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*Do Insider Trading Laws Matter? Some Preliminary
Comparative Evidence*

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DO INSIDER TRADING LAWS MATTER? SOME PRELIMINARY
COMPARATIVE EVIDENCE

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Abstract

Despite the longstanding insider trading debate, there is little empirical research on insider trading laws, especially in a comparative context. The article attempts to fill that gap. I find that countries with more prohibitive insider trading laws have *more diffuse* equity ownership, *more accurate* stock prices, and *more liquid* stock markets. These findings are generally robust to controlling for measures of disclosure and enforceability and suggest that formal insider trading laws (especially their deterrent components) matter to stock market development. The article suggests further avenues of empirical research on the specific mechanisms through which insider trading laws might matter and the political economy of their adoption.

Keywords: Insider trading law, Market efficiency, Ownership structure, Law and finance, Comparative capital markets

JEL Codes: K22, G14, G15, G18 and G32.

I. INTRODUCTION

The law and economics debate about insider trading (that is, trading by corporate insiders or their associates on the basis of price-sensitive, private information) is both long-standing and inconclusive.¹ Scholars on one side of the debate argue that insider trading is efficient and public regulation is inefficient (see, e.g., Carlton and Fischel, 1983; Manne, 1966), while scholars on the other side of the debate argue the opposite (see, e.g., Cox, 1986; Georgakopoulos, 1993; Kraakman, 1991). Although the “desirability of [regulating] insider trading is ultimately an empirical question” (Carlton and Fischel, 1983, p. 866), the insider trading debate thus far has been largely theoretical. It has also implicitly assumed background securities markets and corporate governance institutions like those of the United States and Canada. However, recent studies in comparative corporate and securities law and finance suggest that the implications of these laws vary systematically with economic, legal, institutional and even social differences across countries. The aim of the article is therefore to conduct an exploratory empirical analysis of the relationship between insider trading laws and financial structure and performance across countries.

The article is complementary to Bhattacharya and Daouk (2002). That study addresses the effect of the initial enactment and enforcement of insider trading laws on the cost of equity capital.² Bhattacharya and Daouk (2002) track 51 countries for over more than 20 years; thus, they have a large sample size and high statistical power. However, their insider trading law variables are fairly rudimentary, because they measure only whether an insider trading prohibition exists and whether, if it exists, the prohibition has been enforced once. Nevertheless, such measures are sufficient for their main inquiry, which is the impact of a regime shift from no insider trading prohibition/enforcement to insider trading prohibition/enforcement on the cost of equity. In contrast, my inquiry is whether differences in *specific legal elements* of countries’ insider trading laws are associated with differences in the structure and performance of their stock markets. To address this question, I focus on the aspects of countries’ insider trading laws that I believe, a priori, to be substantively meaningful from a legal and economic perspective,³

¹ See Bainbridge (1999) for a thorough summary of the issues in the debate.

² The major finding of that study is that the cost of equity in a country falls by about 5% upon the first prosecution of that country’s insider trading prohibition, while the enactment of the prohibition has no effect on the cost of equity.

³ Several subsequent studies utilizing the measures of insider trading law developed in this paper confirm the economic significance of these measures (Bris, 2003; Durnev and Nain, 2004; Herrington, 2004).

with an emphasis on deterrence. It is thus appropriate to view Bhattacharya and Daouk (2002) and this article in a complementary light.

Using financial, legal, and institutional data from a cross-section of 33 countries, I find that countries with more prohibitive insider trading laws generally have more dispersed equity ownership, more informative stock prices, and more liquid stock markets. These preliminary findings suggest that formal insider trading laws (especially their deterrent elements) matter to stock market development. The specific mechanisms through which formal insider trading laws might matter and the political economy of their adoption merit further empirical study.

The article is organized as follows. Part II briefly summarizes existing theories of insider trading/regulation and presents three testable hypotheses. In Part III, I describe the data and present univariate statistics. Part IV presents and discusses the regression results. Finally, Part V concludes and suggests promising avenues for future research.

II. THEORIES OF INSIDER TRADING AND TESTABLE HYPOTHESES

A. Insider Trading Regulation and Ownership Concentration

Regardless of whether insider trading is harmful or beneficial, there are several reasons why insider trading (or lax insider trading laws) might be associated with greater ownership concentration. First, insider trading might create adverse selection problems (Manove, 1989). If outsiders are sophisticated, they will simply discount the price that they are willing to pay for the firm's shares to account for adverse selection from insider trading (Manove, 1989). If outsiders are unsophisticated, however, they might refrain altogether from purchasing shares when insider trading rules are weak or nonexistent, thus hindering dispersed share ownership (Ausubel, 1990). Second, insider trading might exacerbate agency problems within the firm (see, e.g., Bebchuk and Fershtman, 1990; Haft, 1982; Maug, 2002) and therefore discourage outside investment (La Porta et al., 1997, 1998).

Finally, even if insider trading is beneficial, it might still foster concentrated ownership. Large shareholders often play a valuable monitoring role (see, e.g., Bhide, 1993; Demsetz, 1986; Shelifer and Vishny, 1986). However, they must be compensated for that and for the risks associated with holding undiversified portfolios. A potential compensation mechanism is insider trading (Bhide, 1993; Demsetz, 1986). Permitting insider trading might therefore encourage large shareholding by active investors, while legally prohibiting insider trading might have the opposite effect (Bhide, 1993; Demsetz, 1986). For the foregoing reasons, countries seeking to

promote widespread equity ownership might consider prohibiting insider trading.

