across legal origins.

Second, we examine whether the anti-self-dealing measures we construct are related to the development of financial markets, and if so which measures are related to which financial outcomes. This enables us to evaluate alternative strategies of regulation of self-dealing from both the scientific and the policy perspectives.

Third, we compare the performance of alternative measures of shareholder protection as predictors of financial development. To this end, we first present revised estimates of the anti-

director rights index of La Porta et al. (1997, 1998) for our larger sample of countries. Several authors have criticized this index for both its *ad hoc* nature (which the creation of our anti-self-dealing index is designed to address), and for several conceptual ambiguities and outright mistakes in coding (Pagano and Volpin 2005, Spamann 2005). Here we address these concerns, and then examine the predictive powers of the revised anti-director rights index, the anti-self-dealing index, and two measures of investor protection derived from securities laws (La Porta, Lopez-de-Silanes, and Shleifer 2006). In addition, we compare the legal predictors of financial development with some alternative candidates, such as taxation, media, and politics.

As a last note, we emphasize that we consider garden-variety self-dealing transactions, in which the controllers of companies make choices that may benefit them at the expense of other investors, but follow the law regarding disclosure and approval procedures. We do not address cases of corporate crime such as Enron or Parmalat. To deter such cases, every country uses harsh criminal punishments. We are interested in a different situation: if a controlling shareholder wants to enrich himself while following the law, how difficult is it for minority shareholders to thwart the deal before it goes through and to recover damages if it is carried out?

## **2. Methodology.**

Our data are based on answers to a questionnaire completed by attorneys from Lex Mundi law firms. Lex Mundi is an association of international law firms with members in 108 countries. We invited Lex Mundi firms to participate in the project and received complete answers from 102 of them. After processing the respondents' answers, we conducted follow-up conference calls to seek clarifications and asked respondents to confirm our coding of the data. The sample we use in this paper is based on the answers of 72 respondents who have confirmed

the validity of our data. The countries included in the sample represent 99.3% of total world market capitalization in 2003.

A key contribution of this paper is to construct an index of the strength of minority shareholder protection against self-dealing by the controlling shareholder (*anti-self-dealing* index). Our earlier index of anti-director rights (La Porta et al. 1997, 1998) was based on an ad-hoc collection of variables meant to capture the stance of corporate law toward shareholder protection. The present index addresses the ways in which the law deals with corporate self-dealing in a more theoretically grounded way. Specifically, we start with a fixed self-dealing transaction, and then measure the hurdles that the controlling shareholder must jump in order to get away with this transaction. The higher the hurdles, the higher the anti-self-dealing index is<sup>1</sup>.

As a first step, we describe to the Lex Mundi law firms the stylized transaction between two companies (“Buyer” and “Seller”) illustrated in Figure I. We specify that Mr. James owns 90% of Seller and 60% of Buyer, and that the latter is a publicly-traded firm. James is a director of Buyer, has appointed 2 directors to Buyer’s 5-member board of directors, and his son is its CEO. Seller operates a chain of retail hardware stores and has recently shut down many stores. As a result, some trucks in Seller’s fleet are not being used. James proposes that Buyer purchases Seller’s idle trucks for a cash payment equivalent to 10% of Buyer’s assets (the transaction).<sup>2</sup> He argues that Buyer could use additional trucks to expand its sales. All required approvals are obtained and all mandatory disclosures are made. If allowed to vote, James casts the deciding vote in favor of the transaction. James is on both sides of the transaction and could

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<sup>1</sup> A possible limitation of this methodology is that the law on the books, which we measure, does not reflect the full legal environment, and that the practice of enforcement matters as much or more. We control for the general quality of law enforcement in our regressions. Perhaps as important, a decade of research in this area suggests that, while the quality of enforcement surely matters, so do the legal rules themselves. This paper, then, provides further evidence on the potential importance of legal rules, without in any way downplaying enforcement.

<sup>2</sup> We explicitly assume that the transaction is part of Buyer’s ordinary course of business and is not *ultra vires* (i.e., is not outside the power or authority of Buyer Co.).

benefit if Buyer overpays for Seller's trucks. In fact, under our case facts, a \$100 wealth transfer from Buyer to Seller would reduce the value of James' equity in Buyer by \$60 but increase the value of his equity in Seller by \$90. Although the proposed transaction has a possible business purpose, it involves an obvious conflict of interest.

To gather data on the regulation of self-dealing, we designed an extensive questionnaire and tested it on nine Lex Mundi firms. A revised questionnaire was sent to all Lex Mundi firms. The lawyers received the case study and were asked to describe the minimum legal requirements in force in May 2003 regarding: (1) who approves the transactions; (2) what needs to be disclosed to the board of directors or supervisory board, the shareholders, the stock exchange, and the regulators; (3) what are the duties of officers, directors, and controlling shareholders; (4) how the transaction's validity could be challenged; (5) what causes of action are available if Buyer suffers damages; (6) what needs to be proved under each cause of action; (7) who has standing to sue under each available cause of action; (8) availability of direct and derivative suits; (9) access to information and discovery rights; and (10) fines and criminal sanctions.

The lawyers based their answers on all binding (i.e., not voluntary guidelines or codes of best practice) laws and regulations applicable under our case facts and substantiated their answers with references to all relevant legal provisions<sup>3</sup>. In addition, they provided the text of laws, statutes, judicial precedent, and regulatory opinions used to answer our questionnaire. Sources of law typically included: (1) company act; (2) civil and commercial code; (3) case law and judicial precedent; (4) stock market act and regulations; (5) stock exchange listing rules; (6) civil procedure code; and (7) criminal code. We read the relevant laws and coded the respondents' answers. Finally, we emailed our coding of the data to the respondents and held

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<sup>3</sup> We treat all sources of law – from precedents to stock exchange listing rules – equally, even though legal scholarship has often emphasized the differences among them from the perspective of the need for state intervention. Our interest is in the rules rather than in the source of their propagation.



conference calls with every country to confirm our interpretation of their answers and to make sure that our coding of the data is comparable across countries.

### *The Regulation of Self-Dealing*

In theory, the law can regulate a transaction involving conflicts of interest so that it replicates the terms and conditions that would exist in an arm's-length transaction. The law can also empower minority shareholders to seek remedy for expropriation through the courts or to provide fines and criminal sanctions to those who expropriate. Below we describe our approach to organizing the data. The exact definitions of the variables are contained in Table I.

We examine several areas of law relevant to the transaction and summarize them with one index of investor protection against self-dealing and one of public enforcement. To measure the role of *private enforcement*, we keep track of disclosure and approval requirements imposed by law *before* Buyer may legally acquire Seller's trucks and of immediate disclosures after the decision to enter into the transaction has been made. Since even a duly approved and disclosed transaction may damage Buyer, litigation may be necessary to obtain restitution. Accordingly, we also keep track of how easy it is for minority shareholders to obtain redress through the courts when the transaction damages Buyer if all disclosure and approval requirements are met. The last assumption is crucial since the laws of most countries provide harsh penalties for breaking disclosure and approval requirements. Factors that affect the odds that the plaintiff prevails in court include liability standards and the right to compel evidence.

In addition to looking at measuring private enforcement, we capture the strength of *public enforcement* by keeping track of the fines and sanctions that may be applicable to James and those in charge of approving the transaction.

To be more specific, begin with private enforcement. The first area that the law may seek to regulate is the *approval process*. The basic choice is whether the transaction requires approval by disinterested shareholders or alternatively may be approved by the CEO, the board of directors (a majority of whose members were by case assumptions appointed by the controlling shareholder who is on both sides of the transaction), or the shareholder meeting where the controlling shareholder votes. An important assumption in our case facts is that all related parties (i.e., controlling shareholder, CEO, and interested directors) vote in favor of the transaction whenever legally possible even when doing so may expose them to greater litigation risk. Prudence might require greater caution, but we focus on the letter of the law. For this reason, we separate disinterested shareholder approval as the purest case of arms-length endorsement of the transaction.

Another critical way in which the law may seek to regulate the approval process is by mandating extensive disclosures by the company and the related party on the view that "sunshine is the best disinfectant" (Brandeis 1914). We keep track of the extent of disclosures by Buyer and the controlling shareholder before the transaction goes through.<sup>4</sup> Finally, before the transaction is approved, the law may require a review by independent third parties (e.g., financial experts) who make available a report on the transaction and may act as a check on the opportunism of the insiders. We summarize our data on approval requirements and immediate disclosures through an index of *ex-ante private control of self-dealing* by investors.

We do not wish to suggest, in this definition of ex ante control, that the main reason why ex ante disclosure and shareholder voting might work is the sophistication of small shareholders.

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<sup>4</sup> Empirical studies of disclosure center on the effect of disclosure requirements imposed by securities laws on stock market outcomes. The early empirical literature was inconclusive (Stigler 1964, Benston 1973). Recent studies find that mandatory disclosure rules are associated with larger stock markets in a cross-section of countries (La Porta et al. 2006) and higher market valuations in the US (Greenstone et al. 2006).

These practices might instead work because, when problematic deals are publicly disclosed, they are criticized in the press (Dyck and Zingales 2004) or stimulate the activism of large outside shareholders (Shleifer and Vishny 1986). Each of these mechanisms is less likely to come into play when self-dealing transactions are only disclosed to and approved by the board.

The second area that the law may seek to regulate is the *ease* with which minority shareholders can *prove wrongdoing*. First, disclosure requirements in annual reports and periodic filings may facilitate the scrutiny of related-party transactions by outside shareholders. The extent of such disclosure varies across jurisdictions.

Second, in most jurisdictions, any damage that the transaction causes is assigned to Buyer rather than to any individual shareholders. Since Buyer is unlikely to pursue legal action that would harm its controlling shareholder, we measure the obstacles (e.g., high ownership requirements) faced by minority shareholders to gain standing to sue on behalf of Buyer. The cost of private enforcement increases with the obstacles faced by minority shareholders to sue derivatively.

Third, courts may void the transaction in cases of approval that is in bad faith or negligent, or alternatively when the transaction is merely unfair or involves a conflict of interest and damages the company. Similarly, James and Buyer's directors may be liable for damages if it can be proved that: (1) they acted in bad faith; or (2) they acted with negligence; or (3) that the transaction was unfair or involved a conflict of interest. Private enforcement is more costly when plaintiffs need to prove bad faith on the part of James or directors than when they are merely required to show that the transaction involved a conflict of interest.

Fourth, plaintiffs are more likely to prevail if *access to evidence* is extensive. We consider three aspects of access to evidence: 1) whether plaintiffs can request the court to

appoint an inspector to examine the affairs of the company; 2) whether plaintiffs must identify (e.g., by providing title and author) the specific documents that they seek to review; and 3) whether plaintiffs can directly question defendants and non-parties in court. We combine our proxies for ex-post disclosure and the ease of proving wrongdoing into an index of *ex-post private control of self-dealing*.

Finally, we create an *anti-self-dealing index* by averaging the indices of ex-ante and ex-post private control of self-dealing.

We next consider *public enforcement*. The law may deter wrongdoing by sanctioning the controlling shareholder and those who approved the transaction with fines and prison terms. We collect data on public enforcement under two alternative scenarios. First, we measure the sanctions that apply to James and those who approved the transaction if all disclosure and approval requirements have been met. In this situation, fines and criminal sanctions apply to behavior ranging from criminal intent to obtain unlawful profits to breaches of duties of care and loyalty. To illustrate the scope of such sanctions, consider an example. Under our case facts, James abstains from a board vote on the proposed transaction if legally required to do so. While abstaining from voting, James can still influence other members of the board to approve the transaction so that he can obtain a personal benefit at the expense of the company. In Belgium, the directors who approved the transaction – but not James – will face criminal sanctions for misuse of company assets. James does face criminal sanctions in Sweden if he intentionally caused damage to the company. The scope of criminal sanctions is wider in Germany where members of the management board can be criminally liable for breach of trust if they violate their duty to care for the assets of the company and the company suffers damages. We keep track of maximum fines and prison terms applicable for such violations of the law.

In addition, most countries impose severe criminal sanctions when the transaction has been approved in violation of the law. We keep track of the prison term that applies to James if – in violation of the law of most countries -- he does not disclose his conflict of interest and Buyer carries out the transaction.

### ***3. Regulation of Self-Dealing Across Countries.***

Table II presents our data on approval and immediate disclosure requirements. Countries are arranged by legal origin, and we report the means for each legal origin and the tests of the differences in these means.

Two examples, Italy and the UK, illustrate our data and empirical approach. Italy ranks 35<sup>th</sup> on our anti-self-dealing index, and is representative of civil law countries. The UK ranks 3<sup>rd</sup>, and most common law countries (but not the US) model their regulation of self-dealing on the UK. Briefly, related party transactions in Italy are approved by disinterested directors, not shareholders. Most of the disclosure regarding related party transactions takes place in periodic filings. When related-party transactions cause damage to the firm, the cost of private litigation is very high. In contrast, related-party transactions in the UK are reviewed by independent financial experts and approved by disinterested shareholders. Extensive disclosure takes place both before and after the transaction is approved. However, as in Italy, litigation in the UK is costly. To substantiate these claims, we next discuss these two countries in more detail.

In Italy, James, as an interested director of Buyer, has to notify the other directors as well as the internal auditor of his interest in the transaction (i.e., his relation to and ownership in Seller), and abstain from participating in the decision. Moreover, because James is a director of Buyer, the transaction must be approved by Buyer's disinterested directors – but not

disinterested shareholders. In addition, Buyer's internal auditor is required to attend the meeting of the board of directors and review the transaction.

Once the board of directors approves the transaction, Buyer has fifteen days to make public a document describing it. This document must include: (1) a description of the assets purchased by Buyer; (2) the nature and amount of consideration paid by Buyer to Seller; (3) an explanation or justification for the price paid by Buyer for Seller's assets; (4) the fact that James owns 60% of Buyer; (5) the fact that James owns 90% of Seller; and (6) all facts about the transaction that a reasonable person would believe to be material.

Gaining standing to sue is straightforward in Italy. Any shareholder or group of shareholders owning 5% of the shares in the company may sue the directors on behalf of Buyer. However, shareholders would rarely exercise their right to sue as their odds of prevailing in court are slim. First, the transaction cannot generally be voided or rescinded provided that it was approved by disinterested directors and all required disclosures were made. Second, holding disinterested directors liable for damages requires proving that they acted negligently and that their actions caused damages to Buyer. Italian courts have stated that, generally, directors cannot be held liable on the merit of their actions, provided that they acted with care, diligence and in a professional manner. Third, James cannot be held liable if he has abstained from voting.

Shareholders in Italy may have a hard time gaining access to the information required to prove that Buyer's disinterested directors acted negligently. First, in case of a well-founded suspicion of serious irregularities in directors' conduct, shareholders holding 5% of the shares can report the facts to the court. The court can then order an investigation of the Company's management at the expense of the claiming shareholders. Second, the plaintiff's request for documents must specifically identify the document(s) sought (e.g., indicate title, author, date,

and contents). Third, the Judge – not the plaintiff -- is in charge of questioning non-party witnesses. Fourth, normally parties (e.g., plaintiffs) are not permitted to give evidence in the case. When they are allowed to testify, the questioning of parties follows the same procedures as that of non-parties.

Criminal sanctions and fines generally apply in case of fraud. James may be convicted for up to three years if he does not disclose his conflict of interest and the transaction is carried out by Buyer. In contrast, criminal sanctions and fines are unavailable if all disclosure and approval requirements have been met.

To wrap up the review of Italy, the regulation of self-dealing in Italy is solely based on trusting disclosure after the fact and on disinterested directors doing the “right thing”. In this regard, disinterested directors are unlikely to be found negligent if they lend their support to a transaction which, while favoring James, has a plausible business purpose. At the same time, disinterested directors owe their position on Buyer’s board to James.

In the U.K., modern regulation of self-dealing evolved from the common law equitable rule that directors, being subject to fiduciary duties, could not enter into engagements with their company when they had or could have had a conflicting personal interest or a conflict with the interests of those they were bound to protect. This “no conflict” rule was subject to an important exception: conflicted contracting was permitted provided that the conflict of interest was disclosed in advance to the shareholders, who then approved the transaction. The scope of this rule was enormous. The requirement of shareholder approval did not require showing an actual conflict of interest between the company and the director (a potential for conflict was enough). Nor was it necessary to show that the conflict had an impact on the terms of the transaction. All self-dealing transactions required shareholder approval even if they appeared fair.

As discussed in Davies (2002), during the nineteenth century the rule of equity lost its bite as courts came to accept that shareholder approval for self-interested transactions could be granted in general, rather than for specific transactions, in the articles of association. Provisions began to appear in these articles permitting the board to contract on behalf of its members. But legislators stepped in to put constraints on self-dealing. Statutes and regulations currently in force require that our hypothetical transaction be approved by both Buyer's board of directors and its shareholders for two reasons (1) because it is a substantial property transaction (i.e., exceeds £100,000 or 10 per cent of the company's asset value) involving directors, and (2) because it is a transaction with a related party<sup>5</sup>. Moreover, under stock exchange listing rules, James must abstain from voting at the shareholder meeting. Extensive mandatory disclosures ensure that disinterested shareholders are knowledgeable about the transaction before they vote to approve it. Specifically, Buyer must send a circular to shareholders containing not only all material information regarding the nature and extent of any interests of its directors in the transaction, but also a statement by the disinterested directors that the transaction is fair and reasonable and that the directors have been so advised by an independent adviser acceptable to the UK Listing Authority. Finally, James and any director who is in any way directly or indirectly interested in the proposed contract must make "full and frank" disclosure of the existence and nature of that interest at a board meeting.

Once the transaction is approved by shareholders, the next annual report must contain the particulars of its principal terms (including the director's name, the nature of his interest, and the value of the transaction).