B. Insider Trading Regulation and Stock Price Informativeness

One of the most contentious issues in the insider trading debate is whether insider trading makes stock prices more or less informative (see, e.g., Kraakman, 1991; Manne, 1966).⁴ On the one hand, insider trading might make a stock's price more informative by moving it more quickly to the firm's true value (Carlton and Fischel, 1983; Manne, 1966).⁵ On the other hand, insider trading could pervert corporate insiders' incentives to release information to the market, making stock prices less informative (Benabou and Laroque, 1992; Kraakman, 1991). Another way in which insider trading might make stock prices less informative is by reducing (outside) informed traders' incentives to uncover firm-specific information⁶ by: (1) increasing the risk of expropriation by corporate insiders (Morck, Yeung, and Yu, 2000); and/or by (2) reducing competition in the market for information (Fishman and Hagerty, 1992; Georgakopoulos, 1993; Goshen and Parchomovsky, 2001).⁷

C. Insider Trading Regulation and Stock Market Liquidity

A final important issue in the insider trading debate is the effect of insider trading on stock market liquidity (see, e.g., Carlton and Fischel, 1983; Georgakopoulos, 1993; Goshen and Parchomovsky, 2001; Haddock and Macey, 1986b, 1987). Finance scholars generally agree that information asymmetry can compromise liquidity (see, e.g., Copeland and Galai, 1983; Glosten and Harris, 1988; Leland, 1992).⁸ In Copeland and Galai (1983), for example, dealers subsidize their trading losses vis-a-vis informed traders by charging liquidity traders an immediacy fee (the *bid-ask spread*), which increases in the degree of information asymmetry.⁹ Since insider trading exacerbates information asymmetry, it should raise trading costs (Fishman and Hagerty, 1992; Georgakopoulos, 1993; Shin, 1996). In turn, greater trading costs imply lower stock market

⁴ This is an important issue because more informative stock prices lead to a more efficient allocation of capital in the economy (Wurgler, 2000).

⁵ Manne (1966) and Carlton and Fischel (1983) argue that insider trading is less expensive than traditional means of information disclosure.

⁶ The collective trading of informed traders leads to more efficient capitalization of firm-specific information into stock prices (see, e.g., French and Roll, 1986; Goshen and Parchomovsky, 2001; Grossman, 1976; Morck, Yeung, and Yu, 2000; Roll, 1988; Shleifer and Vishny, 1997).

⁷ Consistent with this, Bushman, Piotroski and Smith (2004) find that analyst following increases after countries' initial enforcement of insider trading laws.

⁸ This work builds on Akerlof's (1970) original insight that markets malfunction in the presence of asymmetric information and, in extreme cases, may break down entirely.

⁹ Stoll (1989) finds that 43% of the bid-ask spread of NASDAQ/National Market System stocks is due to adverse information costs.

liquidity.

D. Testable Hypotheses

The preceding discussion suggests the following testable hypotheses:

Hypothesis 1 (“H1”): More prohibitive insider trading laws are associated with greater ownership dispersion.

Hypothesis 2 (“H2”): More prohibitive insider trading laws are associated with more informative stock prices.

Hypothesis 3 (“H3”): More prohibitive insider trading laws are associated with greater stock market liquidity.

III. THE VARIABLES AND UNIVRIATE STATISTICS

The initial sample consists of a cross-section of 33 countries. The countries vary along several important dimensions, including the efficiency, transparency and regulation of their stock markets, their corporate laws and corporate governance structures, their legal traditions, and the quality of their law enforcement and other institutions.

A. The Variables

1. The Dependent Variables

Hypotheses 1-3 require measures of ownership dispersion, stock price informativeness, and stock market liquidity. These data come from several sources. First, ownership data come from La Porta et al. (1998). They define ownership concentration as the average ownership concentration of the three largest shareholders in the ten largest private non-financial firms in the economy. I define ownership dispersion as one minus La Porta et al.’s (1998) ownership concentration measure. Thus defined, ownership dispersion is the average fraction of shares owned by all shareholders except the three largest shareholders in the ten largest private non-financial firms in the economy.

Second, Morck, Yeung, and Yu’s (2000) measure of stock price synchronicity is my measure of stock price informativeness. This variable measures the degree to which the stock prices of different firms moved together in an average week in 1995. Greater synchronicity (co-movement) of stock returns implies that a larger proportion of stock return variation is explained by market-wide than by firm-specific factors, suggesting that stock prices are less informative.

Information on stock market liquidity comes from the International Finance Corporation’s (IFC) Emerging Stock Markets Factbook (1996). The IFC reports stock market

turnover, a common measure of liquidity, which is the ratio of the total value traded to total stock market capitalization. I use the IFC's turnover data for the sample countries for 1995. Table 1 describes the dependent variables.

2. Insider Trading Regulation and Enforcement

a. Insider Trading Laws

Since most countries with stock exchanges (and all of the countries in my sample) forbid corporate insiders to trade on the basis of price-sensitive, private information, I do not code this basic restriction.¹⁰ Rather, I code four additional elements of countries' insider trading laws as they existed as of the mid-1990s (Gaillard, 1992; Stamp and Welsh, 1996) on the basis of a priori reasoning about which elements of insider trading laws are substantively significant, with an emphasis on deterrence.¹¹

The first element, *Tippling*, equals one if a corporate insider is liable for giving price-sensitive, private information to an outsider (so-called "tippee"¹²) and encouraging her to trade, and zero otherwise. Forbidding a corporate insider to trade on inside information but at the same time allowing her to tip outsiders who subsequently trade is equivalent to allowing the insider to trade on her own behalf.¹³ The second element, *Tippee*, equals one if tippees, like corporate insiders, are forbidden to trade on price-sensitive, private information, and zero otherwise.¹⁴ The third element, *Damages*, equals one if the potential monetary penalty for violating a country's

¹⁰ Price-sensitive information is generally defined as information that would significantly affect the stock's price. The standards for determining whether information is price-sensitive vary across countries and contexts, as Euronext, the pan-European Exchange, notes: "Whether or not information is price sensitive depends on factors specific to each individual company, such as its size, recent history and sector of activity. Market sentiment can also have a marked effect on price sensitivity. Given these considerations, it is not possible to produce one definition of price sensitivity that takes all of these factors into account. For the same reason, it is impossible to indicate what percentage increase or decrease in a share price qualifies as a 'significant impact' on prices" <http://www.euronext.com/vgn/images/portal/cit_53424/55/32/66175905901789_OA1_Price-sens.pdf>. Therefore, I do not code price-sensitivity (materiality) standards because to do so would require subjective judgments. I avoid coding scienter requirements and fiduciary standards for the same reason. At any rate, the requirement of a fiduciary nexus between the source of the information and the person engaging in insider trading is virtually unique to common law countries, and particularly the United States (see *Chiarella v. United States*, 445 U.S. 222 (1980)). I do not code the misappropriation theory of liability (see *United States v. O'Hagan*, 521 U.S. 642 (1997)) either, for simplicity. Herrington (2004) does, however.