If the transaction is properly approved with full disclosure, disgruntled shareholders will find it hard to challenge it in court. They must first gain standing to sue. In principle, any

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<sup>5</sup> Section 320 of the Companies Act of 1985 and 11.4 of the Listing Rules.



shareholder may sue James and the directors on behalf of Buyer if there has been a fraud on the minority (i.e., the majority of the shareholders succeeded in expropriating at the expense of the minority the money, property or advantages of the company) and the wrongdoers are in control of the company. Proving fraud is complicated and rarely tried. Plaintiffs may also have trouble persuading a court that James is “in control” if a majority of disinterested shareholders have voted for the transaction.<sup>6</sup> If minority shareholders win, the court may make any order – including rescission -- it sees fit to give them relief when the company is run in a manner unfairly prejudicial to their interests. Courts may also hold James liable if he uses his powers to benefit himself at the expense of the company. Finally, shareholders may recover profits and damages from directors who failed to exercise adequate care and skill or had a conflict of interest and failed to act in the best interest of the company. In general, English courts do not correct a “bad bargain” but do intervene in fraud. In practice, this means that, absent a failure to disclose material information, directors are unlikely to face liability when the transaction was reviewed by independent financial experts and approved by disinterested shareholders.

Aggrieved shareholders in the UK have extensive access to information both before and during proceedings. First, shareholders may request that the Secretary of State appoint an inspector if the company’s affairs are being or have been, *inter alia*, conducted in a manner which is unfairly prejudicial to some shareholders. Second, once in court, the plaintiff does not have to specifically identify the document sought (by indicating the title, author, date, etc) but can rather request categories of documents pertinent to the case. Third, the claimant can cross-examine both a defendant and a non-party witness on his witness statement or any other evidence he has given in direct examination without prior approval by the court of the questions posed.

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<sup>6</sup>We follow our respondents and code UK standing to sue as 1, since it is possible to sue. In reality, dissenting shareholders have a hard time gaining standing. The results do not change if we change coding for the UK.

James faces stiff criminal sanctions (7 years) if he does not report his conflict of interest. In contrast, absent fraud or breach of the law, no criminal sanctions or fines apply to either James or Buyer's directors.

In summary, the strength of the regulation of self-dealing in the UK lies in the heightened scrutiny of transactions involving related parties before they may be approved rather than in favoring litigation by minority shareholders. This has led legal scholars to remark that "...judicial assessment of the fairness of self-dealing transactions has not been a significant part of British law" (Davies, 2002, page 171). In fact, minority shareholders face a high burden of proof in challenging the transaction *because* it was approved by disinterested shareholders with both the advice of independent financial experts and full disclosure of all material information.

The difference between Italy and the UK is representative of broader patterns. Turning to Table II, the most pronounced differences are between civil and common law countries. Differences among civil law systems are seldom statistically significant and we do not focus on them. Disinterested shareholders must approve the transaction in 48% of common law countries but only 16% of civil law countries. In contrast, the CEO may single-handedly approve the transaction in 20% of civil law countries but never in common law countries.

Turning to disclosure, we keep track of the disclosures that need to be made by Buyer as well as by James before the transaction is approved. The disclosure indices range from 0 (no disclosure) to a perfect score of 1 (full disclosure). Buyer is required to make full disclosure in 57% of common law countries, but in only 25% of civil law countries. This pattern is reflected in the index of disclosure requirements by Buyer, which takes value of 0.62 in common law countries and 0.37 in civil law ones. Similarly, James also faces more extensive disclosure requirements in common law countries than in civil law ones (0.95 vs. 0.55). Consistent with

this pattern, an independent review of the transaction is required in 48% of common law countries but only 24% of civil law ones. We summarize these results with the index of ex-ante disclosure requirements. This index ranges from 0 in Austria and Ecuador to 1 in Chile and the UK, and averages 0.68 in common law countries but only 0.38 in civil law ones.

The index of *ex-ante* private control of self-dealing summarizes the approval and disclosure requirements for our hypothetical transaction. Common law countries typically require both extensive disclosures and the approval of the transaction by disinterested shareholders (the ex-ante private control of self-dealing index equals 0.58). In contrast, civil law countries typically have fewer disclosure requirements and entrust the approval of self-dealing transactions to the CEO or the board of directors (the ex-ante index equals 0.27).

Table III presents our data on the *ease* with which minority shareholders may *prove wrongdoing* by James and the approving body. The index of disclosure in periodic filings ranges from 0 (no disclosure) to a perfect score of 1 (full disclosure). Buyer is required to make full disclosure in 43% of common law countries, but in only 12% of civil law ones. Shareholders controlling 10% of the stock can sue James and the other directors in 90% of common law countries and in roughly 80% of Scandinavian and German legal origin countries. In contrast, shareholders have standing to sue in only 56% of French civil law countries. Rescinding the transaction is impossible in 66% of civil law countries and requires proving fraud in the remaining 28%. In contrast, only two common law countries make rescission is unavailable, and only additional four limit it to cases of fraud. In the remaining fifteen, plaintiffs face a lower hurdle than fraud to rescind the transaction.

Likewise, it is typically easier to hold James and members of the approving body liable in common law countries than in civil law ones. For example, James may be held liable if the

transaction is unfair or prejudicial – the least demanding standard – in 6% of civil law countries and 52% of common law ones. Here Scandinavian legal origin countries are an exception among civil law countries: it is significantly easier to hold James liable in Scandinavian civil law countries than in French and German civil law ones. *Access to evidence* is also sharply higher in common law countries than in civil law ones (0.75 vs. 0.49). Once again, Scandinavian legal origin countries are an exception among civil law countries: *access to evidence* in Scandinavian legal origin countries is comparable to that in common law countries. The index of *ease of proving wrongdoing* summarizes the litigation variables. It ranges from 0.05 in El Salvador to 1.0 in New Zealand and Singapore. Based on the index of *ease of proving wrongdoing*, litigation is significantly easier in common law countries than in civil law ones (index of 0.70 vs. 0.39).

The index of *ex-post private control of self-dealing* encapsulates the disclosure requirements after the transaction is approved and the *ease of proving wrongdoing*. It shows that disclosures requirements are more stringent and it is easier for plaintiffs to prove wrongdoing in court in common law countries than in civil legal origin ones (score of 0.74 vs. 0.43).

Finally, we average the ex-ante and ex-post indices of private control of self-dealing and create an “*anti-self-dealing*” index. The index is sharply higher in common law countries (0.66) than in civil law ones (0.35). Consistent with this pattern, the anti-self-dealing index is lowest in Ecuador (0.08) and highest in Singapore (1.00).

Interestingly, the regulation of self-dealing in the US and France depart in important ways from the patterns of their respective legal families. The US does not require shareholder approval for related-party transactions and instead emphasizes litigation to protect minority shareholders against self-dealing. France allows related party transactions to be carried out

without shareholder approval *if* they take place on “normal” terms. However, it is easy to challenge related-party transactions that take place without shareholder approval.

To be more specific, under Delaware law, the transaction may be approved by the board of directors. In fact, James may even participate in the decision. However, challenging the transaction in court is very easy if, as we assume, interested directors participate in the decision. In view of the fact that James controls both sides of the transaction, a shareholder would start off with a case in which Buyer’s board would have the difficult task of proving fair dealing and fair price (i.e., the “entire fairness” of the transaction).<sup>7</sup> Fair dealing covers such questions as when the transaction was timed, how it was initiated, structured, negotiated, disclosed to the directors, and how the approval of the directors was obtained. Fair price relates to the economic and financial considerations of the proposed transaction, including all relevant factors. Directors must then show “entire fairness,” where all aspects of the issue are examined. Here, unlike in the UK, the image of a “smell test” is a fitting metaphor for describing the work done by the judge in examining whether the transaction is entirely fair.

In France, agreements between Buyer and, among others, 10% shareholders must first be approved by the board of directors and then by disinterested shareholders. However, no special approval requirements are necessary for agreements “... entered into subject to normal conditions”. In our empirical work, we assume that the transaction is approved by Buyer’s CEO as if its terms were “normal” (i.e. the transaction is approved in accordance with minimum legal requirements). In practice, bypassing the approval requirements legally prescribed for transactions between Buyer and James may not be wise since such agreements may be cancelled

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<sup>7</sup> We assume that the transaction is approved in accordance with minimum legal requirements. The Buyer’s board of directors could seek shareholder approval of the transaction. Approval by either disinterested shareholders or a special committee of disinterested directors would shift the burden of the proof to the plaintiff, but the standard of review would remain entire fairness. See *Weinberger v. UOP, Inc.*, 457 A.2d 701, 711-12 (Del. 1983).

if they have prejudicial consequences for the company. In sum, the requirement to obtain shareholder approval for related party transactions is easy to avoid in France. However, related-party transactions are easy to challenge if they are not approved by shareholders. In practice, shareholder approval is almost always sought.

Turning to public enforcement, Table IV shows what happens when all approval and disclosure requirements are met, but James or the approving parties breach their duties to the company. Those who approved the transaction are subject to fines in 46% of the sample countries. In addition, on average, they may be imprisoned for about two years. Interestingly, prison terms for those who approve the transaction are more severe in civil law countries than in common law ones. Sanctions on James are even less severe than on the approving body and show no variation across legal origin. Perhaps it is not surprising that James faces minimal criminal sanctions (1.9 years). The more surprising result is that James is seldom subject to fines (36% of the sample). The index of public enforcement summarizes our data on sanctions. It shows no variation across legal origins.

If James does not disclose his conflict of interest and his son the CEO carries out the transaction without Board or Shareholder approval, James can be convicted to 4.6 years in prison. Criminal sanctions are prevalent (86% of the countries) when the transaction is carried out secretly. There is no variation across legal origins in the severity of this sanction.

One may wonder whether differences in the regulation of self-dealing can be explained by differences in income levels. For example, rich countries may optimally choose to regulate self-dealing whereas poor countries may not be able to afford to do so. The answer, however, is no. The correlation between anti-self-dealing and (log) GDP per capita is a statistically insignificant 0.16 (see the appendix).

#### ***4. Regulation of Self-Dealing and Stock Market Development***

We are interested in linking the regulation of self-dealing to measures of the development of stock markets. We use five indicators of stock market development. The first is the average ratio of stock market capitalization to GDP for the period 1999-2003. In theory, public firms are larger, more valuable, and more plentiful in countries with better protection of shareholders (Shleifer and Wolfenzon 2002). The ratio of stock market capitalization to GDP encapsulates these predictions. The second variable is the (median) premium paid for control in corporate control transactions for the period 1990-2000. In several theoretical models, this variable has been interpreted as a measure of private benefits of control, which are higher in countries with weaker investor protection (Grossman and Hart 1988, Nenova 2003, Dyck and Zingales 2004).

The third variable is the average number of domestic publicly-traded firms in each country relative to its population for the period 1999-2003. The fourth is the average value of initial public offerings in each country relative to its GDP for the period 1996-2000. Both of these variables should rise with investor protection (Shleifer and Wolfenzon 2002). The fifth and final variable is a proxy for ownership concentration among the largest firms in the country. Both theory (Shleifer and Wolfenzon 2002) and prior evidence (La Porta et al. 1998, La Porta, Lopez-de-Silanes, and Shleifer 1999, Claessens, Djankov, and Lang 2000, Faccio and Lang 2002) show that ownership concentration is lower in countries with better investor protection.

Consistent with our previous work, there are pronounced differences in financial development across legal families. Compared to French civil law countries, common law countries have sharply more valuable stock markets relative to their GDPs (85.5% vs. 42.0%), a lower value of control (4% vs. 16%), more listed firms per million people (32.6 vs. 19.6, although statistically insignificant), more IPOs relative to their GDPs (3.7% vs. 1.7%), and less

concentrated ownership (44% vs. 55%). Stock markets in German and Scandinavian law countries are also generally less developed than in common law countries but this pattern is less systematic than for French civil law countries. In particular, German and Scandinavian law countries have ownership concentration and IPO activity comparable to those of common law countries. In addition, the number of listed firms per million people is higher in Scandinavian legal origin countries than in common law countries (69.4 vs. 32.6). In sum, for most indicators, stock markets are best developed in common law countries. The development of stock markets in civil law, particularly French civil law, countries lags behind that of common law countries.

We first consider the effect on market capitalization and block premium of each of the six aspects of the regulation of self-dealing transactions: (1) approval by disinterested shareholders; (2) disclosure requirements before the transaction may be approved; (3) index of ex-ante private control of self-dealing; (4) disclosure requirements in periodic filings; (5) ease of proving wrongdoing; and (6) index of ex-post private control of self-dealing. All specifications include logarithm of per capita income<sup>8</sup> and the efficiency of the judiciary as measured by the number of days to resolve a commercial dispute (Djankov et al. 2003a).

To begin, Table V shows that the efficiency of the judiciary is associated with larger stock markets (Panel A) and a lower block premium (Panel B), while income per capita is associated with larger stock markets but not with a lower premium. The key result in Panel A of Table V is that all six measures of the regulation of self-dealing are statistically and economically significant predictors of stock market development. Figures II and III illustrate the relationship between stock market to GDP ratio and ex-ante and ex-post private control of self-dealing, respectively. The estimated coefficients imply that a two-standard deviation increase in the indices of ex-ante and ex-post private control of self-dealing is associated with an

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<sup>8</sup> Results are qualitatively similar with the log of GDP per capita in constant purchasing power parity dollars.



increase in market to GDP ratio of 32 and 34 percentage points, respectively. These effects are economically large: the sample average stock-market-capitalization-to-GDP ratio is 59%.

In Figures II and III, Switzerland and Hong Kong are major outliers. Switzerland plays a key role in making the results *weaker* than they would be otherwise. Switzerland's legal environment, from the perspective of disclosure, approval, and the burden of litigation is extremely friendly to insiders and hostile to outside shareholders. Yet Switzerland has an extremely valuable stock market. We might have missed some important legal protection of shareholders in Switzerland, or it might have developed mechanisms for protecting minority shareholders separate from the law. Alternatively, the enormous investment resources of the Swiss banks might have artificially inflated the value of its stock market.<sup>9</sup>

The results on block premium are also interesting (Panel B of Table V). Five measures of the regulation of self-dealing are robust predictors of lower block premium (the exception is difficulty in proving wrongdoing). Consistent with the results on stock-market-to-GDP, the regulation of self-dealing has a large impact on private benefits. Figures IV and V illustrate the results for the relationship between block premium and ex-ante and ex-post private control of self-dealing, respectively. The estimated coefficients imply that increasing the ex-ante private control of self-dealing by two-standard deviations is associated with a reduction of 9% points in the median block premium -- a large effect since the block premium averages 11% in our sample. Similarly, a two-standard deviation improvement in the ex-post index of private control of self-dealing is associated with an additional reduction of 10% in the median block premium.

Table VI shows the effect of the indices of ex-ante private control of self-dealing (Panel A), ex-post private control of self-dealing (Panel B), and anti-self-dealing (Panel C) on our five

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<sup>9</sup> More generally, one might be concerned that the results are driven by extreme observations. However, the results are qualitatively similar if we cap the stock market capitalization of four extreme observations on each side. The results are also qualitatively similar when we run robust regressions.

indicators of the development of stock markets (Table VI also includes the results on stock market capitalization and block premium reported in Table V). All three measures of the regulation of self-dealing are statistically significant for stock-market-capitalization-to-GDP, block premium, and IPOs-to-GDP. In contrast, both the ex-post private control of self-dealing index and the overall anti-self-dealing index are significant for (log) firms per million inhabitants. Finally, only the ex-post private control of self-dealing matters for ownership concentration. Below we discuss the economic significance of these results.

We have already noted that the effects of raising the ex ante and the ex post anti-self-dealing indices on the stock market to GDP ratio and the block premium are economically large. The same is obviously true for the overall anti-self-dealing index. Figure VI shows that the block premium is very high in Brazil and Mexico (49% and 47%, respectively), two countries for which the anti-self-dealing index is low (0.29 and 0.18, respectively). Excluding both countries does not alter the statistical significance of the results.

Both the ex-post control and the anti-self-dealing indices have a significant effect on the (logarithm of the) number of domestic firms per million inhabitants. A two-standard deviation in the ex-post private control of self-dealing is associated with a 67% increase in the number of domestic firms. Similarly, as illustrated by Figure VII, a two-standard deviation increase in the anti-self-dealing index is associated with a 51% increase in the number of domestic firms.

All three indices of the regulation of self-dealing have a significant effect on the IPOs-to-GDP ratio. The estimated coefficient implies that increasing ex-ante private control of self-dealing by two-standard deviations is associated with an increase in the IPOs-to-GDP ratio of 1.7%. This effect is very large since the sample mean of IPOs-to-GDP is only 3.0%. Similarly, the estimated coefficient implies that increasing ex-post private control of self-dealing by two-

standard deviations is associated with an increase in the IPOs-to-GDP ratio of 1.8%. Finally, as illustrated by Figure VIII, the predicted effect of improving the anti-self-dealing index by two standard deviations is an additional 2.0% in the IPOs-to-GDP ratio.

Ex-ante control of self-dealing does not lower ownership concentration (this result does not seem to be driven by a few outliers). In contrast, increasing the ex-post self-dealing index by two standard deviations is associated with a reduction of 9% in ownership concentration. To interpret this magnitude, note that the average ownership concentration in our sample is 47%.

A skeptic may worry that our indices of the regulation of self-dealing data may depend on our method of aggregating the sub-indices. One way to address this concern is to use principal components analysis to build indices of ex-ante and ex-post regulation of self-dealing as well as an aggregate anti-self-dealing index. The results are qualitatively similar to those in Table VI. Interestingly, the first principal component of anti-self-dealing is significant in the ownership concentration regression but the index itself is not. These results should alleviate concerns about aggregation.

Another concern with our findings on the effect of private enforcement rules on the development of stocks markets is endogeneity. To address this concern, we can use legal origin, which is clearly exogenous, as an instrument. However, as discussed by Glaeser et al. (2004), the use of instrumental variables in this context is problematic, since a valid instrument must not only be exogenous, but also uncorrelated with the error term. Since legal origin influences other aspects of the legal environment which in turn affect financial development (including securities laws or other elements of corporate law), it might not be a valid instrument.

There is no good solution to this problem, but we can show the results that do obtain. To begin, Table VII presents two-stage least square regressions using common law as an instrument

for the anti-self-dealing index. Consistent with our OLS results in Table VI, the anti-self-dealing index is significant in the regressions for stock-market-capitalization-to-GDP, block premium, (logarithm of) firms per million inhabitants, and IPOs-to-GDPs (Panel A). In addition, legal origin is a strong predictor of the regulation of self-dealing. Note also that income per capita predicts the regulation of self-dealing when legal origin is included in the regressions but not in univariate regressions.

To deal with the problem of the validity of the instrument, we have also replaced the anti-self-dealing index with the first principal component of the four available measures of legal protection of shareholders: the anti-self-dealing index, the revised anti-director-rights index (see section 5), prospectus disclosure, and prospectus liability (the latter two variables come from La Porta et al. 2006). The first principal component accounts for roughly 66% of the variation in these four variables. In two-stage least squares results using common law as an instrument, the principal component is statistically significant for all proxies for stock market development except ownership concentration.

Public enforcement is the last area of law we examine. Table VIII shows that neither measure of public enforcement is associated with more developed stock markets. Our proxy for public enforcement when all disclosure and approval requirements have been met is significant, but with the wrong sign, in only one regression (block premium). Figure IX illustrates that there is no relationship between public enforcement and stock market capitalization and that this absence cannot be blamed on outliers. Public enforcement is never significant when James does not disclose his conflict of interest.

Advocates of public enforcement may dismiss these findings by arguing that what deters self-dealing is the likelihood that criminal sanctions are actually imposed (rather than their mere

existence). Unfortunately, we lack data on actual enforcement practices to test this view. As a crude way of capturing the actual enforcement of fines and criminal sanctions, we run separate regressions for rich (above median GDP per capita) and poor countries (below median GDP per capita). Public enforcement measured under the assumption that all disclosures and approval requirements have been met is never a significant predictor of stock market development.<sup>10</sup> Ownership concentration in *poor* countries is the only measure of financial development that is predicted by our proxy for public enforcement when the transaction is approved without disclosure. In sum, with the caveats that public enforcement may be measured with error and that it may matter in other situations, we find no evidence that public enforcement matters.

Overall, the evidence shows that a high anti-self-dealing index is associated with valuable stock markets, more domestic firms, more initial public offerings, and lower benefits of control. In contrast, the anti-self-dealing index is not reliably associated with ownership concentration (although the index of ex-post control is). Finally, public enforcement does not predict more developed stock markets. One reason to be cautious about the large estimated effect of the regulation of self-dealing on financial development is that this regulation may covary with other legal and non-legal institutions. We examine this issue in the next two sections.

### ***5. Other Measures of Investor Protection.***

In previous work, we have constructed three other measures of investor protection: anti-director rights, disclosure in the prospectus, and prospectus liability. In this section, we examine

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<sup>10</sup> We have also examined the explanatory power of our proxies for public enforcement in the sub-sample of 24 countries that first enforced insider trading laws before 1996 (Bhattacharya and Daouk, 2002). In this sub-sample, we find that public enforcement when the transaction is carried out without disclosure is associated with less ownership concentration. In contrast, public enforcement when the transaction complies with disclosure and approval requirements is associated with *more* ownership concentration and a *higher* block premium.

the robustness of our findings on the effect of anti-self-dealing on the development of stock markets when including these three alternative measures of investor protection. In particular, we are interested in understanding whether the theoretically-grounded anti-self-dealing index works better than the original index of anti-director rights in explaining financial development.

We begin with the anti-director index. The original anti-director rights index, reported in La Porta et al. (1997, 1998), is available for 49 countries and is based on laws in force circa 1993. This index has been criticized by a number of scholars for its ad-hoc nature, for mistakes in its coding, and most recently for conceptual ambiguity in the definitions of some of its components (Pagano and Volpin 2005, Spamann 2005). Our first step is then to describe and present a revised index of anti-director rights for 72 countries based on laws and regulations applicable to publicly-traded firms in May 2003. The revised index relies on the same basic dimensions of corporate law, but defines them with more precision.

Both the original and the revised anti-director rights indices summarize the protection of minority shareholders in the corporate decision-making process, including the right to vote. The index covers the following six areas: (1) vote by mail; (2) obstacles to the actual exercise of the right to vote (i.e., the requirement that shares be deposited before the shareholders' meeting); (3) minority representation on the Board of Directors through cumulative voting or proportional representation; (4) an oppressed minority mechanism to seek redress in case of expropriation; (5) pre-emptive rights to subscribe to new securities issued by the company; and (6) right to call a special shareholder meeting. The general principle behind the construction of the revised anti-director rights index is to associate better investor protection with laws that explicitly mandate, or set as a default rule, provisions that are favorable to minority shareholders. We recognize that firms may, in their charters, opt out of the default rules set in the law. Firms may also enhance

investor protection by including in their charters provisions favorable to shareholders. However, it has been shown theoretically (Bergman and Nicolaievsky 2007) and established empirically – including in this paper – that the actual rules do matter for financial development.

Methodologically, the key difference between the original and revised indices of anti-director rights lies in the treatment of enabling provisions. To illustrate, consider the example of cumulative voting in the US. The Delaware code contains a provision that explicitly allows the certificate of incorporation of any corporation to provide that directors be elected through cumulative voting. In our earlier work, we did not draw a distinction between enabling provisions and mandatory and default rules (Spamann 2005), so our original index of anti-director rights treats the US as having cumulative voting. Arguably, an enabling provision may lower the cost of private contracting. However, we ignore enabling provisions when coding the revised anti-director rights index and now treat the US as not having cumulative voting. We do so because enabling provisions are more prevalent in common than in civil law countries and we want to bias the results against the hypothesis that common law better protects investors.

The revised anti-director rights index is based on six proxies defined on Table IX. First, to make voting easier, shareholders may appoint a proxy to take their place at the shareholders' meeting and vote on their behalf. In many countries, the solicitation of proxies is unregulated and shareholders lack sufficient information to provide specific instructions to the proxy on how to vote on the items on the agenda. In other countries, in contrast, shareholders may vote by mail on each of the items on the agenda through a ballot or proxy form. The regulation of the proxy solicitation process makes it easier for shareholders to both cast informed votes and oppose proposals put forward by directors. Thus our first sub-index reflects the difficulty of making informed votes by mail.

Second, in some countries, the law requires, or permits companies to require, that shareholders who intend to vote at the shareholders' meeting deposit their shares with the company or a financial intermediary. The requirement that shares be deposited is closely related to the existence of bearer shares and is intended to force shareholders to prove their right to vote. This requirement imposes a cost on shareholders as they must obtain a certificate proving their ownership or are unable to sell their shares (i.e., shares are "blocked") or both. Moreover, when the identity of shareholders is unknown, dissenting shareholders face great difficulties forming coalitions with like-minded shareholders before the meeting.

Third, some countries mandate or set as a default rule that shareholders cast all their votes for one candidate for the board of directors or supervisory board (cumulative voting) or provide a mechanism of proportional representation in the board of directors or supervisory board. The effect of cumulative voting and proportional representation is to limit the power of controlling shareholders to dominate the board of directors or supervisory board.

Fourth, some countries provide legal mechanisms that protect minority shareholders against oppressive actions by controlling shareholders. These mechanisms include the right to rescind transactions that are prejudicial to the company or to recover damages suffered by the company in case of prejudicial resolutions of the shareholders' meeting, or decisions of the board of directors, or both. In contrast, in other countries transactions may only be rescinded in case of fraud and shareholders may only seek to recover damages suffered by the company if they can prove that directors acted with negligence, gross negligence, bad faith, or fraud.<sup>11</sup>

Fifth, in some countries shareholders have a preemptive right to buy new issues of stock, which can only be waived by a shareholder vote. In the absence of preemptive rights, insiders

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<sup>11</sup> This fourth component of the anti-directors index is closely related to the sub-index of *ease of proving wrongdoing* in the anti-self-dealing index.



may expropriate minority shareholders by offering shares to related parties, or even to themselves, at below-market prices.

Finally, we consider the minimum fraction of capital or votes that entitles a shareholder to call a shareholders' meeting. Shareholders owning at least 3% of the capital are entitled to call a meeting in Japan, Korea, and Taiwan. In contrast, shareholders must own at least 20% of the capital to call a meeting in Belgium, Venezuela, and Uruguay. Shareholders in firms incorporated in Delaware may not call an extraordinary shareholders' meeting at all unless authorized by the certificate of incorporation or bylaws. Insiders have greater control over the firm where it is more difficult for minority shareholders to call a shareholders' meeting.

The correlation between the revised anti-director rights index and one presented by La Porta et al. (1997, 1998) is 0.60. As in the case of the original index, differences between English and French legal origin countries are extremely pronounced and we discuss them first. English legal origin countries are more likely than French legal origin ones to provide voting by mail (76% vs. 22%), avoid the requirement that shares be deposited (100% vs. 50%), and provide an oppression remedy (90% vs. 28%). Moreover, English legal origin countries require less capital to call a shareholders meeting than do French legal origin ones (9% vs. 11%). In contrast, French legal origin countries are more likely than English legal origin ones to require cumulative voting (34% vs. 10%) and to offer shareholders preemptive rights (91% vs. 52%). The index of anti-director rights aggregates the information contained in these six proxies for investor protection. Consistent with our earlier findings, the index of anti-director rights is sharply higher in English legal origin countries than in French legal origin ones (4.19 vs. 2.91).

Also consistent with our earlier work, there are several differences among civil law families. Specifically, Scandinavian legal origin countries are more likely than French and

German legal origin ones to avoid the requirement that shares be deposited ahead of a shareholders' meeting (100% for Scandinavian countries vs. 50% and 43% for French and German countries, respectively) as well as to provide an oppressed minority mechanism (60% for Scandinavian countries vs. 28% and 32% for French and German countries, respectively). Capital requirements to call a shareholder's meeting in Scandinavian and German legal origin countries (9% and 6%, respectively) are lower than in French (11%) legal origin countries and comparable to those in English legal origin ones (9%). As a result of these differences among civil law families, the index of anti-director rights is lowest in French legal origin countries (2.91) and highest in Scandinavian ones (3.80). In fact, the anti-director index in Scandinavian legal origin countries (3.80) is not statistically different than in English legal origin ones (4.29).<sup>12</sup>

Table X shows the relationship between our five proxies for the development of stock markets and both the original anti-directors variable (Panel A) and the revised one (Panel B). The original anti-director rights index is associated with a higher stock-market-capitalization-to-GDP ratio, a smaller block premium, more domestic firms and IPOs-to-GDP, and less ownership concentration. The revised one, however, is insignificant in the regressions for block premium. The revised index has a large effect on the development of stock markets. For example, a two-standard deviations increase in the anti-director index is associated with an increase in stock-market-capitalization-to-GDP of 23 percentage points (sample mean of 59%), a 92% increase in the number of domestic firms per million inhabitants, an increase of 1.5 percentage points in the IPOs-to-GDP ratio (sample mean of 3%), and a reduction of 7 percentage points in ownership concentration (sample mean of 47%).

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<sup>12</sup> Scandinavian countries have significantly higher income per capita than the rest of the sample (\$29,374 vs. \$9,295). This raises the question of whether the strength of investor protection in Scandinavian countries may simply reflect the fact that they are rich. However, the index of anti-director rights is uncorrelated (0.0718) with (log) GDP per capita (see the correlation table in the appendix).

Table XI presents horse races between the anti-self-dealing index, (revised) anti-director rights (Panel A), and the two variables from the La Porta et al. (2006) study of securities laws: prospectus disclosure (Panel B), and prospectus liability (Panel C). Before presenting the horse-race results, note that the correlations of anti-self-dealing with anti-director rights, disclosure requirements, and prospectus liability are 0.55, 0.67 and 0.42, respectively (see correlation table in the appendix). This suggests that it is going to be difficult to disentangle the effects of the anti-self-dealing index and the disclosure in the prospectus, which is not surprising in light of the fact that both measures heavily focus on disclosure (albeit in different spheres).

When controlling for anti-director rights (see Panel A), the anti-self-dealing index loses significance for firms per capita and IPOs to GDP ratio but remains significant for our two preferred measures of stock market development: stock-market-capitalization-to-GDP and block premium. In the same regressions (i.e., controlling for the anti-self-dealing index), the anti-director rights index loses significance for stock-market-capitalization-to-GDP, IPOs-to-GDP, and ownership concentration and remains significant only for (log) firms per capita. We conclude that the anti-self-dealing index is a more robust predictor of the development of stock markets than the anti-director rights index.

Controlling for disclosure in the prospectus (Panel B), the anti-self-dealing index is never significant. Disclosure in the prospectus, however, is significant in all regressions. Controlling for prospectus liability (Panel C), the anti-self-dealing index remains significant for block premium, (log) firms per population, and IPOs-to-GDP and loses significance for market-capitalization-to-GDP. Prospectus liability is significant in all regressions. The anti-self-dealing index, disclosure in the prospectus, and prospectus liability all matter for the development of stock markets, but the former is a less robust predictor than the latter two.

## 6. *Robustness*

Our main finding is that the regulation of self-dealing varies across legal origins and is associated with more developed securities markets. In this section, we address alternative interpretations of these findings.

To begin, effective tax enforcement can prevent some self-dealing transactions. Our indices of the regulation of self-dealing may be picking up this effect (Dyck and Zingales 2004; Desai, Dyck, and Zingales 2006). To test this hypothesis, we include a subjective measure of the incidence of tax evasion in our specifications. The results on Panel A of Table XII show that tax evasion is significant for stock market capitalization and (logarithm) domestic firms per capita. In contrast, anti-self-dealing is significant only for block premium and nearly significant for IPOs-to-GDP (at the 10.7% level). Tax evasion and anti-self-dealing knock each other out.

One difficulty in interpreting these results is that tax evasion is a subjective variable highly correlated with perceptions (from the 1999 Global Competitiveness Report) of the quality of corporate governance as proxied by the perceived incidence of insider trading (correlation of 0.67) or the perceived quality of financial disclosure (correlation 0.61). To examine whether low tax evasion is capturing effective corporate governance, we pursue two further robustness checks. First, we investigate the robustness of the results on tax enforcement. Specifically, we collect data on three alternative, and arguably more objective, measures of tax evasion: the size of the informal economy, cross-border bank deposits of non-banks by residence of depositor, and assets held by Swiss banks by residence of beneficial owner.<sup>13</sup> Controlling for the anti-self-dealing index, cross-border deposits by non-banks enters significantly in the ownership

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<sup>13</sup> The size of the informal economy is from Djankov et al. (2002). Cross-border deposits by non-banks is from “International Financial Statistics” (October 1997; variable 7xrd). Assets held by Swiss banks in 2003 as fiduciaries for foreign investors are from “Banks in Switzerland 2005” published by the Swiss National Bank. We scale the last two variables by GDP.

concentration regression. However, the estimated coefficients for the three tax evasion proxies are insignificant in the other fourteen regressions.

Second, we include disclosure in the prospectus along with tax evasion in our regressions for the size of securities markets. Controlling for disclosure in the prospectus, tax evasion remains significant both for stock market capitalization and (logarithm) domestic firms per capita (see Panel C). Disclosure in the prospectus is significant in all five regressions. Taken together, these results do not support the view that omitted tax evasion accounts for the strength of anti-self-dealing in explaining the development of securities markets.

Public opinion pressure through the media may also curb private benefits (Dyck and Zingales 2004; Desai, Dyck, and Zingales 2007). This raises a concern that the benefits of disclosure as reflected in our indices come from the effects of the open media working as a watchdog. To address this concern, we include in our regressions a measure of per capita newspaper circulation, as suggested by Dyck and Zingales (2004). Newspaper circulation does affect the (logarithm) number of domestic firms per capita, but it has no effect on other measures of stock market development (Panel C). In contrast, the regulation of self-dealing remains significant in all four regressions. These results do not mean that the media is unimportant for corporate governance, but they help put to rest omitted variable concerns.

Finally, investor protection may be determined by politics rather than legal origin. Pagano and Volpin's (2005) model predicts that proportional electoral systems are conducive to weaker investor protection than majoritarian systems<sup>14</sup>. Table XIII addresses this hypothesis. Panel A shows univariate regressions using common law and proportional representation to explain anti-self-dealing regulation. Consistent with the results on Table III, common law countries have sharply higher anti-self-dealing scores. Moreover, as predicted by Pagano and

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<sup>14</sup> See also Perotti and von Thadden (2006), Roe (2000), and Rajan and Zingales (2003).

Volpin (2005), proportional representation is associated with lower anti-self-dealing scores. When both proportional representation and common law are included in the regression, only the latter is statistically significant.

Multicollinearity makes it difficult to disentangle the effect of proportional representation and common law: the correlation between the two variables is  $-.46$ . To get around this problem, we run univariate regressions for common and civil law countries separately using proportional representation to explain anti-self-dealing regulation (Panel B). Proportional representation is insignificant in both regressions even though, as illustrated by Figure X, it varies considerably within civil law countries. As a final check of whether legal origin is a proxy for politics, we split the sample into countries above and below the median competitiveness of the legislature (Panel C). If common law is a proxy for electoral rules, it should not predict the development of securities markets in non-democratic countries. Instead, we find that common law is a significant predictor of the anti-self-dealing index in both sub-samples. Figure XI illustrates this result. These findings should allay fears that legal origin is a proxy for politics.