¹¹ Bainbridge (1999), Brudney (1979), Clark (1986), and Kraakman (1991) provide excellent overviews of the legal doctrinal issues.

¹² A tippee is an outsider who has received a "heads-up" (or tip) about price-sensitive, private information by a corporate insider (a director, manager, employee, advisor, etc.).

¹³ As Brudney (1979) notes, "the insider, by giving the information out selectively, is in effect selling the information to its recipient for cash, reciprocal information, or other things of value for himself, including possibly prestige or status or the like (p. 348)."

insider trading law is greater than the illicit insider trading profits, and zero otherwise. If the potential monetary penalty is less than the profits from insider trading, the insider trading law's deterrent effect is weaker, holding constant the probability of detection.¹⁵ Finally, the fourth element, *Criminal*, equals one if insider trading is a criminal offense in the country, and zero otherwise. In some cases, criminal sanctions might yield more efficient deterrence than monetary sanctions (Polinsky and Shavell, 2000).¹⁶

A country's insider trading prohibition can be characterized along two broad (although not exhaustive) dimensions: the *scope* of the activities that it prohibits and the *sanctions* for violating it. I thus create two sub-indices of insider trading law, which correspond roughly to these separate aspects. The first sub-index, *Scope*, is the sum of *Tipping* and *Tippee*. The insider trading prohibition is broader if it prohibits insiders both from trading *and* from tipping third parties. It is broader still if it also forbids tippees to trade. The second sub-index, *Sanction*, is the sum of *Damages* and *Criminal* and is a rough proxy for the expected cost of violating a country's insider trading laws. A potential violator will compare the expected benefit to the expected cost of breaking the law (see, e.g., Becker, 1968; Polinsky and Shavell, 2000). Holding constant the expected benefit, the greater the expected cost, the greater is the law's deterrent effect.¹⁷

I also create an aggregate insider trading law index, *IT Law*, which is the sum of the two sub-indices, *Scope* and *Sanction*. Abstracting from enforcement, an *IT Law* score of zero represents the most lax insider trading regime, while an *IT Law* score of four represents the most

¹⁴ “[R]eceipt of the information by one who is such a selected beneficiary taints the recipient so that he should no more be entitled to use it in trading than was the donor” (*Id.*).

¹⁵ Of course, the probability of detection is not constant; some countries have better detection technology than others. When the probability of detection is very low, the monetary penalty must be greater for efficient deterrence (Dooley, 1980; Easterbrook, 1985; Polinsky and Shavell, 2000). In fact, very high monetary sanctions might be desirable if they accommodate low detection probabilities and thus economize on enforcement costs (Polinsky and Shavell, 2000). In the context of shareholder litigation, Dooley (1980) discusses several negative effects of limiting recovery to insider trading profits.

¹⁶ One case is where the likelihood of detection is very low and the optimal monetary penalty is thus greater than the violator's net wealth. In such a case, criminal prosecution leading to imprisonment or other non-monetary sanctions might yield optimal deterrence (Easterbrook, 1985). Criminal sanctions might also have the opposite effect, however, since in most jurisdictions criminal prosecution requires a higher standard of proof. A higher burden of proof reduces the probability of success of prosecution and increases enforcement costs. This should reduce the likelihood of finding a statistically significant coefficient on *Criminal*.

¹⁷ Since I do not have data on the expected benefits of violating insider trading laws, my analysis implicitly assumes that they are constant within and across countries. In reality, insider trading profits vary systematically with legal and institutional differences across countries and the context within which such trading occurs (see, e.g., Bris 2003; Durnev and Nain, 2004).

prohibitive insider trading regime. Each of the insider trading law variables is described in Table 1.

b. Enforceability

Enacting insider trading laws is merely the first step. The deterrent effect of such laws also depends on the probability (actual or perceived) that they will be enforced (see, e.g., Zimring and Hawkins, 1973). In this regard, two dimensions of enforcement are relevant: *actual* (or *past*) enforcement and enforcement *power* (or *potential*), both of which theoretically should figure in the costs of potential transgressors' calculus.

Although there is little systematic information on actual enforcement or enforcement power across countries, a few rough proxies exist. For actual enforcement, I use information on countries' enforcement histories from Bhattacharya and Daouk (2002). Their enforcement information consists of the year in which a country enforced its insider trading rules for the first time. I convert this information into the variable *Enforced by 1994*, which equals one if a country had enforced its insider trading rules for the first time by 1994 and zero otherwise.¹⁸

For enforcement power, I construct two separate measures: *public* enforcement power and *private* enforcement power. My division of enforcement power into public and private dimensions is inspired by the theoretical inquiry about who should enforce a particular public law (see, e.g., Glaeser, Johnson, and Shleifer, 2001; Hay and Shleifer, 1998; Landis, 1938; La Porta et al., 2003; Shavell and Polinsky, 2000).¹⁹ To construct public enforcement power, I rely on securities regulatory information compiled by La Porta et al. (2003) based on a survey of domestic lawyers concerning, among other things, the attributes and investigative powers of the

¹⁸ I choose 1994 as the cut-off date because the dependent variables come from around the period 1995-1996 and because the insider trading law indices are based on the sample countries' insider trading rules as they existed around the same period. Both the content and the enforcement of these laws might have changed in many of these countries since 1994. See Herrington (2004) for more recent measures of insider trading rules and enforcement across countries.

¹⁹ La Porta et al. (2003) address the relative advantages and disadvantages of private and public enforcement of securities laws. Under their *public enforcement* hypothesis, "[p]ublic enforcement might work because the enforcer is *independent and focused* and so can regulate markets free from political interference, because the enforcer can *introduce regulations of market participants*, because it can *secure information* from issuers and market participants – through subpoena, discovery, or other means – more effectively than private plaintiffs, or because it can *impose sanctions*" (p. 4). Under their *private enforcement* hypothesis, the main, "benefit of the securities law is the direct reduction in the costs of private contracting [since] the law can structure contracting and litigation by explicitly describing the obligations of various parties and burdens of proof, thereby reducing the costs to them and to the court of establishing liability" (pp. 3-4).

securities market supervisor.²⁰ The supervisor's attributes include four elements that address the supervisor's independence, focus and power: (1) supervisor appointment process; (2) supervisor tenure; (3) focus of supervisor's activities; and (4) supervisor's rulemaking authority. La Porta et al. (2003) compute the supervisor characteristics index as the mean of these four attributes. A higher mean signifies that the securities market supervisor is more independent of the political process and has greater authority. La Porta et al. (2003) also construct an index of the supervisor's investigative powers, which equals the mean of the supervisor's power to command documents and to subpoena the testimony of witnesses during investigations of violations of the country's securities laws. Using these two measures, I create the variable *Public Enforcement Power* as the mean of La Porta et al.'s (2003) supervisor characteristics and investigative powers indices. Table 1 describes *Public Enforcement Power* and its components in greater detail.

To construct a measure of private enforcement power, I first consider whether investors may bring private suits against alleged transgressors of the country's insider trading laws. Private rights to sue theoretically should increase investors' incentives to enforce the country's insider trading laws independent of any action taken by the relevant regulatory authority(ies).²¹ The variable *Private Right* equals one if such a right exists, and zero otherwise. Private litigation is only meaningful to the extent that the judicial system is reliable and efficient, however (see, e.g., Glaeser, Johnson, and Shleifer, 2001; Hay and Shleifer, 1998). Thus, I construct an index of private enforcement power, *Private Enforcement Power*, as the product of an index of the efficiency of the judiciary (La Porta et al., 2003) and *Private Right*. Table 1 describes *Private Enforcement Power* and its components in greater detail.

3. Other Controls

To isolate the relationship between insider trading regulation and the dependent variables, I control for several factors that prior research suggests are relevant to financial market structure and performance. First, since economic development is generally associated with greater financial market development and better institutions and law enforcement capabilities (see, e.g., La Porta et al., 1999; North, 1981), I control for the logarithm of per capita gross domestic

²⁰ I am implicitly assuming that the sample countries' relative rankings in terms of these measures have not changed significantly between the mid-1990s and the time of La Porta et al.'s (2003) survey.

²¹ Of course, private enforcement might be abusive or insufficient (see, e.g., Dooley, 1980; Polinsky and Shavell, 2000). I say more about the potential insufficiency of private enforcement in the conclusion.

product (GDP).²² Second, since stock market liquidity is positively associated with economic growth (Atje and Jovanovic, 1993; Levine and Zervos, 1998), I control for the growth of GDP per capita. Third, I control for anti-director rights (La Porta et al., 1997) and legal origin (La Porta et al., 1997), since La Porta et al. (1997, 1998) demonstrate that both measures have an important bearing upon financial development. Finally, I control for disclosure, since better disclosure is associated with greater stock market development (Francis, Khurana and Pereira, 2003; La Porta et al., 1997, 1998, 2003) and might reduce corporate insiders' incentives to engage in insider trading (Baiman and Verrecchia, 1996; Shin, 1996).

I use two measures of disclosure. The first is a measure of legal disclosure requirements from La Porta et al. (2003). This index, *Disclosure*, is an arithmetic average of 5 categories of information that firms are required to include in their offering prospectuses: (1) compensation; (2) ownership structure; (3) inside ownership; (4) irregular contracts; and (5) related party transactions. The second measure is the quality of accounting standards, *Accounting*, which ranks countries on the basis of the quality of their corporate disclosure practices as of 1990 (La Porta et al., 1998). *Disclosure* is a proxy for the strength of the involuntary disclosure regime at the initial offering stage, while *Accounting* is a proxy for the quality of periodic (post-offering) disclosure and measures firms' actual disclosure practices rather than legal disclosure requirements per se. Table 1 describes both disclosure variables and all of the other control variables in greater detail.

4. Univariate Statistics

Table 2 presents the formal insider trading laws and enforcement measures for the sample countries, grouped by legal origin. The only significant difference in the formal insider trading laws between the common law countries and the civil law countries is with respect to sanctions. The difference in the mean value of *Sanction* (the sum of *Damages* and *Criminal*) between the common law and civil law countries is positive and significant at the 10% level. The common law countries also tend to allocate greater public and private²³ enforcement power (the differences in the mean values of both of these variables are significant at the 1% level). These patterns are consistent with the general finding of La Porta et al. (1997, 1998) that common law

²² Also, wealthier countries should have (access to) more advanced surveillance technologies to detect insider trading violations.

countries are more protective of investors than civil law countries. However, there is no significant difference in the proportion of the common law countries that had enforced their insider trading laws by 1994 and the proportion of the civil law countries that had done so.

Table 3 presents pair-wise correlation coefficients. Consistent with H1, ownership dispersion is positively and significantly correlated with the aggregate *IT Law* index, the sub-index *Sanction*, and *Enforced by 1994* (the correlation coefficients have *p*-values of 0.01, 0.00 and 0.00, respectively). Ownership dispersion is not significantly correlated with either of the enforcement power variables, *Public Enforcement Power* and *Private Enforcement Power*, although the correlation coefficients are all positive, consistent with H1. Consistent with H2, stock price synchronicity is negatively²⁴ and significantly correlated with the aggregate *IT Law* index and the sub-indices *Sanction* and *Scope* (the correlation coefficients have *p*-values of 0.01, 0.04 and 0.03, respectively). However, stock price synchronicity is not significantly correlated with any of the actual or enforcement power measures. Consistent with H3, stock market turnover is positively correlated with the sub-index *Scope* and the aggregate *IT Law* index (the correlation coefficients have *p*-values of 0.04 and 0.03, respectively). However, stock market turnover is not significantly correlated with *Sanction* or with any of the enforcement measures (column 5 and rows 7-9).

Finally, the results in Table 3 suggest that countries whose formal insider trading laws penalize insider trading more harshly also tend to allocate greater enforcement powers to both public and private enforcers and are more likely to have actually enforced such laws.