In summary, the quality of investor protection, as measured by anti-self-dealing or disclosure in the prospectus, is not merely a proxy for non-legal institutions and politics. Law indeed does seem to matter for finance. Our results do not mean that non-legal institutions and politics are unimportant for the development of stock markets; only that legal rules are not mere proxies for these institutions.

## ***7. Summary and Implications.***

We have constructed a new index of shareholder protection for 72 countries. The index addresses specifically the protection of minority shareholders against self-dealing transactions

benefiting controlling shareholders. As such, it is better grounded in theory than the index of anti-director rights constructed by La Porta et al. (1997, 1998) and revised for this paper. We have found that the anti-self-dealing index exhibits some of the same properties as both the anti-director rights index, and the indices of shareholder protection through securities laws presented in La Porta et al. (2006). Specifically, the index is sharply higher in common law countries than in French civil law countries. The index is also a statistically significant and economically strong predictor of a variety of measures of stock market development across countries. These results support the findings of the earlier work, but also show that theoretically-grounded measures of investor protection are closely tied to financial development. In conclusion, we delineate the implications of these findings in three areas: the measurement of shareholder protection, the interpretation of legal origin, and the design of regulatory strategies.

#### *Implications for the Measurement of Shareholder Protection*

The availability of four measures of shareholder protection, each collected with a different methodology and addressing a different situation, raises an obvious question: what is “the best” measure for researchers to use? The measures of shareholder protection from securities laws appear to “work” best in terms of predicting stock market outcomes, but they are only available for 49 countries. These measures are particularly appropriate for studies of protection of investors buying securities, as opposed to corporate governance *per se*. The revised anti-director rights index and the anti-self-dealing index are available for 72 countries. The former has the advantage of continuity with previous studies; the latter is clearer conceptually, as pertains directly to the pervasive problem of corporate self-dealing (or tunneling). Indeed, this last benefit seems to us to be dispositive. To the extent that self-dealing is *the* central problem of

corporate governance in most countries, the law's effectiveness in regulating this problem is the fundamental element of shareholder protection. This suggests to us that, in general, the anti-self-dealing index is preferred to the anti-director-rights index in cross-country empirical work.

### *Implications for the Interpretation of Legal Origin*

For all the measures of shareholder protection we have considered, there is a pronounced difference between common and French civil law countries. This does not mean that politics, media, or for that matter culture do not affect legal rules – they surely do. But the evidence shows quite clearly that legal origins are not merely proxies for politics or media; they exert large and powerful influences on legal rules. Moreover, our examination of specific legal rules permits some further insight into what explains these differences among legal origins.

Johnson et al. (2000b) conjecture that common law is more suspicious of conflicted transactions than civil law, and subjects them to closer regulatory and legal scrutiny. The results of this paper are broadly consistent with that conjecture. Specifically, common law countries subject related-party transactions to greater disclosure requirements as well as to more arms-length approval, than do French civil law countries in particular. These different approaches to the regulation of self-dealing appear to derive from long-standing legal principles, such as fiduciary duty, which over time are incorporated into the statutes that we actually observe.

Compared to our previous research, we still find greater emphasis on ex post litigation in common law than in civil law countries, although it appears that ex post – once the disclosure and the approval requirements are met – it is quite difficult for shareholders to recover damages even in common law countries. The US seems to be exceptional, with its greater emphasis on ex



post litigation rather than ex ante disclosure and approval. The ex ante transparency in self-dealing transactions appears to be the central difference between common and civil law.

At a broader level, the results are consistent with the view of Djankov et al. (2003b) that common law is distinguished from civil law by its encouragement of private solutions to the problem of “disorder.” In a common law system, statutes seek to reduce the costs of these private solutions, but not to replace them with public ones. Mandatory disclosure and arms-length approval are very clear examples of this broader strategy of social control of business associated with common law.

### *Implications for Regulatory Strategies*

If we take the evidence in this paper at face value, several ideas for the improvement of regulation of corporate governance, particularly in the area of self-dealing transactions, emerge. Perhaps the most basic conclusion from the data is that *laissez-faire* – the strategy of no public involvement at all – does *not* lead to developed financial markets. The public sector clearly has a central role to play, but principally as the designer of the rules of the game, which are then enforced by private action. Specifically, our findings reinforce those in La Porta et al. (2006) on securities laws, who also identify the key role of private contracting and enforcement for financial development, and deemphasize that of public enforcers. Countries with successful stock markets mandate that shareholders receive the information they need and the power to act – including both voting and litigation – on this information. There is no evidence that these countries rely heavily on fines and criminal sanctions. This, perhaps, is the crucial message. But there are specific conclusions as well.

First, the results suggest that an effective strategy of regulating large self-dealing transactions is to combine full public disclosure of such transactions (including the potential conflicts) with the requirement of approval by disinterested shareholders. In practical implementation, this policy must take account of the fact that, in many countries, firms are organized in business groups with individual firms controlled by the same family while trading separately on the stock exchange, so that many intra-group transactions are potentially conflicted. To avoid shareholder involvement in daily activities of such groups, the law needs to set lower bounds on which intra-group transactions must be disclosed and brought to shareholders for approval. However, we do not believe that group structures invalidate the wisdom of disclosure and shareholder approval altogether. Indeed, financial structures in which group member firms are listed separately only encourage self-dealing, and legal rules that expose intra-group transaction to both public light and shareholder approval may be desirable even if – and perhaps because -- they render such financial structures impractical.

We stress that this approach to regulating self-dealing is compatible with any legal system, and is appropriate for not just rich, but also middle income countries. Sunshine indeed seems to be the best disinfectant. We also note that the benefits of full disclosure for stock market development were also extremely large in our study of securities laws (La Porta et al. 2006), where we focused on disclosure by firms issuing securities to the public.

Second, the evidence suggests that on-going disclosure of self-dealing transactions, combined with the relatively easy burden of litigation placed on the aggrieved shareholders, also benefits stock market development. Here reforms may be more difficult, as their success would depend on the more general structure and efficiency of legal systems in different countries. Nonetheless, the results suggest that giving aggrieved shareholders the standing to sue, access to

information to identify self-dealing, and a low burden of proof would deter self-dealing and promote stock market development.

Finally, the evidence suggests that the government's power to impose fines and prison terms for self-dealing transactions does not benefit stock market development. We stress that this is a narrow conclusion, since we lack data on the actual enforcement of criminal sanctions and cannot rule out that public enforcement may matter under alternative scenarios. To avoid self-dealing, however, it appears best to rely on extensive disclosure, approval by disinterested shareholders and private enforcement.

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

This table describes the variables collected for the 72 countries in our study. Unless otherwise noted, the source of the variables is the questionnaire sent to Lex-Mundi firms.

Variable	Description
<i>1.1) Private Enforcement: Ex-Ante Private Control of Self-Dealing</i>	
Approval by disinterested Shareholders	Equals 1 if the transaction must be approved by disinterested shareholders, and zero otherwise.
Disclosures by Buyer	Index of disclosures that are required before the transaction may be approved. Ranges from 0 to 1. One-third point if each of the following items must be disclosed by Buyer to the public or its shareholders before the transaction is approved: (1) Mr. James owns 60% of Buyer; (2) Mr. James owns 90% of Seller; and either (3) all material facts or the following three items: (a) description of the assets; (b) nature and amount of consideration; and (c) explanation for the price.
Disclosures by Mr. James	Index of disclosures that Mr. James must make before the transaction may be approved. Ranges from 0 to 1. Equals 0 if no disclosure is required. Equals 1/2 if only the existence of a conflict of interest must be disclosed, without details. Equals 1 if all material facts must be disclosed.
Independent review	Equals 1 if a positive review required before the transaction may be approved (e.g., by a financial expert or independent auditor), and zero otherwise.
Ex-ante disclosure	Average of the preceding three variables.
Ex-ante private control of self-dealing	Index of ex-ante control of self-dealing transactions. Average of approval by disinterested shareholders and ex-ante disclosure.
Principal component – Ex-ante	First principal component of: (1) approval by disinterested shareholders; (2) disclosures by buyer; (3) disclosures by Mr. James; and (4) independent review.
<i>1.2) Private Enforcement: Ex-Post Private Control of Self-Dealing</i>	
Disclosure in periodic filings	Index of disclosures required in periodic disclosures (e.g., annual reports). Ranges from 0 to 1. One fifth-point for each of the following items: (1) Mr. James owns 60% of stake in Buyer; (2) Mr. James owns 90% of Seller; (3) shares held beneficially by Mr. James (i.e., shares held and/or managed via a nominee account, trust, brokerage firm or bank); (4) shares held indirectly by Mr. James (e.g., via a subsidiary company or holding); and either (5) all material facts about the transaction or the following three items: (a) description of the assets; (b) nature and amount of consideration; and (c) explanation for the price.
Standing to sue	Equals 1 if a 10% shareholder may sue derivatively Mr. James or the approving bodies or both for damages that the firm suffered as a result of the transaction, and zero otherwise.
Rescission	Index of the ease in rescinding the transaction. Ranges from 0 to 1. Equals 0

Variable	Description
	when rescission is unavailable or only available in case of bad faith, or when the transaction is unreasonable or causes disproportionate damage. Equals 1/2 when rescission is available when the transaction is oppressive or prejudicial. Equals 1 when rescission is available when the transaction is unfair or entails a conflict of interest.
Ease of holding Mr. James liable	Index of the ease in holding Mr. James liable for civil damages. Ranges from 0 to 1. Equals 0 when the interested director is either not liable or liable in case of bad faith, intent, or gross negligence. Equals 1/2 when the interested director is liable if he either influenced the approval or was negligent. Equals 1 if the interested director is liable if the transaction is unfair, oppressive, or prejudicial.
Ease of holding the approving body liable	Index of the ease in holding members of the approving body liable for civil damages. Ranges from 0 to 1. Equals 0 when members of the approving body are either not liable or liable in case of intent, bad faith, or gross negligence. Equals 1/2 when members of the approving body are liable if they acted negligently. Equals 1 if members of the approving body are liable if the transaction is unfair, oppressive, or prejudicial.
Access to evidence	Index of access to evidence. Ranges from 0 to 1. One quarter point for each of the following four rights: (1) a shareholder owning at least 10% of the shares can request that the Court appoint an inspector to investigate Buyer's affairs; (2) the plaintiff can request any documents relevant to the case from the defendant (without specifying which ones); (3) the plaintiff may examine the defendant without the Court approving the questions in advance; and (4) the plaintiff may examine non-parties without the court approving the questions in advance. One-eight point for each of the following two rights: (1) the plaintiff may examine the defendant but questions require prior court approval; and (2) the plaintiff may examine directly the non-parties but questions require prior court approval.
Ease in proving wrongdoing	Average of the preceding five variables.
Ex-post private control of self-dealing	Index of ex-post control over self-dealing transactions. Average of disclosure in periodic filings and ease of proving wrongdoing. Ranges from zero to one.
Principal component – Ex-post	First principal component of : (1) each of the elements in the index of disclosure in periodic filings; (2) standing to sue; (3) rescission; ease of holding Mr. James liable; (4) ease of holding the approving body liable; and (5) access to evidence.
<i>1.3) Private Enforcement: Anti-self-dealing index</i>	
Anti-self-dealing index	Average of ex-ante and ex-post private control of self-dealing.
Principal component -- All	First principal component of : : (1) approval by disinterested shareholders; (2) disclosures by buyer; (3) disclosures by Mr. James; (4) independent review; (5) each of the elements in the index of disclosure in periodic filings; (6) standing to sue; (7) rescission; ease of holding Mr. James liable; (8) ease of holding the approving body liable; and (9) access to evidence.
<i>2) Public Enforcement</i>	



Variable	Description
Fines for the approving body	Equals one if fines may be applied to the approving body when all disclosure and approval requirements have been met, and zero otherwise.
Prison term for approving body	Maximum length of prison term for members of the approving body if all disclosure and approval requirements have been met.
Fines for Mr. James	Equals one if fines may be applied to Mr. James when all disclosure and approval requirements have been met, and zero otherwise.
Prison term for Mr. James	Maximum length of prison term for Mr. James if all disclosure and approval requirements have been met.
Public enforcement index	Index of public enforcement if all disclosure and approval requirements have been met. Ranges from 0 to 1. One quarter point when each of the following sanctions is available: (1) fines for the approving body; (2) jail sentences for the approving body; (3) fines for Mr. James; and (4) jail sentence for Mr. James.
Prison term for Mr. James if he does not disclose	Maximum length of prison term for Mr. James if Junior completes the transaction without seeking approval by the Board of Directors or the Shareholders' Meeting. Moreover, neither Junior nor Mr. James discloses the conflict of interest.
<i>3) Stock Market Development</i>	
Stock market capitalization to GDP	Average of the ratio of stock market capitalization to gross domestic product for the period 1999-2003. Source: <i>World Development Indicators</i> at <a href="http://devdata.worldbank.org/dataonline/">http://devdata.worldbank.org/dataonline/</a> .
Block premium	"The block premia is computed taking the difference between the price per share paid for the control block and the exchange price two days after the announcement of the control transaction, dividing by the exchange price and multiplying by the ratio of the proportion of cash flow rights represented in the controlling block." We use the country's sample media. Source: <i>Dyck and Zingales (2004)</i> .
Listed firms per million population	Average ratio of the number of domestic firms listed in a given country to its population (in millions) for the period 1999-2003. Source: <i>World Development Indicators</i> at <a href="http://devdata.worldbank.org/dataonline/">http://devdata.worldbank.org/dataonline/</a> .
IPOs-to-GDP	The average ratio of the equity issued by newly listed firms in a given country (in thousands) to its GDP (in millions) over the period 1996-2000. Source: <i>La Porta et al. (2006)</i> .
Ownership concentration	Average percentage of common shares 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. Source: <i>La Porta et al. (2006)</i> .
<i>4) Control Variables</i>	
Ln GDP/POP	Logarithmic of per capita Gross Domestic Product (in US dollars) in 2003. Source: <i>World Development Indicators</i> at <a href="http://devdata.worldbank.org/dataonline/">http://devdata.worldbank.org/dataonline/</a> .

Variable	Description
Time to collect on a bounced check	Logarithm of the length (in calendar days) of the judicial procedure to collect on a bounced check. Source: <i>Djankov et al. (2003a)</i> .
Common law	Equals one if the origin of the commercial law of a country is English Common Law, and zero otherwise. Source: <i>La Porta et al. (1999)</i> .
Disclosure in the prospectus	Index of the scope of disclosure in the prospectus of an IPO. Source: <i>La Porta et al. (2006)</i> .
Prospectus liability	Index of the procedural difficulty in recovering losses in a civil liability case for losses due to misleading statements in the prospectus. Source: <i>La Porta et al. (2006)</i> .
Tax evasion	Assessment of the prevalence of tax evasion. Higher scores indicate higher tax evasion. The data is for 2002. Ranges from 0.94 to 8.54. Source: <i>World Economic Forum (2003)</i> .
Newspaper circulation	Logarithmic of newspapers and periodicals circulation per thousand inhabitants in 2000 (or closest available). Source: United Nations Statistical Database ( <a href="http://unstats.un.org">http://unstats.un.org</a> ).
Proportional representation	Equals 3 if 100 percent of seats are assigned via a proportional rule, 2 if the majority of seats are assigned by this rule, 1 if a minority of seats is assigned proportionally, and 0 if no seats are assigned in this way. The data are drawn from the 3/2002 World Bank Database on Political Institutions and defined in Beck et al. (2001). We use all available observations for the period 1975-2000.

**Table II**  
**Ex-ante control of self-dealing**

This table presents data on measures of the ex-ante regulation of self-dealing transactions for 72 countries classified by their legal origin. Definitions for each of the variables are given in Table I. This table also reports tests of means by legal origin.

Country	(1) Approval by disinterested shareholders	(2) Disclosure by Buyer	(3) Disclosure by James	(4) Independent review	(5) Ex-ante disclosure (Average (2)-(4))	(6) Ex-ante private control of self-dealing (Average (1) and (5))
Average common law	0.48	0.62	0.95	0.48	0.68	0.58
Average French origin	0.19	0.30	0.63	0.19	0.37	0.28
Average German origin	0.14	0.38	0.43	0.36	0.39	0.27
Average Scandinavian origin	0.00	0.73	0.40	0.20	0.44	0.22
Average Civil Law	0.16	0.37	0.55	0.24	0.38	0.27
			T-Stat			
Common vs. Civil	2.98 <sup>a</sup>	2.28 <sup>b</sup>	4.73 <sup>a</sup>	2.05 <sup>b</sup>	4.23 <sup>a</sup>	4.00 <sup>a</sup>
French vs Common	2.31 <sup>b</sup>	2.68 <sup>a</sup>	3.74 <sup>a</sup>	2.31 <sup>b</sup>	4.05 <sup>a</sup>	3.42 <sup>a</sup>
French vs German	0.36	0.62	1.60	1.23	0.20	0.15
French vs Scandinavian	1.04	2.36 <sup>b</sup>	1.28	0.06	0.59	0.46

<sup>a</sup> Significant at 1% level.

<sup>b</sup> Significant at 5% level.

<sup>c</sup> Significant at 10% level.

**Table III**  
**Ex-post private control of self-dealing and anti-self-dealing index**

This table presents data on measures of the ex-post regulation of self-dealing transactions for 72 countries classified by their legal origin. Definitions for each of the variables are given in Table I. This table also reports tests of means by legal origin.