IV. DO INSIDER TRADING LAWS MATTER?

A. Ownership Dispersion

H1 predicts that countries with more prohibitive insider trading laws have more dispersed stock ownership. Panel A of Table 4 presents the basic regressions for ownership dispersion. Columns 1-3 present the results using the alternative insider trading law indices and the control variables, excluding the disclosure variables. The coefficient on *Scope* is negative and insignificant (column 1). In contrast and consistent with H1, the coefficient on *Sanction* is

²³ I thank Merritt Fox for pointing out that “countries that have a private right of action to support rules against insider trading probably have a quite different kind of legal system in other broader regards.” I control for legal origin in the regressions, which should partially address this concern.

²⁴ H2 predicts a negative correlation between the stringency of insider trading laws and synchronicity because lower synchronicity implies that stock prices are more informative.

positive and significant at the 1% level (column 2). Also consistent with H1, the coefficient on the aggregate index *IT Law* is positive and significant at the 5% level (column 3).

In columns 4-9 in Panel A of Table 4, I regress ownership dispersion on the alternative insider trading law measures, the disclosure variables and the other control variables. When I control for *Disclosure* and *Accounting*, the coefficient on *Scope* remains insignificant (columns 4 and 5, respectively); the coefficient on *Sanction* remains positive and significant (columns 6 and 7, respectively); and the coefficient on the aggregate *IT Law* index remains positive and significant (columns 8 and 9, respectively). The coefficients on the disclosure variables are generally insignificant (columns 4-9).²⁵ Overall, the results in Panel A of Table 4 are consistent with H1 and suggest that large public corporations tend to have greater ownership dispersion in countries whose formal insider trading laws contain greater sanctions for insider trading violations.

B. Stock Price Informativeness

H2 predicts that stock prices are more informative in markets with more stringent insider trading laws. Lower synchronicity implies more informative stock prices, so H2 predicts negative regression coefficients on the insider trading law variables. Panel B of Table 4 presents the basic regressions for stock price synchronicity. Columns 1-3 of Panel B regress stock price synchronicity on the alternative insider trading law indices and the control variables, excluding the disclosure variables. Consistent with H2, the coefficient on *Scope* is negative and significant at the 5% level (column 1). Also consistent with H2, the coefficient on *Sanction* is negative and significant at the 1% level (column 2). Again, consistent with H2, the coefficient on the aggregate *IT Law* index is negative and significant at the 5% level (column 3).

In columns 4-9 in Panel B of Table 4, I regress stock price synchronicity on the alternative insider trading law measures and the control variables, including the alternative disclosure variables, *Disclosure* and *Accounting*.²⁶ The coefficients on *Scope*, *Sanction*, and the

²⁵ In unreported regressions, I regress ownership dispersion on the alternative disclosure measures and the control variables, excluding the insider trading law indices. The coefficient on *Disclosure* is positive and significant at the 10% level. In contrast, although the coefficient on *Accounting* is positive, it is insignificant. My finding in this paper that the relationship between insider trading laws and the dependent variables is generally stronger than the relationship between the dependent variables and disclosure is consistent with the finding of Francis, Khurana and Pereira (2003) that disclosure is of secondary importance to the legal rules protecting investors.

²⁶ In unreported regressions, I regress stock price synchronicity on the alternative disclosure measures and the control variables, without the insider trading law indices. The coefficient on *Disclosure* is positive but insignificant, while the coefficient on *Accounting* is positive and significant at the 5% level.

aggregate *IT Law* index remain negative and significant when I control for *Disclosure* in each of columns 4-9. The overall picture in Panel B of Table 4 is that, consistent with H2, the degree of informativeness of stock prices is positively associated with more prohibitive formal insider trading rules.

C. Stock Market Liquidity

H3 predicts that countries with more prohibitive insider trading laws have more liquid stock markets. Panel C of Table 4 presents the basic results. In columns 1-3 of Panel C, I regress stock market turnover on the alternative insider trading law indices and the control variables, excluding the disclosure variables. The coefficient on *Scope* is positive but insignificant (column 1). Consistent with H3, the coefficients on *Sanction* (column 2) and the aggregate *IT Law* index (column 3) are both positive and significant at the 10% level.

In columns 4-9 in Panel C, the regressions include the alternative insider trading law measures and the control variables, including the disclosure variables, *Disclosure* and *Accounting*.²⁷ The coefficient on *Scope* remains positive but insignificant when I control for *Disclosure* (column 4) and becomes positive and significant at the 10% level when I control for *Accounting* (column 5). The coefficient on *Sanction* is still positive and significant at the 10% level when I control for *Disclosure* (column 6), but it becomes slightly less significant (*p*-value of 11%) when I control for *Accounting* (column 7). The coefficient on the aggregate *IT Law* index remains positive and significant at the 10% level when I control for *Disclosure* and *Accounting* (columns 8 and 9, respectively). The results in Panel C of Table 4 suggest that, consistent with H3, countries with more prohibitive formal insider trading laws have more liquid stock markets.

D. Are the Basic Results Robust to the Enforcement Environment?

Thus far, I have focused on countries' formal insider trading laws. However, enforceability might be more pivotal than the formal rules (Pistor, Raiser, and Gelfer, 2000). Therefore, in Table 5, I control for the enforcement measures that I describe in Part III. These measures should capture (at least in part) omitted institutional characteristics of the securities regulatory regime that might be driving the results.

²⁷ In unreported regressions, I regress stock market turnover on each the alternative disclosure quality measures and the other control variables, excluding the insider trading law variables. The coefficients on *Disclosure* and *Accounting* are both positive but insignificant.

Panel A of Table 5 reports the results for ownership dispersion. Columns 1-3 include the alternative enforcement measures and the control variables without the insider trading law indices. Only past enforcement, *Enforced by 1994*, is positive and significant (at the 5% level, column 1), implying that ownership is more dispersed in countries that have enforced their insider trading laws in the past. In contrast, neither *Public Enforcement Power* nor *Private Enforcement Power* is significant (columns 2 and 3, respectively). In columns 4-6, the regressions include *Scope* and the enforcement measures; neither *Scope* nor any of the enforcement measures is significant. In columns 7-9, the regressions include *Sanction* and the enforcement measures; the coefficient on *Sanction* is still positive and significant at the 1% level, while past enforcement, *Enforced by 1994*, is still the only significant enforcement measure (column 7). Finally, in columns 10-12, I include the aggregate *IT Law* index and the enforcement measures; the coefficient on the aggregate *IT Law* index remains positive and significant in each of these regressions, as does the coefficient on past enforcement (column 10). In short, controlling for the enforcement environment does not alter the ownership results relative to the basic regressions in Panel A of Table 5. Sanctions remain the dominant aspect of formal insider trading laws vis-à-vis ownership dispersion.

Panel B of Table 5 reports the results for stock price synchronicity. In columns 1-3, I regress stock price synchronicity on the enforcement variables without the insider trading law measures. *Public Enforcement Power* is negative and significant at the 5% level (column 2), implying that greater public enforcement power is associated with more informative stock prices. In contrast, neither *Enforced by 1994* nor *Private Enforcement Power* is significant (columns 1 and 3, respectively). In columns 4-6, the regressions include *Scope* and the enforcement measures; the coefficient on *Scope* becomes insignificant (but is still negative) when I control for *Public Enforcement Power* (column 5) and none of the coefficients on the enforcement measures is significant. In columns 7-9, the regressions include *Sanction* and the enforcement measures; the coefficient on *Sanction* remains negative and significant, except in column 8, where it becomes less significant (with a *p*-value of 12%) when I control for *Public Enforcement Power*, which is insignificant. Finally, in columns 10-12, the regressions include the aggregate *IT Law* index and the enforcement variables; the coefficient on the aggregate *IT Law* index remains negative and significant, except in column 11, where it becomes less significant (with a *p*-value of 11%) when I control for *Public Enforcement Power*, which is insignificant.

Panel C of Table 5 reports the results for stock market liquidity. In columns 1-3, I regress stock market turnover on the enforcement variables without the insider trading law measures. The coefficient on *Public Enforcement Power* is positive and significant at the 10% level (column 2), implying that greater public enforcement power is associated with more liquid stock markets. In contrast, the coefficients on *Enforced by 1994* and *Private Enforcement Power* are both insignificant (columns 1 and 3, respectively).²⁸

In columns 4-6, the regressors include *Scope* and the alternative enforcement measures; the coefficients on *Scope* and the enforcement measures are all positive but insignificant. In columns 7-9, the regressions include *Sanction* and the enforcement measures. The coefficient on *Sanction* remains positive and significant at the 10% level when I control for *Private Enforcement Power* (column 9). In contrast, the coefficient on *Sanction* becomes insignificant when I control for both *Enforced by 1994* (column 7) and *Public Enforcement Power* (column 8), neither of which is significant. Finally, in columns 10-12, the regressions include the aggregate *IT Law* index and the alternative enforcement measures. The coefficient on the aggregate *IT Law* index remains positive and significant at the 10% level when I control for *Private Enforcement Power* (column 12), but becomes slightly less significant (*p*-value of 11%) when I control for past enforcement (column 10) and completely insignificant when I control for *Public Enforcement Power* (column 11).

Table 5 shows that the basic results are robust to controlling for past enforcement and private enforcement power, but not public enforcement power. The results for stock price synchronicity and especially stock market turnover (but not ownership dispersion) are mitigated when I take into account public enforcement power. It turns out, however, that *Public Enforcement Power* is highly correlated with *Sanction* (and thus with the aggregate *IT Law* index), which means that the two variables cannot really be disentangled. This could explain why, in the liquidity and synchronicity regressions, each is significant without the other but both are insignificant when they are included together. To address this problem, I code a new variable, the product of *Public Enforcement Power* and *Sanction*.²⁹ As Table 6 demonstrates, the

²⁸ In contrast, Bhattacharya and Daouk (2002) find that past enforcement of insider trading laws is associated with a positive and statistically significant increase in stock market liquidity. The difference between their results and mine is not altogether surprising, however. Because their data cover many countries over more than twenty years, they have a very large sample size. The low level of statistical significance of the coefficient on *Enforced by 1994* undoubtedly results from my small sample size, which reduces the power of the statistical tests.

²⁹ The results are similar if I take their sum. See SAS (1999).

combined measure is highly significant and trumps both *Disclosure*³⁰ and *Private Enforcement Power* in full regressions for all of the dependent variables.

In summary, then, the basic results are robust to controlling for the enforcement environment. The possibility of stringent sanctions (especially criminal sanctions), rather than the breadth of the prohibition, seems to be the pivotal feature of the insider trading prohibition.

V. DISCUSSION AND FUTURE RESEARCH

I find that countries with more prohibitive formal insider trading laws tend to have more dispersed equity ownership (H1), more informative stock prices (H2) and more liquid stock markets (H3), even when accounting for disclosure and enforceability. My results are consistent with and supplement those of Bhattacharya and Daouk (2002) in that both enforceability *and* formal insider trading laws seem matter to stock market development.³¹ Moreover, the most important aspects of the formal laws seem to be their deterrent elements, especially the possibility of criminal sanctions. Thus, while Bhattacharya and Daouk (2002) argue that the mere enactment of insider trading laws does not matter, it appears that enactment of the “right” laws does.³² Finally, my results suggest some of the particular channels (i.e., greater ownership dispersion, liquidity, and stock price informativeness) through which effective insider trading regulation might lower the cost of equity (Bhattacharya and Daouk, 2002). However, further empirical work (including case studies) covering more countries and time periods is required before I would confidently make policy recommendations.

The specific mechanisms through which countries enforce their insider trading laws merit further study. My legal measures do not incorporate liability rules, allocations of evidentiary burdens or general rules of litigation and administrative procedure, which could pose greater or lesser obstacles to private suits and public enforcement. In addition, my measure of public enforcement power (from La Porta et al., 2003) addresses general characteristics of the securities market supervisor rather than supervisor characteristics specific to insider trading oversight and

³⁰ I do not include *Disclosure* in Table 6 because it is also highly correlated with *Public Enforcement Power*. However, the results in Table 6 do not change if I include it.

³¹ My data suggest that there is a strong positive correlation between the securities regulatory environment and the stringency of the formal laws.

³² This supports Polinsky and Shavell (2000), who argue that a very low probability of enforcement might be optimal if the legal sanctions are sufficiently large.

enforcement.³³ I acknowledge such shortcomings and encourage further empirical study of these additional dimensions.