Country	(1) Disclosure in periodic filings	(2) Standing to sue	(3) Rescission	(4) Ease of holding Mr. James liable	(5) Ease of holding approving body liable	(6) Access to evidence	(7) Ease of proving wrongdoing (Average (2)-(6))	(8) Ex-post private control of self-dealing (Average (1) and (7))	(9) Anti-self-dealing index
Average common law	0.78	0.90	0.52	0.62	0.74	0.75	0.70	0.74	0.66
Average French origin	0.42	0.56	0.08	0.30	0.34	0.43	0.34	0.38	0.33
Average German origin	0.56	0.86	0.00	0.39	0.46	0.51	0.44	0.50	0.38
Average Scandinavian origin	0.56	0.80	0.00	0.60	0.50	0.80	0.54	0.55	0.39
Average Civil law	0.47	0.67	0.05	0.35	0.39	0.49	0.39	0.43	0.35
World average	0.56	0.74	0.19	0.43	0.49	0.56	0.48	0.52	0.44
T-Stat									
<b>Common vs Civil</b>	3.89 <sup>a</sup>	2.12 <sup>b</sup>	6.95 <sup>a</sup>	3.02 <sup>a</sup>	4.35 <sup>a</sup>	4.26 <sup>a</sup>	6.40 <sup>a</sup>	6.05 <sup>a</sup>	6.29 <sup>a</sup>
<b>French vs Common</b>	4.13 <sup>a</sup>	2.80 <sup>a</sup>	5.18 <sup>a</sup>	3.24 <sup>a</sup>	4.26 <sup>a</sup>	5.58 <sup>a</sup>	6.72 <sup>a</sup>	6.26 <sup>a</sup>	5.86 <sup>a</sup>
<b>French vs German</b>	1.37	1.97 <sup>c</sup>	1.13	1.06	1.59	1.12	2.09 <sup>b</sup>	1.98 <sup>b</sup>	0.98
<b>French vs Scandinavian</b>	0.89	0.99	0.67	2.30 <sup>b</sup>	1.47	4.15 <sup>a</sup>	2.77 <sup>a</sup>	1.73 <sup>c</sup>	0.73

<sup>a</sup> Significant at 1% level.

<sup>b</sup> Significant at 5% level.

<sup>c</sup> Significant at 10% level.

**Table IV**  
**Public enforcement**

This table presents data on measures of public enforcement regarding self-dealing transactions for 72 countries classified by their legal origin. Definitions for each of the variables are given in Table I. This table also reports tests of means by legal origin.

Country	Disclosure and approval requirements were met					Prison term for Mr. James if he does not disclose
	Approving parties		Mr. James		Public enforcement index	
	Applicable fines	Prison term	Applicable fines	Prison term		
Average common law	0.43	1.14	0.33	1.43	0.32	5.74
Average French origin	0.44	2.39	0.34	1.98	0.42	3.98
Average German origin	0.50	3.36	0.36	2.64	0.48	5.07
Average Scandinavian origin	0.60	2.40	0.60	0.80	0.55	2.80
Average civil law	0.47	2.66	0.37	2.05	0.45	4.17
World average	0.46	2.22	0.36	1.87	0.41	4.63
			T-Stat			
Common vs Civil	0.32	1.94 <sup>c</sup>	0.31	0.81	1.15	1.15
French vs Common	0.06	1.57	0.08	0.66	0.84	1.33
French vs German	0.38	0.90	0.09	0.72	0.42	1.03
French vs Scandinavian	0.66	0.01	1.09	0.95	0.60	0.75

<sup>a</sup> Significant at 1% level.

<sup>b</sup> Significant at 5% level.

<sup>c</sup> Significant at 10% level.

**Table V**  
**Stock Market Capitalization and Control of Self-Dealing**

This table presents results for OLS regressions for the sample of 72 countries. The dependent variables are stock-market-capitalization-to-GDP ratio (Panel A) and block premium (Panel B). The independent variables are: (1) approval by disinterested shareholders; (2) ex-ante disclosure; (3) ex-ante private control of self-dealing; (4) disclosure in periodic filings; (5) difficulty in proving wrongdoing; (6) ex-post private control of self-dealing; (7) (logarithm) GDP per capita; and (8) time to collect on a bounced check. Table I provides definitions for the variables. Robust standard errors are shown in parentheses.

<i>Panel A. Dependent Variable: Stock-market-capitalization-to-GDP ratio</i>						
Approval by disinterested shareholders	30.1605 <sup>c</sup> [17.0429]					
Ex-ante disclosure		50.2001 <sup>b</sup> [23.8745]				
Ex-ante private control of self-dealing			48.0959 <sup>b</sup> [23.1395]			
Disclosure in periodic filings				43.786 <sup>a</sup> [15.8883]		
Difficulty proving wrongdoing					55.0993 <sup>c</sup> [28.4338]	
Ex-post private control of self-dealing						70.9618 <sup>a</sup> [25.5879]
Ln GDP/POP	23.9451 <sup>a</sup> [4.6644]	21.4156 <sup>a</sup> [4.2830]	23.1001 <sup>a</sup> [4.3733]	20.0926 <sup>a</sup> [4.1511]	20.1715 <sup>a</sup> [4.0394]	18.9961 <sup>a</sup> [4.0953]
Time to collect on a bounced check	-14.6453 <sup>c</sup> [8.3248]	-14.3777 <sup>c</sup> [7.5822]	-13.3685 <sup>c</sup> [7.3956]	-16.1557 <sup>c</sup> [9.3182]	-16.6180 <sup>c</sup> [8.8021]	-15.2516 <sup>c</sup> [8.4885]
Constant	-74.1561 [57.8757]	-70.2678 [47.5839]	-83.4582 <sup>c</sup> [50.5655]	-50.7705 [58.1494]	-50.8626 [55.2684]	-58.5579 [53.8109]
Observations	72	72	72	72	72	72
R-squared	0.40	0.42	0.42	0.41	0.40	0.43

<i>Panel B. Dependent Variable: Block Premium</i>						
Approval by disinterested shareholders	-0.0834 <sup>b</sup> [0.0340]					
Ex-ante disclosure		-0.0953 <sup>c</sup> [0.0569]				
Ex-ante private control of self-dealing			-0.1101 <sup>c</sup> [0.0484]			
Disclosure in periodic filings				-0.1306 <sup>c</sup> [0.0690]		
Difficulty proving wrongdoing					-0.1170 [0.0868]	
Ex-post private control of self-dealing						-0.1908 <sup>b</sup> [0.0941]
Ln GDP/POP	-0.0288 [0.0193]	-0.0218 [0.0181]	-0.0272 [0.0192]	-0.0090 [0.0154]	-0.0111 [0.0168]	-0.0055 [0.0156]
Time to collect on a bounced check	0.0454 <sup>b</sup> [0.0217]	0.0487 <sup>b</sup> [0.0203]	0.0435 <sup>b</sup> [0.0209]	0.0517 <sup>b</sup> [0.0215]	0.0509 <sup>b</sup> [0.0209]	0.0456 <sup>b</sup> [0.0214]
Constant	0.1600 [0.2721]	0.1106 [0.2658]	0.1790 [0.2780]	0.0113 [0.2286]	0.0109 [0.2333]	0.0388 [0.2291]
Observations	39	39	39	39	39	39
R-squared	0.27	0.25	0.28	0.29	0.24	0.30

Robust standard error values in brackets

<sup>a</sup> Significant at 1% level.

<sup>b</sup> Significant at 5% level.

<sup>c</sup> Significant at 10% level.

**Table VI**  
**Stock market development and the regulation of self-dealing**

This table presents results for OLS regressions for the sample of 72 countries. The dependent variables are (1) stock-market-capitalization-to-GDP ratio; (2) block premium; (3) (logarithm) listed firms per million population; (4) IPOs-to-GDP; and (5) ownership concentration. The independent variables include: (1) ex-ante private control of self-dealing (Panel A); (2) ex-post private control of self-dealing (Panel B); and (3) anti-self-dealing index (Panel C). All regressions also include: (1) (logarithm) GDP per capita; and (2) time to collect on a bounced check. Table I provides definitions for the variables. Robust standard errors are shown in parentheses.

Panel A: Ex-ante private control of self-dealing					
	Stock market capitalization to GDP	Block premium	Ln Firms / Pop	IPOs / GDP	Ownership concentration
Ln GDP/POP	23.1001 <sup>a</sup> [4.3733]	-0.0272 [0.0192]	0.6733 <sup>a</sup> [0.0933]	1.1758 <sup>a</sup> [0.2262]	-0.0316 <sup>b</sup> [0.0126]
Time to collect on a bounced check	-13.3685 <sup>c</sup> [7.3956]	0.0435 <sup>b</sup> [0.0209]	0.0792 [0.1518]	0.3780 [0.5773]	0.0607 <sup>b</sup> [0.0266]
Ex-ante control of private self-dealing	48.0959 <sup>b</sup> [23.1395]	-0.1101 <sup>d</sup> [0.0484]	0.3851 [0.3768]	2.5441 <sup>c</sup> [1.3563]	0.0044 [0.0563]
Constant	-83.4582 <sup>c</sup> [50.5655]	0.1790 [0.2780]	-3.8347 <sup>b</sup> [1.3235]	-10.2604 <sup>b</sup> [4.2853]	0.4336 <sup>b</sup> [0.2081]
Observations	72	39	72	49	49
R-squared	0.42	0.28	0.45	0.35	0.27
Panel B: Ex-post private control of self-dealing					
	Stock market capitalization to GDP	Block premium	Ln Firms / Pop	IPOs / GDP	Ownership concentration
Ln GDP/POP	18.9961 <sup>a</sup> [4.0953]	-0.0055 [0.0156]	0.5985 <sup>a</sup> [0.1071]	1.0107 <sup>a</sup> [0.2174]	-0.024 <sup>b</sup> [0.0113]
Time to collect on a bounced check	-15.2516 <sup>c</sup> [8.4885]	0.0456 <sup>b</sup> [0.0214]	0.1052 [0.1421]	0.2978 [0.5622]	0.0421 <sup>c</sup> [0.0240]
Ex-post private control of self-dealing	70.9618 <sup>a</sup> [25.5879]	-0.1908 <sup>b</sup> [0.0941]	1.3897 <sup>a</sup> [0.4903]	3.7405 <sup>b</sup> [1.5789]	-0.1850 <sup>a</sup> [0.0657]
Constant	-58.5579 [53.8109]	0.0388 [0.2291]	-3.9224 <sup>a</sup> [1.3041]	-9.6296 <sup>b</sup> [4.2082]	0.5727 <sup>a</sup> [0.1612]
Observations	72	39	72	49	49
R-squared	0.43	0.3	0.49	0.36	0.36
Panel C: Anti-self-dealing index					
	Stock market capitalization to GDP	Block premium	Ln Firms / Pop	IPOs / GDP	Ownership concentration
Ln GDP/POP	20.9013 <sup>a</sup> [4.1275]	-0.0194 [0.0168]	0.6472 <sup>a</sup> [0.0965]	1.0884 <sup>a</sup> [0.2162]	-0.0301 <sup>b</sup> [0.0122]
Time to collect on a bounced check	-11.9803 <sup>c</sup> [6.7769]	0.0393 <sup>c</sup> [0.0215]	0.1241 [0.1475]	0.4953 [0.5621]	0.0485 <sup>c</sup> [0.0247]
Anti self-dealing index	83.7041 <sup>a</sup> [33.1478]	-0.1791 <sup>b</sup> [0.0776]	1.0847 <sup>b</sup> [0.4884]	4.1413 <sup>b</sup> [1.7923]	-0.0847 [0.0715]
Constant	-91.6324 <sup>c</sup> [46.9993]	0.1750 [0.2684]	-4.1868 <sup>a</sup> [1.2988]	-11.1332 <sup>a</sup> [4.2791]	0.5253 <sup>a</sup> [0.1808]
Observations	72	39	72	49	49
R-squared	0.45	0.31	0.47	0.38	0.29

Robust standard errors in brackets

<sup>a</sup> Significant at 1% level.

<sup>b</sup> Significant at 5% level.

<sup>c</sup> Significant at 10% level.

**Table VII**  
**Instrumental variables regressions**

This table presents results for IV regressions using common law as an instrument for the anti-self-dealing index. The dependent variables are (1) stock-market-capitalization-to-GDP ratio; (2) block premium; (3) (logarithm) listed firms per million population; (4) IPOs-to-GDP; and (5) ownership concentration. The independent variables include: (1) anti-self-dealing index; (2) (logarithm) GDP per capita; and (3) time to collect on a bounced check. Panel B presents the first-stage results for the anti-self-dealing index. Table I provides definitions for the variables. Robust standard errors are shown in parentheses.

Panel A: Second-stage regression results					
	Stock market capitalization to GDP	Block premium	Ln Firms / Pop	IPOs / GDP	Ownership concentration
Ln GDP/POP	19.6642 <sup>a</sup> [4.3327]	-0.0192 [0.0166]	0.6347 <sup>a</sup> [0.0981]	1.0529 <sup>a</sup> [0.2187]	-0.0288 <sup>b</sup> [0.0125]
Time to collect on a bounced check	-7.0659 [6.1241]	0.0449 <sup>b</sup> [0.0226]	0.1738 [0.1455]	0.7530 [0.6423]	0.0391 [0.0274]
Anti-self-dealing index	144.0127 <sup>a</sup> [47.5366]	-0.1340 <sup>c</sup> [0.0720]	1.6940 <sup>b</sup> [0.7966]	6.0566 <sup>b</sup> [2.5357]	-0.1546 [0.1067]
Constant	-133.3304 <sup>a</sup> [49.1809]	0.1209 [0.2638]	-4.6080 <sup>a</sup> [1.3773]	-13.0748 <sup>a</sup> [4.9534]	0.5961 <sup>a</sup> [0.1840]
Observations	72	39	72	49	49
R-squared	0.40	0.30	0.46	0.36	0.27

Panel B: First-stage regression results for anti-self-dealing index	
Ln GDP/POP	0.0385 <sup>b</sup> [0.0154]
Time to collect on a bounced check	-0.0438 [0.0335]
Common law	0.3148 <sup>a</sup> [0.0500]
Constant	0.2514 [0.2445]
Observations	72
R-squared	0.45

Robust standard error values in brackets

<sup>a</sup> Significant at 1% level.

<sup>b</sup> Significant at 5% level.

<sup>c</sup> Significant at 10% level.



**Table VIII**  
**Regression results for public enforcement**

This table presents results for OLS regressions for the sample of 72 countries. The dependent variables are (1) stock-market-capitalization-to-GDP ratio; (2) block premium; (3) (logarithm) listed firms per million population; (4) IPOs-to-GDP; and (5) ownership concentration. The independent variables include: (1) public enforcement index (Panel A); and (2) prison term for Mr. James if he does not disclose (Panel B). All regressions also include: (1) (logarithm) GDP per capita; and (2) time to collect on a bounced check. Table I provides definitions for the variables. Robust standard errors are shown in parentheses.

<b>Panel A: Public enforcement when all disclosure and approval requirements have been met</b>					
	Stock market capitalization to GDP	Block premium	Ln Firms / Pop	IPOs / Pop	Ownership concentration
Ln GDP/POP	23.3409 <sup>a</sup> [4.6131]	-0.0285 [0.0172]	0.6598 <sup>a</sup> [0.1002]	1.2429 <sup>a</sup> [0.2600]	-0.0336 <sup>b</sup> [0.0145]
Time to collect on a bounced check	-18.4398 <sup>c</sup> [9.8767]	0.0506 <sup>b</sup> [0.0215]	0.0309 [0.1547]	0.0395 [0.6140]	0.0574 <sup>b</sup> [0.0253]
Public enforcement	-13.8088 [14.5481]	0.0650 <sup>c</sup> [0.0341]	0.1834 [0.3271]	-0.8511 [1.0047]	0.0209 [0.0409]
Constant	-36.0403 [60.7170]	0.0811 [0.2341]	-3.4065 <sup>a</sup> [1.3136]	-7.8059 <sup>c</sup> [4.4091]	0.4608 <sup>b</sup> [0.1992]
Observations	72	39	72	49	49
R-squared	0.37	0.25	0.44	0.30	0.27

<b>Panel B: Public enforcement when the transaction is approved by the CEO without disclosure</b>					
	Stock market capitalization to GDP	Block premium	Ln Firms / Pop	IPOs / Pop	Ownership concentration
Ln GDP/POP	21.7650 <sup>a</sup> [4.0175]	-0.0214 [0.0159]	0.6732 <sup>a</sup> [0.0928]	1.1210 <sup>a</sup> [0.2365]	-0.0287 <sup>b</sup> [0.0125]
Time to collect on a bounced check	-18.0333 <sup>c</sup> [9.9211]	0.0647 <sup>a</sup> [0.0232]	0.0323 [0.1535]	-0.0172 [0.5970]	0.0569 <sup>b</sup> [0.0246]
Prison term for Mr. James if he does not disclose	1.2903 [1.7628]	0.0031 [0.0046]	-0.0058 [0.0291]	0.0718 [0.0635]	-0.0048 [0.0037]
Constant	-36.7872 [63.4297]	-0.0461 [0.2326]	-3.4231 <sup>a</sup> [1.3025]	-7.1680 <sup>c</sup> [4.2631]	0.4549 <sup>b</sup> [0.1835]
Observations	72	39	72	49	49
R-squared	0.37	0.22	0.44	0.3	0.29

Robust standard error values in brackets

<sup>a</sup> Significant at 1% level.

<sup>b</sup> Significant at 5% level.

<sup>c</sup> Significant at 10% level.

## Table IX

### Description of the revised anti-director rights index

This table describes the revised anti-director index and its components. The source of the data is the commercial laws of the various countries.