Nevertheless, my preliminary findings arguably shed some initial light on the question “[w]ho should enforce a particular legal rule?” (Glaeser, Johnson, and Shleifer, 2001) in the context of insider trading. Hay and Shleifer (1998) argue that private enforcement of public laws is superior to public enforcement of such laws when the state’s legal apparatus is dysfunctional. Consistent with the latter rationale, La Porta et al. (2003) find that private enforcement of securities laws governing new equity offerings is more effective than public enforcement of such laws. In contrast, my findings suggest that public enforcement (especially the legal and institutional ability to levy criminal sanctions) is more important than private enforcement of insider trading laws. This result is not surprising, since many features of insider trading render it more amenable to public enforcement.³⁴

Two additional enforcement mechanisms that I have not considered here are *self-regulation* by stock exchanges (self-regulatory organizations (SROs)) and *private ordering*. On the one hand, via their proprietary, real-time electronic trading data, SROs might be better able to identify insider trading and might have greater incentives, relative to the state and private investors, to write and enforce securities market rules (Mahoney, 1997). On the other hand, SROs might have conflicted interests (Kahan, 1997), especially if their owners/members (i.e., broker-dealers) are the very parties who engage in insider trading (Haddock and Macey, 1987). Also, spillovers (Cooter, 1996) might cause SROs to under-enforce, especially in light of market fragmentation (Harris, 1993). Finally, SROs lack the police force necessary to compel information, capture violators and impose non-monetary sanctions, like imprisonment.³⁵ The

³³ The latter data are extremely hard to get, although Herrington (2004) makes some initial strides in this direction.

³⁴ In particular, individual investors are unable to discern insider trading in impersonal markets and are therefore unlikely to exercise private rights of action, even in countries with efficient judicial systems. As Dooley (1980) notes for the United States, “private actions play a trivial role in regulating insider trading; the Commission [SEC] has a virtual monopoly. The private actions actually brought are largely parasitic – a condition found nowhere else in securities regulation. Even with the benefit of prior SEC action, private parties are surprisingly reluctant to bring claims” (pp. 16-17). Consequently, “[p]rivate suits have little deterrent effect independent of what can be produced at less cost by public enforcement and must be justified, if at all, on compensatory grounds” (Dooley, 1980, p. 36). This is consistent with Landis (1938) and Polinsky and Shavell (2000), who argue that public enforcement is optimal when it is too costly for the victim to identify or apprehend the perpetrator.

³⁵ In practice, many stock exchanges (like the NYSE) cooperate with public regulators to enforce insider trading rules (see, e.g., Dooley, 1980).

role of SROs in insider trading rulemaking and enforcement is thus an interesting question that merits future comparative study.³⁶

Private contracting between firms and shareholders (as opposed to a mandatory prohibition) is another way that countries might address insider trading (see, e.g., Carlton and Fischel, 1983; Haddock and Macey, 1986a). Breaches of insider trading “contracts” presumably would be settled in court.³⁷ However, since public regulation has generally supplanted any private ordering of insider trading,³⁸ this method of enforcement is not very amenable to empirical analysis (Cox, 1986; Easterbrook, 1985), except perhaps from an historical perspective.³⁹ Also, the preceding analysis of the relative efficacy of private and public enforcement of public insider trading rules applies with equal force to private ordering (Cox, 1986; Easterbrook, 1985).

Another issue worthy of further study is the political economy of insider trading laws. The public choice claim that various stakeholders in the financial system cause these laws to be adopted (Haddock and Macey, 1987) suggests that causality might instead run from the financial system to insider trading rules.⁴⁰ (The fact that the basic results appear to be robust to changing the time period in which the dependent variables are measured⁴¹ and the legal origin controls should partially address this critique with respect to my data, however.) It is also possible that some countries enacted insider trading laws merely in response to external pressure (Haddock and Macey, 1986b), resulting in rote transplantation of foreign laws unrelated to the country’s financial, legal, and institutional characteristics (see, e.g., Pistor, 2002). (However, my finding

³⁶ Herrington (2004) is the first study I am aware of that considers SRO enforcement. His results suggest that SRO enforcement is generally not strongly related to the financial variables in this study.

³⁷ “[I]t is not at all clear...that the current enforcement apparatus of the [SEC] is necessary to supplement in the common law courts the regime of private enforcement that would take place if a ‘Coasian’ system of private contracting were permitted to exist” (Haddock and Macey, 1986a, p. 1451). However, private ordering of insider trading would raise several concerns, including: difficulty of shareholders to detect breaches of insider trading agreements (Cox, 1986); judicial and transaction uncertainty caused by the absence of a bright line rule, which could pose particular problems in transition economies (Shleifer and Hay, 1998); externalities (Easterbrook, 1985); and potential reinforcement of undesirable social norms (Cooter, 1997; Posner, 1996; Shleifer and Hay, 1998).

³⁸ For example, Germany apparently had a system of private contracting prior to its adoption of a statutory insider trading law (Schafer and Ott, 1992).

³⁹ According to Easterbrook (1985), “[t]he [U.S.] historical pattern – trading until 1961, public enforcement thereafter – is consistent with a story that trading is efficient, but it is equally consistent with a story that public enforcers have a comparative advantage, aided by computers and the criminal law, in getting rid of an inefficient practice” (p.95).

⁴⁰ Coffee (2001) addresses this issue more generally.

⁴¹ Herrington (2004) runs similar regressions of 2003 measures of synchronicity and liquidity using my insider trading indices for a larger sample of 49 countries and obtains qualitatively similar results.

of a significant relationship between formal insider trading laws and financial structure and performance suggests otherwise, at least for the countries in my sample.) Since both endogeneity and irrelevance of formal insider trading laws are plausible alternatives to the story here, careful study of the political economy of countries' (especially emerging markets') adoption of insider trading laws would therefore be informative (see, e.g., Beny, 2002, for a start).