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Variable	Description
Vote by mail	Equals one if the law explicitly mandates or sets as a default rule that: (a) proxy solicitations paid by the company include a proxy form allowing shareholders to vote on the items on the agenda; or (b) a proxy form to vote on the items on the agenda accompanies notice to the meeting; or (c) shareholders vote by mail on the items on the agenda (i.e. postal ballot); and zero otherwise.
Shares not deposited	Equals 1 if the law rule does not require, nor explicitly permits companies to require, shareholders to deposit with the company or another firm any of their shares prior to a general shareholders meeting.
Cumulative voting	Equals one if the law explicitly mandates or sets as a default rule that shareholders owning 10% or less of the capital may cast all their votes for one board of directors or supervisory board candidate (cumulative voting) or if the law explicitly mandates or sets as a default rule a mechanism of proportional representation in the board of directors or supervisory board by which shareholders owning 10% or less of the capital stock may name a proportional number of directors to the board, and zero otherwise.
Oppressed minority	Index of the difficulty faced by (minority) shareholders owning 10% or less of the capital stock in challenging (i.e. by either seeking damages or having the transaction rescinded) resolutions that benefit controlling shareholders and damage the company. Equals one if minority shareholders may challenge a resolution of both the shareholders and the board (of directors or, if available, of supervisors) if it is unfair, prejudicial, oppressive, or abusive; equals one-half if shareholders are able to challenge either a resolution of the shareholders or of the board (of directors or, if available, of supervisors) if it is unfair, prejudicial, or oppressive; equals zero otherwise.
Pre-emptive rights	Equals one when the law or listing rules explicitly mandate or set as a default rule that shareholders hold the first opportunity to buy new issues of stock; equals zero otherwise.
Capital to call a meeting	The minimum percentage of share capital [or voting power] that the law mandates or sets as a default rule as entitling a single shareholder to call a shareholders' meeting (directly or through the court). Define capital to equal one when capital to call a meeting is less than or equal to 10 percent and zero otherwise.
Anti-director rights index	Aggregate index of shareholder rights. The index is formed by summing: (1) vote by mail; (2) shares not blocked or deposited; (3) cumulative voting; (4) oppressed minority; (5) pre-emptive rights; and (6) capital.

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**Table X**  
**Regression results for the anti-director rights index**

This table presents results for OLS regressions. The dependent variables are (1) stock-market-capitalization-to-GDP ratio; (2) block premium; (3) (logarithm) listed firms per million population; (4) IPOs-to-GDP; and (5) ownership concentration. The independent variables include: (1) anti-director rights index from La Porta et al. 1998 (Panel A); and (2) the revised anti-directors index. All regressions also include: (1) (logarithm) GDP per capita; and (2) time to collect on a bounced check. Table IX provides definitions for the revised anti-directors index. Robust standard errors are shown in parentheses.

Panel A: Anti-director rights index from LLSV					
	Stock market capitalization to GDP	Block premium	Ln Firms / Pop	IPOs to GDP	Ownership concentration
Ln GDP/POP	18.0808 <sup>a</sup> [5.1853]	-0.0120 [0.0166]	0.5160 <sup>a</sup> [0.0772]	1.2003 <sup>a</sup> [0.2245]	-0.0337 <sup>a</sup> [0.0105]
Time to collect on a bounced check	-24.8784 <sup>b</sup> [10.6914]	0.0496 <sup>a</sup> [0.0176]	-0.2359 [0.1911]	0.2662 [0.5687]	0.0405 <sup>c</sup> [0.0237]
Anti-director rights index-- LLSV 98	14.3777 <sup>a</sup> [5.5806]	-0.0346 <sup>a</sup> [0.0134]	0.2608 <sup>a</sup> [0.1004]	0.6030 <sup>b</sup> [0.2716]	-0.0357 <sup>a</sup> [0.0112]
Constant	2.4869 [69.1489]	0.0667 [0.2226]	-1.5440 [1.6414]	-10.757 <sup>b</sup> [4.3433]	0.6658 <sup>a</sup> [0.1722]
Observations	49	37	49	49	49
R-squared	0.40	0.32	0.57	0.35	0.37
Panel B: Revised anti-director rights index					
	Stock market capitalization to GDP	Block premium	Ln Firms / Pop	IPOs to GDP	Ownership concentration
Ln GDP/POP	22.3752 <sup>a</sup> [4.3003]	-0.0195 [0.0160]	0.6595 <sup>a</sup> [0.0871]	1.2173 <sup>a</sup> [0.2334]	-0.0342 <sup>a</sup> [0.0111]
Time to collect on a bounced check	-14.0437 [8.8830]	0.0561 <sup>b</sup> [0.0244]	0.2300 [0.1560]	0.4616 [0.5793]	0.0346 [0.0250]
Anti-director rights index -- Revised	10.0045 <sup>c</sup> [5.5485]	-0.0077 [0.0246]	0.4085 <sup>a</sup> [0.1377]	0.6824 <sup>b</sup> [0.3388]	-0.0330 <sup>b</sup> [0.0165]
Constant	-90.1826 [63.2923]	0.0262 [0.2508]	-5.7406 <sup>a</sup> [1.4929]	-12.4998 <sup>a</sup> [4.7684]	0.7086 <sup>a</sup> [0.1861]
Observations	72	39	72	49	49
R-squared	0.39	0.21	0.53	0.34	0.32

Robust standard error values in brackets

<sup>a</sup> Significant at 1% level.

<sup>b</sup> Significant at 5% level.

<sup>c</sup> Significant at 10% level.

**Table XI**  
**Horse race between anti-self-dealing and other proxies for investor protection**

This table presents results for OLS regressions for the sample of 72 countries. The dependent variables are (1) stock-market-capitalization-to-GDP ratio; (2) block premium; (3) (logarithm) listed firms per million population; (4) IPOs-to-GDP; and (5) ownership concentration. All regressions include: (1) anti-self-dealing index; (2) (logarithm) GDP per capita; and (3) time to collect on a bounced check. Regressions also control for: (1) the revised anti-directors index (Panel A); (2) disclosure in the prospectus (Panel B); and (3) prospectus liability (Panel C). The revised anti-directors index is defined in Table XII. All other variables are defined in Table I. Robust standard errors are shown in parentheses.

Panel A: Controlling for the revised anti-directors index					
	Stock market capitalization to GDP	Block premium	Ln Firms / Pop	IPOs / GDP	Ownership concentration
Ln GDP/POP	20.9381 <sup>a</sup> [4.1687]	-0.0161 [0.0164]	0.6570 <sup>a</sup> [0.0892]	1.1073 <sup>a</sup> [0.2255]	-0.0345 <sup>a</sup> [0.0111]
Time to collect on a bounced check	-11.5689 <sup>c</sup> [6.9960]	0.0526 <sup>b</sup> [0.0233]	0.2342 [0.1582]	0.5543 [0.5793]	0.0348 [0.0248]
Anti-self-dealing index	80.1685 <sup>b</sup> [33.7653]	-0.2313 <sup>c</sup> [0.1213]	0.1384 [0.5989]	3.7314 [2.2708]	0.0102 [0.0993]
Anti-directors index (revised)	1.4711 [4.0338]	0.0272 [0.0342]	0.3938 <sup>b</sup> [0.1660]	0.1489 [0.3881]	-0.0345 [0.0234]
Constant	-97.4845 <sup>c</sup> [52.0209]	0.0035 [0.2715]	-5.7532 <sup>a</sup> [1.5114]	-11.9315 <sup>a</sup> [4.7002]	0.7101 <sup>a</sup> [0.1914]
Observations	72	39	72	49	49
R-squared	0.45	0.33	0.53	0.38	0.32

Panel B: Controlling for disclosure in the prospectus					
	Stock market capitalization to GDP	Block premium	Ln Firms / Pop	IPOs / GDP	Ownership concentration
Ln GDP/POP	16.8237 <sup>a</sup> [5.3006]	-0.0122 [0.0143]	0.4860 <sup>a</sup> [0.0772]	1.1513 <sup>a</sup> [0.2033]	-0.0333 <sup>a</sup> [0.0113]
Time to collect on a bounced check	-15.2793 [11.1004]	0.0321 [0.0211]	-0.0575 [0.2032]	0.9435 <sup>c</sup> [0.5180]	0.0253 [0.0242]
Anti-self-dealing index	29.1189 [50.5557]	-0.0502 [0.1004]	0.8933 [0.7095]	1.157 [2.0634]	0.0697 [0.0848]
Disclosure in the prospectus	85.6991 <sup>b</sup> [37.9210]	-0.2367 <sup>c</sup> [0.1305]	1.2702 <sup>c</sup> [0.6708]	5.3915 <sup>a</sup> [1.6298]	-0.2791 <sup>a</sup> [0.0898]
Constant	-58.2786 [83.4718]	0.2264 [0.2332]	-2.6107 [1.6387]	-15.8069 <sup>a</sup> [4.0788]	0.7672 <sup>a</sup> [0.1900]
Observations	49	37	49	49	49
R-squared	0.44	0.39	0.62	0.46	0.40

Panel C: Controlling for prospectus liability					
	Stock market capitalization to GDP	Block premium	Ln Firms / Pop	IPOs / GDP	Ownership concentration
Ln GDP/POP	15.6724 <sup>a</sup> [5.1477]	-0.0165 [0.0154]	0.4687 <sup>a</sup> [0.0787]	1.0772 <sup>a</sup> [0.1982]	-0.0297 <sup>b</sup> [0.0124]
Time to collect on a bounced check	-17.0216 [10.8912]	0.0353 [0.0203]	-0.0744 [0.1980]	0.8957 [0.6122]	0.0345 [0.0233]
Anti-self-dealing index	59.4717 [41.3254]	-0.1354 <sup>b</sup> [0.0650]	1.3149 <sup>b</sup> [0.5199]	2.8702 [1.7404]	-0.0401 [0.0742]
Prospectus liability	54.7649 <sup>a</sup> [21.3554]	-0.1192 <sup>b</sup> [0.0572]	0.9025 <sup>c</sup> [0.4723]	4.0749 <sup>a</sup> [1.2694]	-0.1430 <sup>b</sup> [0.0610]
Constant	-28.0906 [74.8109]	0.2034 [0.2561]	-2.2363 [1.6343]	-14.4146 <sup>a</sup> [4.5837]	0.6405 <sup>a</sup> [0.1764]
Observations	49	37	49	49	49
R-squared	0.43	0.37	0.61	0.46	0.34

Robust standard errors in brackets

<sup>a</sup> Significant at 1% level.

<sup>b</sup> Significant at 5% level.

<sup>c</sup> Significant at 10% level.

**Table XII -- Alternative Hypotheses**

This table presents results for OLS regressions for the sample of 72 countries. The dependent variables are (1) stock-market-capitalization-to-GDP ratio; (2) block premium; (3) (logarithm) listed firms per million population; (4) IPOs-to-GDP; and (5) ownership concentration. All regressions include: (1) (logarithm) GDP per capita; and (2) time to collect on a bounced check. Regressions also control for: (1) tax evasion and anti-self-dealing (Panel A); (2) tax evasion and disclosure in the prospectus (Panel B); and (3) (logarithm) newspaper circulation per capita and anti-self-dealing (Panel C). Table I provides definitions for the variables. Robust standard errors are shown in parentheses.

Panel A: Tax Evasion and Anti-self-dealing					
	Stock market capitalization to GDP	Block premium	Ln Firms / Pop	IPOs / GDP	Ownership concentration
Ln GDP/POP	9.9842 [7.1655]	-0.022 [0.0237]	0.5159 <sup>a</sup> [0.1543]	1.1801 <sup>b</sup> [0.4791]	-0.0343 <sup>c</sup> [0.0194]
Time to collect on a bounced check	-13.8431 [9.0651]	0.0321 [0.0246]	0.1742 [0.1932]	0.7814 [0.6555]	0.0418 [0.0269]
Anti-self-dealing	44.1097 [51.8846]	-0.1838 <sup>c</sup> [0.0993]	0.6832 [0.5660]	4.1115 [2.4821]	-0.0079 [0.0875]
Tax Evasion	13.0330 <sup>b</sup> [6.3722]	-0.0060 [0.0147]	0.2881 <sup>a</sup> [0.0783]	0.1380 [0.3410]	-0.0136 [0.0103]
Constant	-20.9171 [59.6363]	0.2715 [0.2943]	-4.5621 <sup>a</sup> [1.7908]	-14.095 <sup>a</sup> [5.4733]	0.6226 <sup>a</sup> [0.2375]
Observations	47	37	47	39	39
Pseudo R-squared	0.44	0.35	0.64	0.31	0.32
Panel B: Tax Evasion and Disclosure in the prospectus					
	Stock market capitalization to GDP	Block premium	Ln Firms / Pop	IPOs / GDP	Ownership concentration
Ln GDP/POP	10.2115 [6.8331]	-0.0119 [0.0195]	0.4038 <sup>a</sup> [0.1110]	1.2636 <sup>a</sup> [0.3919]	-0.0487 <sup>a</sup> [0.0169]
Time to collect on a bounced check	-6.2111 [13.3539]	0.0284 [0.0212]	0.0329 [0.1767]	1.1629 <sup>b</sup> [0.5242]	0.0250 [0.0251]
Disclosure in the prospectus	92.4098 <sup>b</sup> [42.6754]	-0.2714 <sup>b</sup> [0.1175]	1.2336 <sup>b</sup> [0.6036]	7.3585 <sup>a</sup> [2.0777]	-0.2275 <sup>a</sup> [0.0852]
Tax Evasion	11.6066 <sup>b</sup> [5.6395]	-0.0080 [0.0154]	0.2773 <sup>a</sup> [0.0663]	0.0789 [0.2611]	-0.0005 [0.0111]
Constant	-88.5853 [88.4167]	0.2817 [0.2452]	-3.2411 <sup>b</sup> [1.5422]	-19.0407 <sup>a</sup> [4.6014]	0.9206 <sup>a</sup> [0.2137]
Observations	39	35	39	39	39
Pseudo R-squared	0.42	0.43	0.72	0.4	0.4
Panel C: (Log) Newspaper circulation per capita					
	Stock market capitalization to GDP	Block premium	Ln Firms / Pop	IPOs / GDP	Ownership concentration
Ln GDP/POP	23.0029 <sup>a</sup> [4.5475]	-0.0309 [0.0213]	0.3106 <sup>c</sup> [0.1656]	0.9111 <sup>a</sup> [0.3439]	0.0034 [0.0212]
Time to collect on a bounced check	-11.7426 [7.1449]	0.0424 <sup>c</sup> [0.0242]	0.0339 [0.1410]	0.5593 [0.6064]	0.0364 [0.0265]
Anti-self-dealing	83.4879 <sup>b</sup> [33.4857]	-0.1735 <sup>b</sup> [0.0821]	1.1679 <sup>b</sup> [0.5225]	4.2735 <sup>b</sup> [1.9087]	-0.1097 [0.0709]
Ln newspaper circulation per capita	-4.1207 [5.4529]	0.0182 [0.0311]	0.5580 <sup>b</sup> [0.2361]	0.3088 [0.5943]	-0.0583 <sup>c</sup> [0.0304]
Constant	-91.0437 <sup>a</sup> [49.1494]	0.1702 [0.2763]	-3.4757 <sup>a</sup> [1.1682]	-11.4414 <sup>b</sup> [4.5814]	0.5835 <sup>a</sup> [0.1737]
Observations	71	39	71	49	49
Pseudo R-squared	0.45	0.31	0.53	0.38	0.34

Robust standard errors in brackets

<sup>a</sup> Significant at 1% level.

<sup>b</sup> Significant at 5% level.

<sup>c</sup> Significant at 10% level.

**Table XIII**  
**Legal Origin and Proportional Representation**

This table presents results for regressions for the sample of 62 countries that have data on proportional representation and the regulation of self-dealing. The dependent variable is the anti-self-dealing index. Panel A shows OLS regressions that control for: (1) Common law; and (2) proportional representation. Panel B presents SURE regressions for civil and common law countries using proportional representation as the independent variable. Finally, Panel C shows SURE regressions for countries above and below the median in competitiveness of the legislature using common law as the independent variable. Table I provides definitions for the variables. Standard errors are shown in parentheses.

Dependent Variable: Anti-self-dealing index

Panel A: OLS regressions			
Common law	0.2939 <sup>a</sup> [0.0580]		0.3007 <sup>a</sup> [0.0597]
Proportional Representation		-0.0446 <sup>c</sup> [0.0246]	0.0055 [0.0213]
Constant	0.3503 <sup>a</sup> [0.0246]	0.5200 <sup>a</sup> [0.0567]	0.3389 <sup>a</sup> [0.0520]
Observations	62	62	62
R-squared	0.36	0.06	0.36

Panel B: Common versus civil law		
	Civil law	Common law
Proportional Representation	0.0070 [0.0251]	0.0028 [0.0370]
Constant	0.3357 <sup>a</sup> [0.0594]	0.6418 <sup>a</sup> [0.0692]
Observations	42	20
R-squared	-0.02	-0.05

Panel C: High versus low competitiveness of the legislature		
	Above Median	Below Median
Common law	0.4168 <sup>a</sup> [0.0494]	0.1918 <sup>b</sup> [0.0875]
Constant	0.3452 <sup>a</sup> [0.0273]	0.3559 <sup>a</sup> [0.0415]
Observations	31	31
R-squared	0.68	0.13

Robust standard errors in brackets

<sup>a</sup> Significant at 1% level.

<sup>b</sup> Significant at 5% level.

<sup>c</sup> Significant at 10% level.

## Appendix. Correlation Table

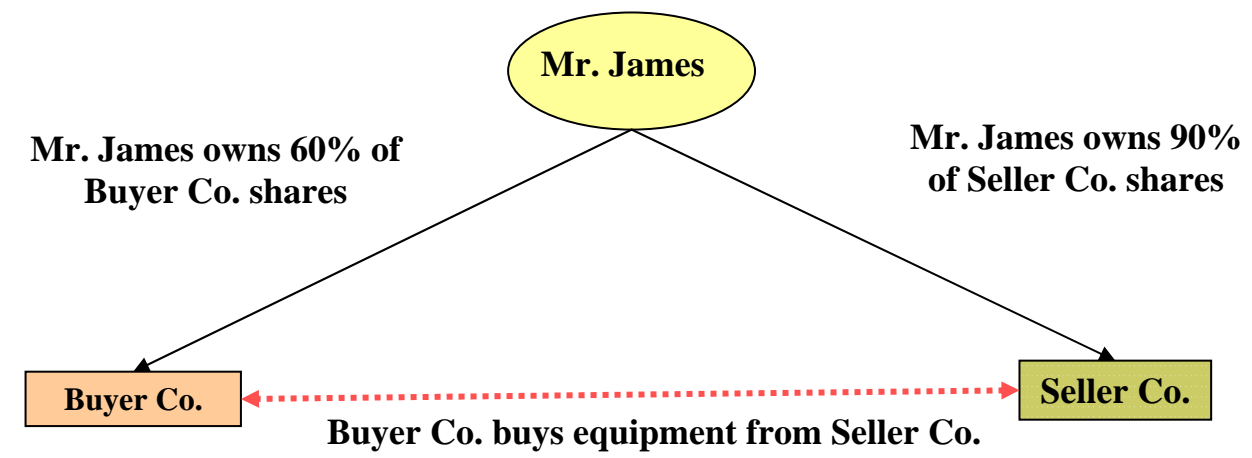
This table presents the correlations among the main variables in the paper.

	Ex-ante private control self-dealing	Ex-post private control self-dealing	Jail James -- no disclosure	Public enforcement	Anti-self-dealing index	Antidirectors index (revised)	Disclosure in prospectus	Prospectus liability	Market capitalization to GDP	Block premium	Ln(Firms/POP)	IPOs/GDP	Ownership concentration	Time to Collect on a bounced check	Ln(GDP/POP)	Tax evasion	Newspaper circulation	Proportional representation	
Ex-post private control self-dealing	0.3553																		
Anti-self-dealing index	0.8777 <sup>a</sup>	0.7597 <sup>a</sup>																	
Jail James -- no disclosure	0.1093	0.2030	0.1800																
Public enforcement	-0.1591	0.0010	-0.1102	0.0487															
Antidirectors index (revised)	0.3607	0.5879 <sup>a</sup>	-0.0360	0.0908	0.5522 <sup>a</sup>														
Disclosure in prospectus	0.5104 <sup>b</sup>	0.6875 <sup>a</sup>	0.2310	-0.1528	0.6733 <sup>a</sup>	0.5916 <sup>a</sup>													
Prospectus liability	0.2213	0.5694 <sup>a</sup>	0.0998	-0.0681	0.4247	0.4469	0.5479 <sup>a</sup>												
Market capitalization to GDP	0.2886	0.4554 <sup>a</sup>	0.2393	-0.0099	0.4341 <sup>b</sup>	0.2753	0.4938 <sup>b</sup>	0.4262											
Block premium	-0.3412	-0.4758	-0.0286	0.2126	-0.4580	-0.2440	-0.5839 <sup>b</sup>	-0.4529	-0.4765										
Ln(Firms / POP)	0.0671	0.4136 <sup>b</sup>	0.1410	0.1664	0.2587	0.3206	0.4681 <sup>c</sup>	0.4180	0.4940 <sup>a</sup>	-0.5301 <sup>b</sup>									
IPOs / GDP	0.2861	0.4195	0.2200	0.0344	0.3941	0.2227	0.4368	0.4246	0.6537 <sup>a</sup>	-0.4641	0.5916 <sup>a</sup>								
Ownership concentration	-0.1330	-0.4872 <sup>b</sup>	-0.2737	0.0025	-0.3262	-0.3646	-0.4991 <sup>b</sup>	-0.4166	-0.3131	0.4993	-0.4251	-0.4743 <sup>b</sup>							
Time to collect on bounced check	-0.2647	-0.2001	-0.1367	0.0257	-0.2867	-0.3342	-0.4670 <sup>c</sup>	-0.4050	-0.2985	0.4243	-0.0623	-0.1797	0.4080						
Ln(GDP/POP)	-0.0116	0.3284	0.2391	0.1694	0.1602	0.0718	0.1367	0.1700	0.5537 <sup>a</sup>	-0.2726	0.6646 <sup>a</sup>	0.5398 <sup>a</sup>	-0.4282	-0.1221					
Tax evasion	0.2400	0.5997 <sup>a</sup>	0.2485	0.1670	0.4595	0.3519	0.4522	0.3795	0.6271 <sup>a</sup>	-0.4952	0.7254 <sup>a</sup>	0.4239	-0.4831	-0.4405	0.6380 <sup>a</sup>				
Newspaper circulation	-0.0733	0.2264	0.1368	0.2031	0.0647	0.1273	0.0791	0.1082	0.3511	-0.2367	0.5546 <sup>a</sup>	0.3546	-0.5338 <sup>b</sup>	-0.1369	0.7137 <sup>a</sup>	0.5265 <sup>b</sup>			
Proportional representation	-0.2112	-0.2038	-0.1728	0.0437	-0.2483	-0.2018	-0.5671 <sup>a</sup>	-0.2342	-0.1232	0.2403	0.1117	-0.2395	0.2311	0.3483	0.2682	-0.3366	0.2576		
English Legal Origin	0.4317 <sup>b</sup>	0.5861 <sup>a</sup>	0.1367	-0.1359	0.6007 <sup>a</sup>	0.4707 <sup>a</sup>	0.5918 <sup>a</sup>	0.3377	0.2686	-0.3355	0.0474	0.1795	-0.1572	-0.1831	-0.1568	0.4133	-0.1857	-0.4557 <sup>b</sup>	

<sup>a</sup> Significant at 1% level.

<sup>b</sup> Significant at 5% level.

<sup>c</sup> Significant at 10% level.



**Figure I. Case facts.** Buyer Co. (“Buyer”) is a food manufacturer company. It is a publicly traded firm that is listed on the country’s largest stock exchange. Buyer manufactures and distributes all of its products itself.

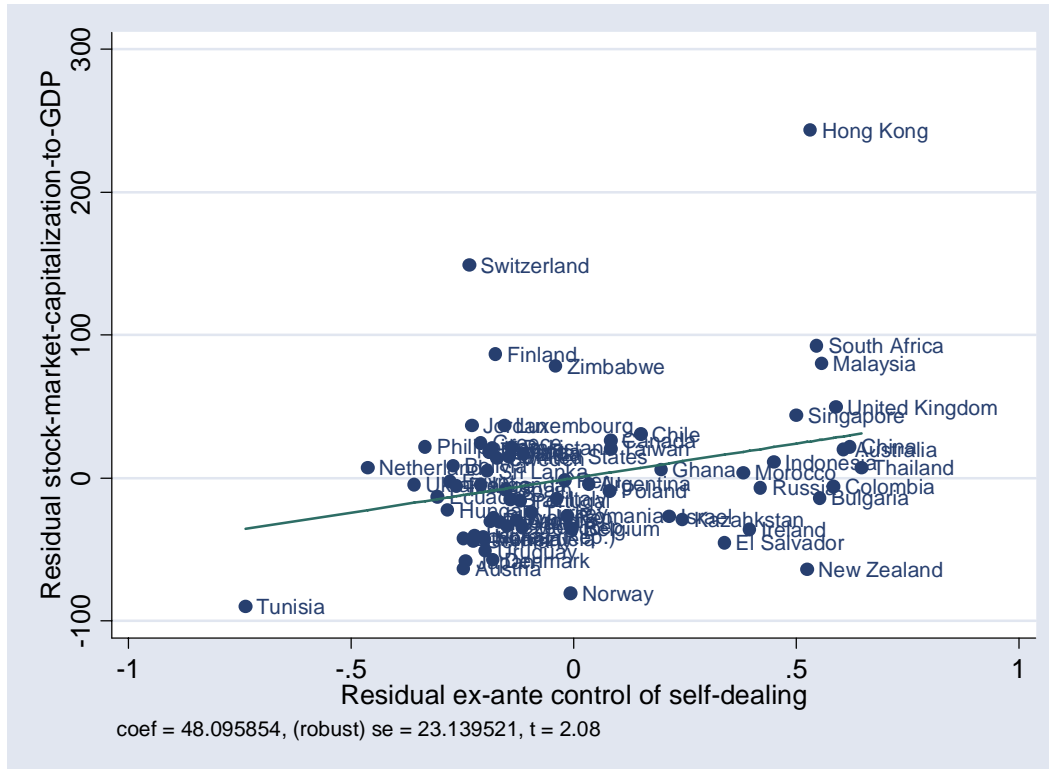
Mr. James is Buyer’s controlling shareholder and a member of Buyer’s board of directors. He owns 60% of Buyer, and elected 2 directors to Buyer’s 5-member board of directors. Buyer’s CEO is the son of Mr. James.

Mr. James also owns 90% of Seller Company, which operates a chain of retail hardware stores. Seller recently shut a large number of its stores. As a result, its fleet of trucks is not being utilized.

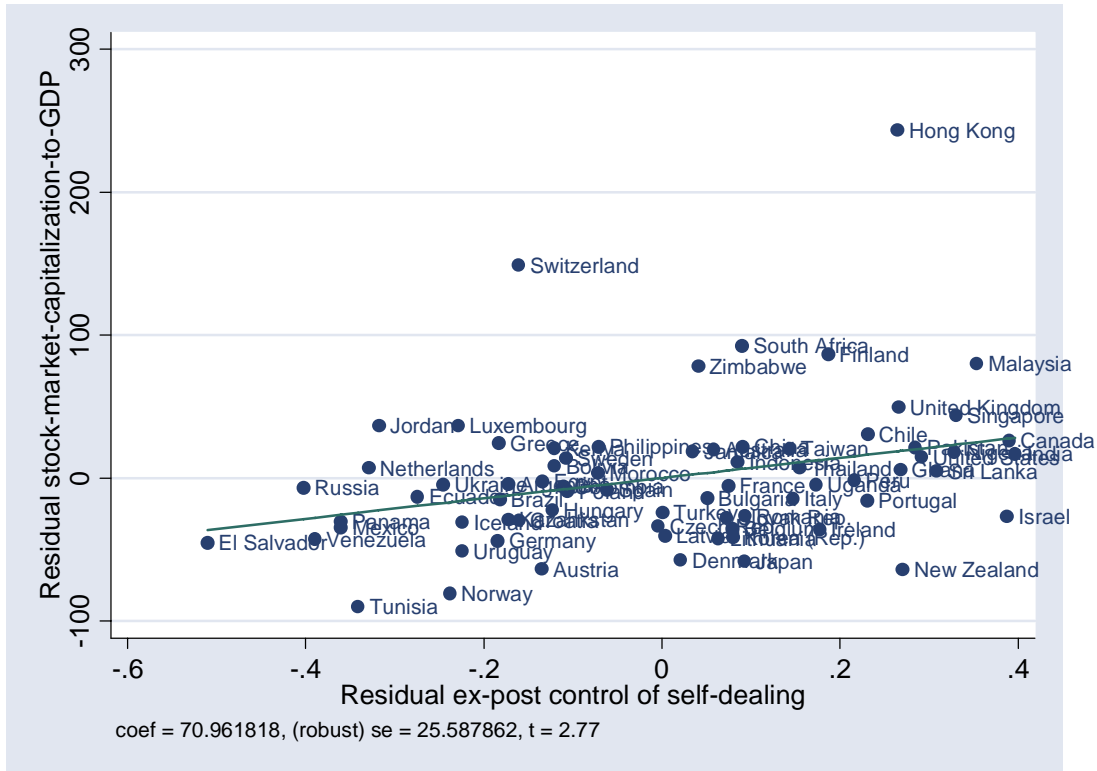
Mr. James proposes to Buyer that Buyer purchase Seller’s unused fleet of trucks to expand Buyer’s distribution of its food products. Buyer agrees. The final terms of the transaction require Buyer to pay to Seller in cash an amount equal to 10% of Buyer’s assets in exchange for the trucks. The transaction is part of Buyer’s ordinary course of business and is not *ultra vires*.

Buyer enters into the transaction. All required approvals are obtained and all the required disclosures made. The transaction might be unfair to Buyer. Shareholders sue the interested parties and the approving body.

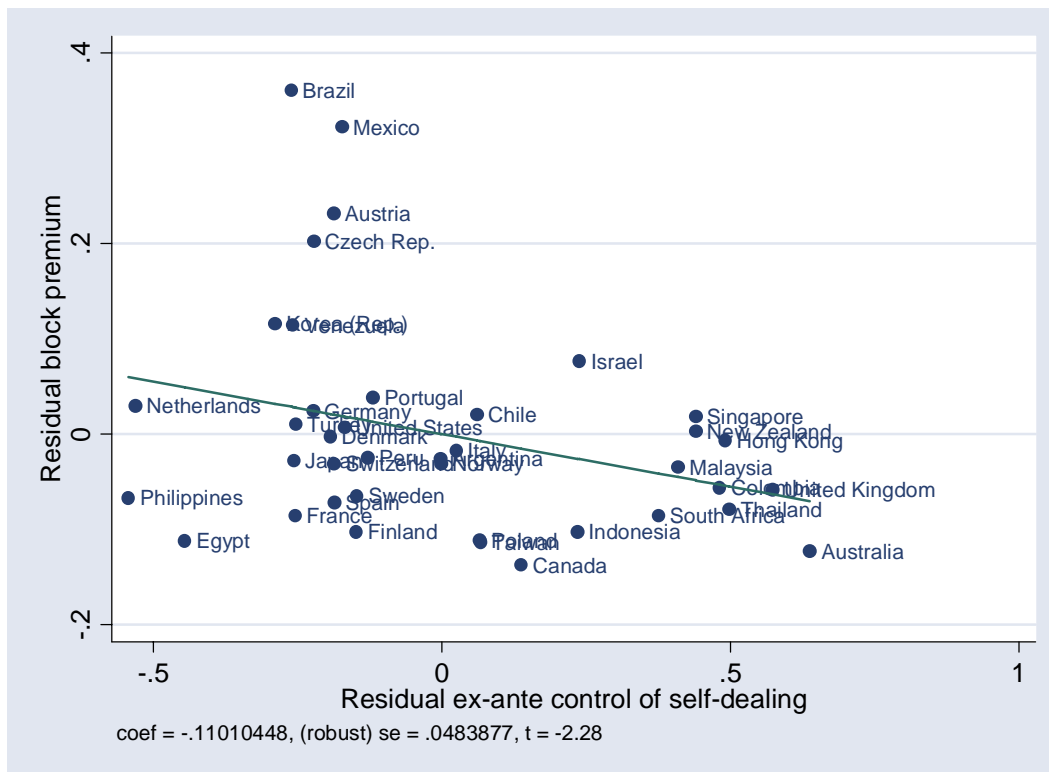




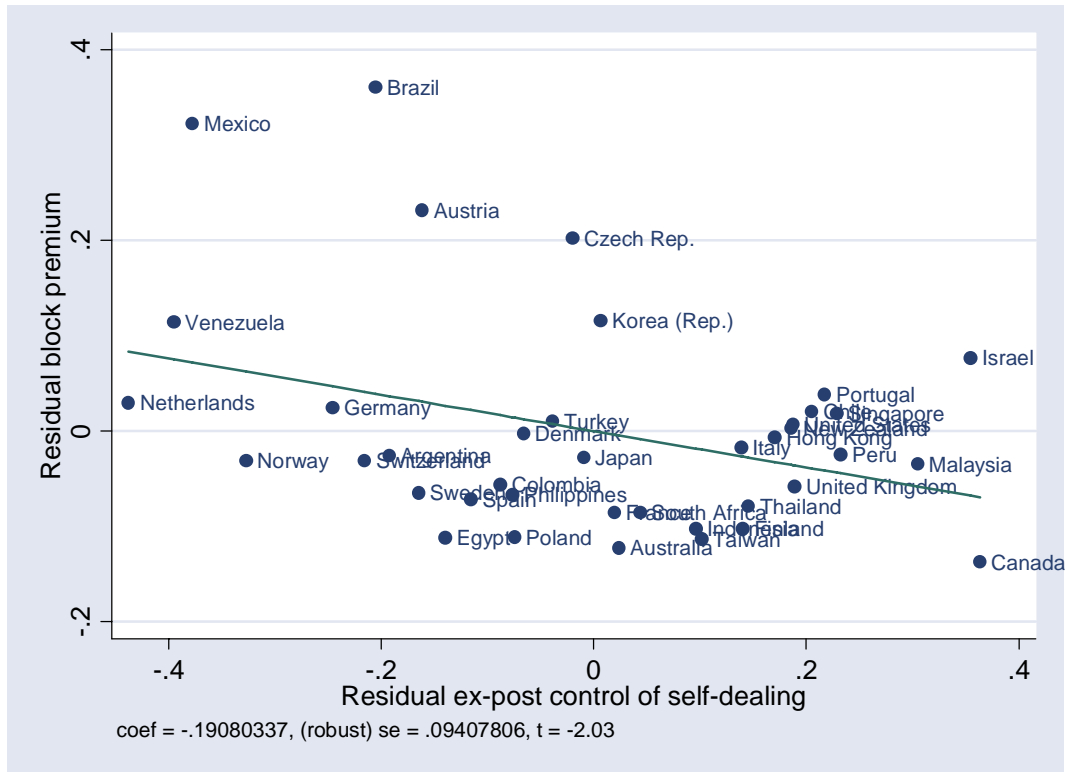
**Figure II:** Partial-regression plot of stock market capitalization and ex-ante control of self-dealing in regressions that control for (log) income per capita and efficiency of the judiciary.



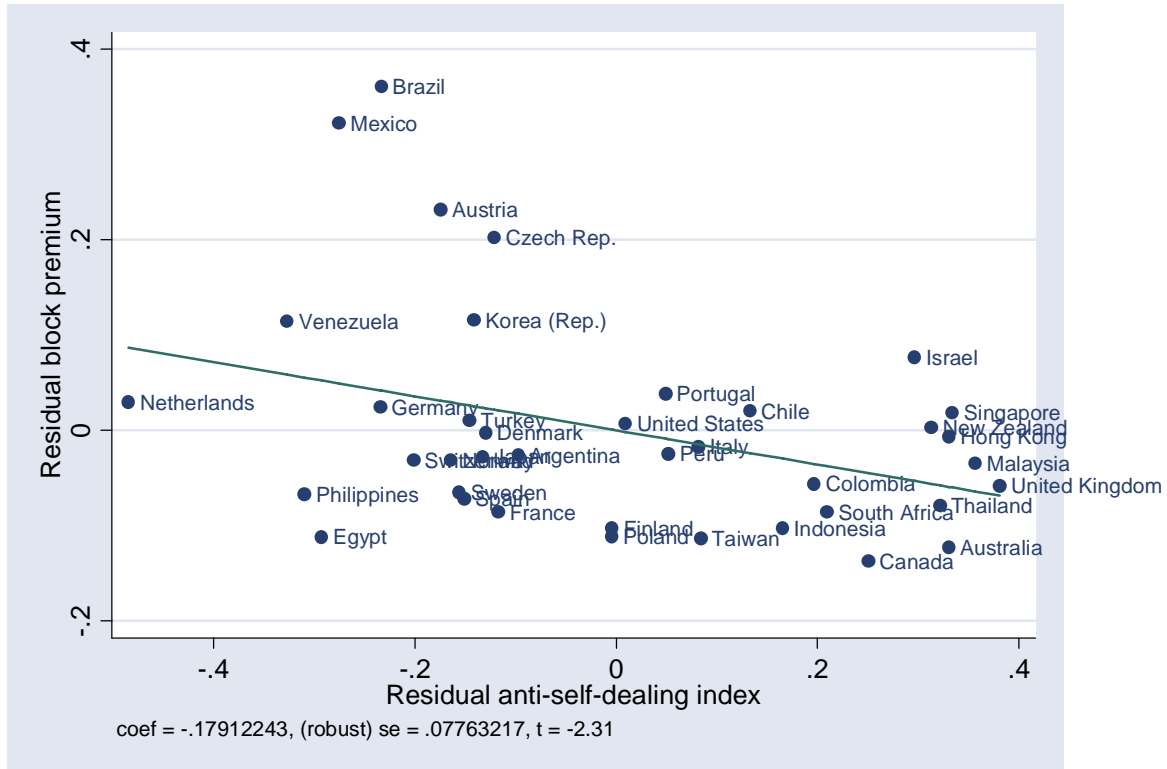
**Figure III:** Partial-regression plot of stock market capitalization and ex-post control of self-dealing in regressions that control for (log) income per capita and efficiency of the judiciary.



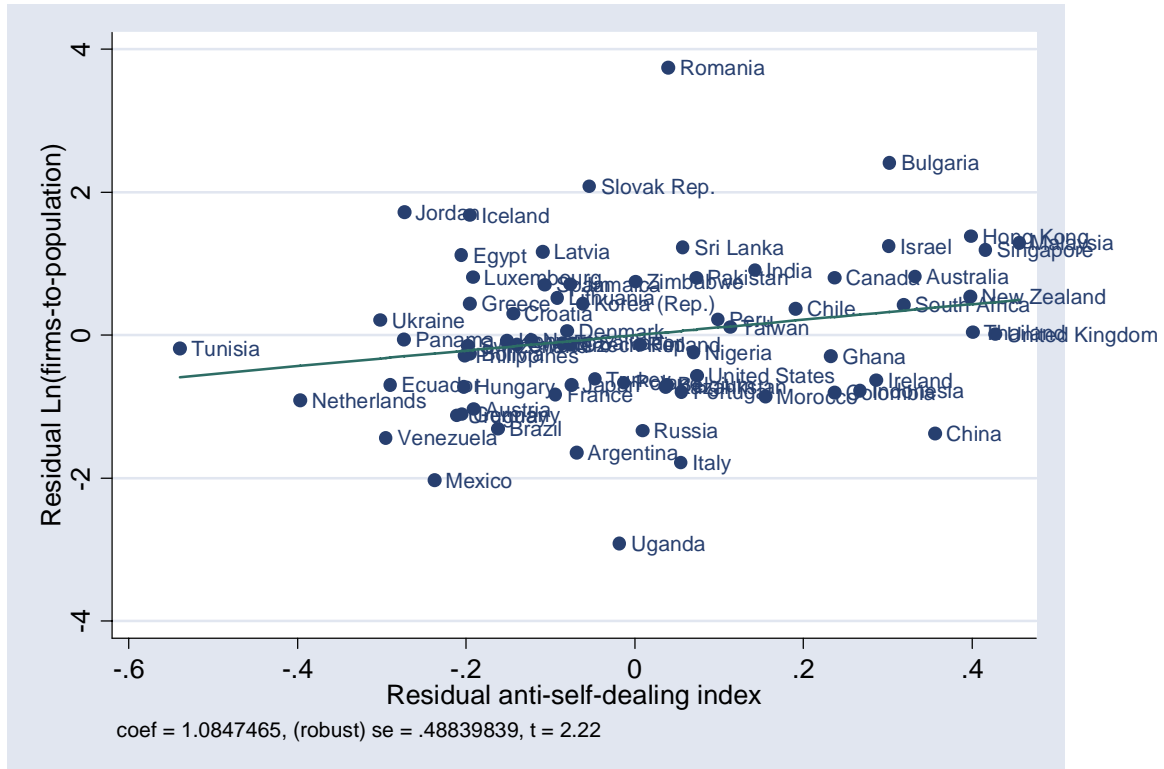
**Figure IV:** Partial-regression plot of block premium against the ex-ante control of self-dealing in regressions that control for (log) income per capita and efficiency of the judiciary.



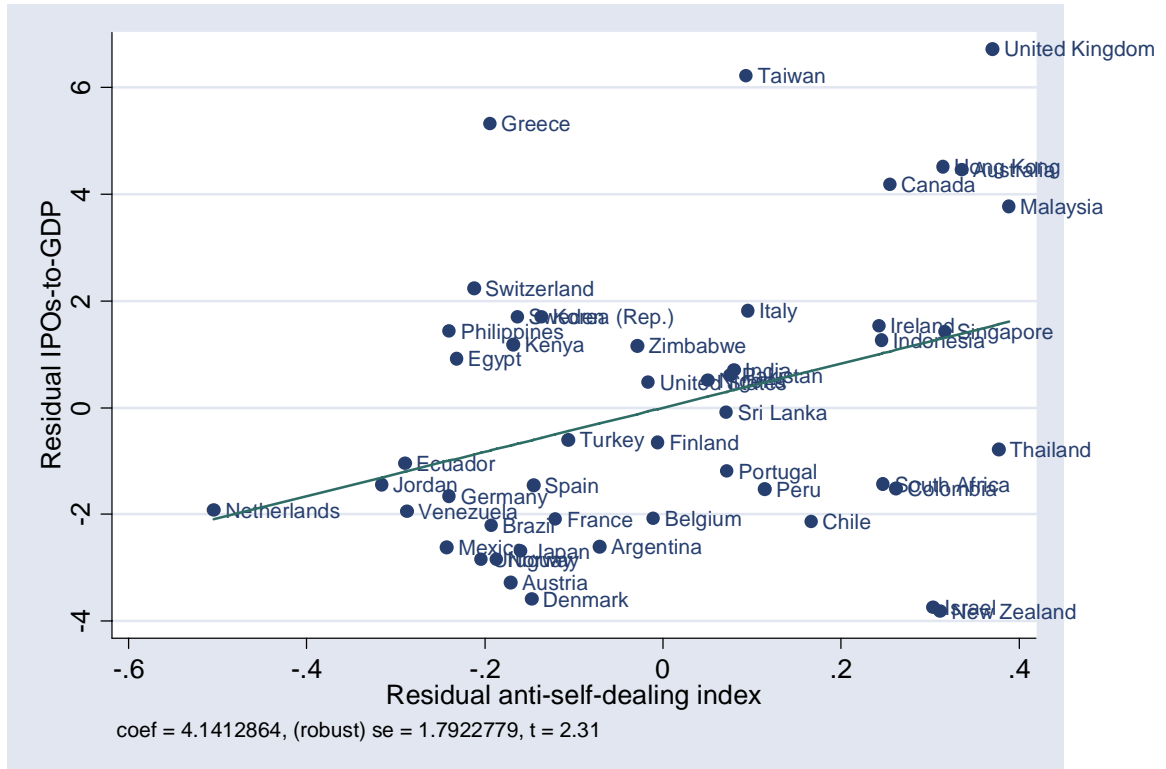
**Figure V:** Partial-regression plot of block premium against the ex-post control of self-dealing in regressions that control for (log) income per capita and efficiency of the judiciary.



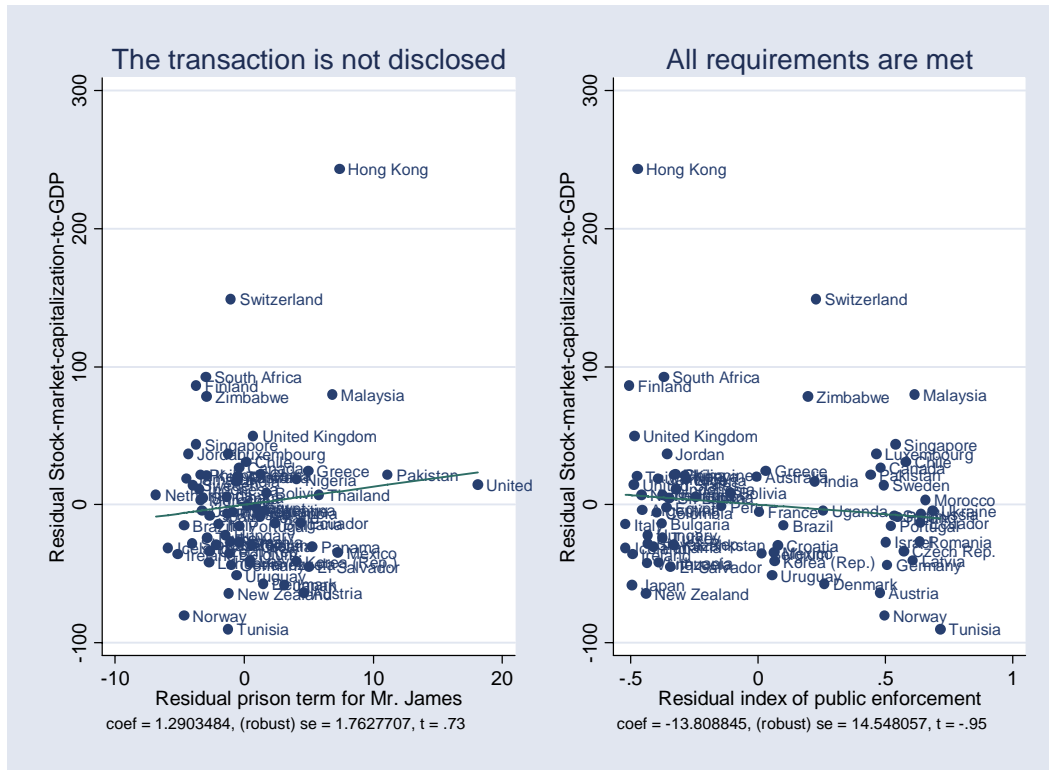
**Figure VI:** Partial-regression plot of block premium and the anti-self-dealing index in regressions that control for (log) income per capita and efficiency of the judiciary.



**Figure VII:** Partial-regression plot of (log) listed firms per million population and the anti-self-dealing index in regressions that control for (log) income per capita and efficiency of the judiciary.

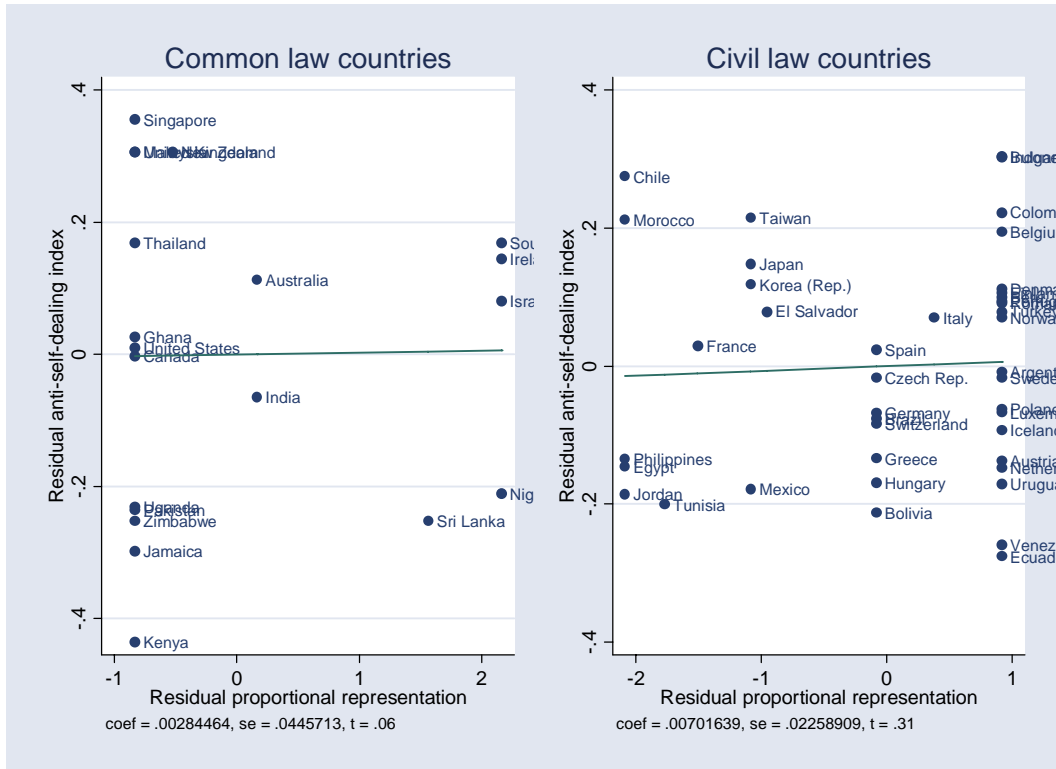


**Figure VIII:** Partial-regression plot of IPOs-to-GDP against the index of anti-self-dealing in regressions that control for (log) income per capita and efficiency of the judiciary.

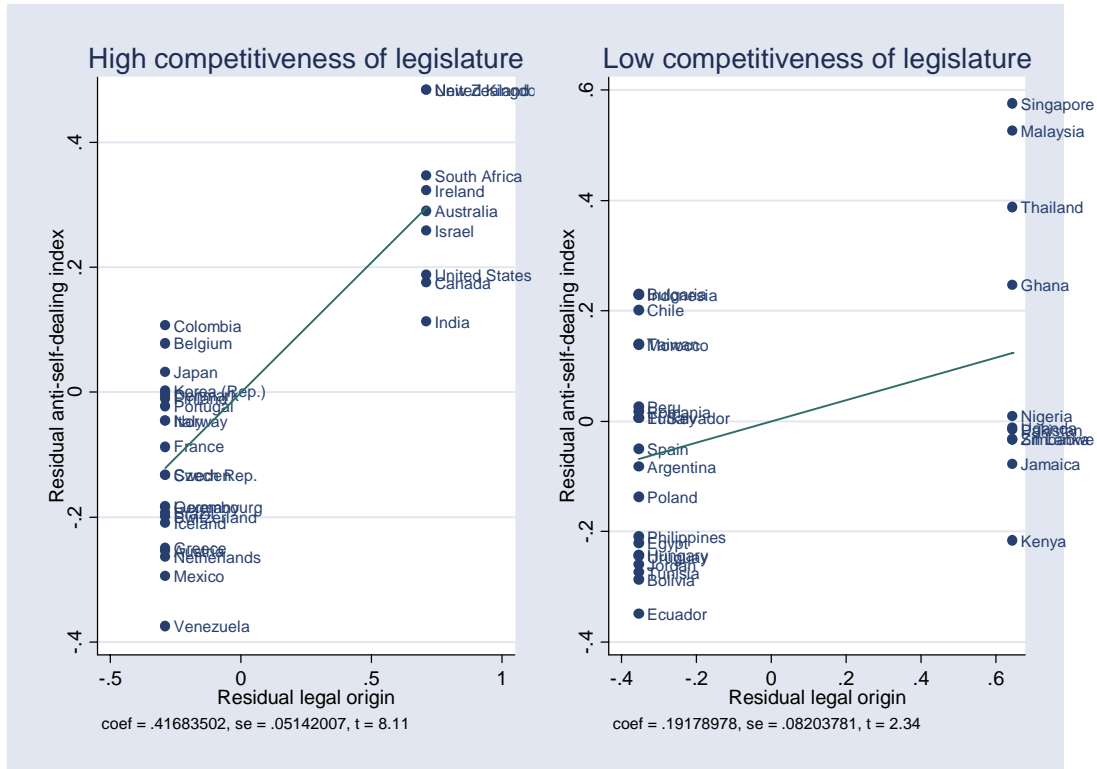


**Figure IX:** Partial-regression plot of stock market capitalization against public enforcement when the transaction is approved by the CEO –the son of the controlling shareholder-- without disclosure (left graph) and when all approval and disclosure requirements are met (right graph) in regressions that control for (log) income per capita and efficiency of the judiciary.





**Figure X:** Partial-regression plot of anti-self-dealing index against proportional representation in common law countries (left graph) and civil law ones (right graph) in regressions that control for (log) income per capita and efficiency of the judiciary.



**Figure XI:** Partial-regression plot of anti-self-dealing index against proportional legal origin for countries with high (left graph) and low (right graph) competitiveness of the legislature in regressions that control for (log) income per capita and efficiency of the judiciary.