Finally, it might be worth exploring the interaction between insider trading laws and business norms. The enforceability critique of formal laws (Pistor, Raiser, and Gelfer, 2000) notwithstanding, the rarity of enforcement (Bhattacharya and Daouk, 2002) might not prove non-compliance in every context (Cooter, 1998, 2000). From an expressive perspective, insider trading laws might "tip a system of social norms into a new equilibrium" (Cooter, 1998). Among other things, therefore, one could examine countries' official pronouncements accompanying their prohibition of insider trading. Such pronouncements (or lack thereof) might illuminate whether they are trying to promote the best global business norms or simply appeasing imperial prerogatives.

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Table 1: Description of the Variables

Description	
<u>Dependent Variables</u>	
Ownership Dispersion	One minus the average fraction of common stock of the ten largest non-financial domestic firms owned by the three largest shareholders in the country. Source: La Porta et al. (1998).
Stock Market Turnover	The total value traded divided by stock market capitalization in 1995. Source: International Finance Corporation, Emerging Stock Markets Factbook (1996).
Stock Price Synchronicity	The fraction of stocks whose prices moved in the same direction in an average week in 1995. Source: Morck, Yeung, and Yu (2000).
<u>Insider Trading Law Variables</u>	
Tipping	Tipping equals one if corporate insiders are prohibited from tipping outsiders (tippees) about material non-public information and/or encouraging them to trade on such information for personal gain; equals zero otherwise. Sources: Gaillard (1992); Stamp and Welsh (1996).
Tippee	Tippee equals one if tippees, like corporate insiders, are prohibited from trading on material non-public information that they have received from corporate insiders; equals zero otherwise. Sources: Gaillard (1992); Stamp and Welsh (1996).
Damages	Damages equals one if the monetary penalty for violating insider trading laws is potentially greater than the insiders' trading profits; equals zero otherwise. Sources: Gaillard (1992); Stamp and Welsh (1996).
Criminal	Criminal equals one if violation of insider trading laws is a potential criminal offense; equals zero otherwise. Sources: Gaillard (1992); Stamp and Welsh (1996).
Scope	Scope is a sub-index of insider trading law. Scope measures the breadth of the insider trading prohibition. It is the sum of Tipping and Tippee. Scope ranges from 0 to 2, with 0 representing the most permissive insider trading prohibition and 2 representing the most restrictive insider trading prohibition.
Sanction	Sanction is a sub-index of insider trading law. Sanction is a proxy for the expected criminal and monetary sanctions for violating a country's insider trading laws. It is the sum of Damages and Criminal. Sanction ranges from 0 to 2, with 0 representing the lowest expected sanctions and 2 representing the highest expected sanctions.
IT Law	The aggregate IT Law index equals the sum of (1) Tipping; (2) Tippee; (3) Damages; and (4) Criminal; or, equivalently, the sum of Scope and Sanction. IT Law ranges from 0 to 4, with 0 representing the most lax insider trading legal regime and 4 representing the most restrictive insider trading legal regime.
<u>Enforcement Variables</u>	
Enforced by 1994	A proxy for actual enforcement, Enforced by 1994 is an indicator variable that equals one if the country's insider trading law has been enforced for the first time by the end of 1994. Source: Bhattacharya and Daouk (2002).
Public Enforcement Power	The public enforcement index is the arithmetic mean of an index of the securities market supervisor's characteristics and an index of the securities market supervisor's investigative powers. The securities market supervisor's characteristics index equals the arithmetic mean of the four components: (1) Appointment – "[e]quals one if a majority of the members of the Supervisor are unilaterally appointed by

the Executive branch of government; equals zero otherwise”; (2) Tenure – “[e]quals one if members of the Supervisor cannot be dismissed at the will of the appointing authority; equals zero otherwise; (3) Focus – “[e]quals one if separate government agencies or official authorities are in charge of supervising commercial banks and stock exchanges; equals zero otherwise; (4) Rules – “[e]quals one if the Supervisor can generally issue regulations regarding primary offerings and/or listing rules on stock exchanges without prior approval of other governmental authorities. Equals one-half if the Supervisor can generally issue regulations regarding primary offerings and/or listing rules on stock exchanges only with the prior approval of other governmental authorities. Equals zero otherwise.”

The supervisor’s investigative powers index equals the arithmetic mean of two factors: (1) Document – “[a]n index of the power of the Supervisor to command documents when investigating a violation of securities laws. Equals one if the Supervisor can generally issue an administrative order commanding all persons to turn over documents; equals one-half if the Supervisor can generally issue an administrative order commanding publicly-traded corporations and/or their directors to turn over documents; equals zero otherwise; (2) Witness – “[a]n index of the power of the Supervisor to subpoena the testimony of witnesses when investigating a violation of securities laws. Equals one if the Supervisor can generally subpoena all persons to give testimony; equals one-half if the Supervisor can generally subpoena the directors of publicly-traded corporations to give testimony; equals zero otherwise.”

Source: La Porta et al. (2003)

Private Right	Private right equals one if private parties have a private right of action against parties who have violated the country’s insider trading laws. Sources: Gaillard (1992); Stamp and Welsh (1996).
Efficiency of the Judiciary	Efficiency of the judiciary is a measure of the “efficiency and integrity of the legal environment as it affects business, particularly foreign firms.” It is recorded as the arithmetic average between 1980 and 1983. Source: La Porta et al. (2003).
Private Enforcement Power	The product of Private Right and Efficiency of the Judiciary.

Control Variables

Log of GDP	Logarithm of per capita gross domestic product in 1995, measured in constant 1995 US \$. Source: World Bank, World Development Report CD-Rom (2003).
GDP Growth	Average annual percentage growth rate of per capita GDP for the years 1970-1993. Source: World Bank, World Development Report (1995).
Anti-director Rights	The index is created by adding 1 if: (1) shareholders are allowed to mail their proxy votes; (2) the law does not require shareholders to deposit their shares before the general meeting of shareholders; (3) the law permits cumulative voting; (4) a mechanism for oppressed minority shareholders exists; or (5) the minimum percentage ownership stake that entitles a shareholder to request an extraordinary meeting of shareholders is less than or equal to 10% of outstanding capital shares. The index ranges from 0 to 5, where 0 signifies the weakest investor protections and 5 signifies the strongest investor protections. Source: La Porta et al. (1997).
Legal Origin	An indicator variable that signifies the legal origin of the country’s Company Law or Commercial Code. Legal origin may be English common law, French civil law, German civil law or Scandinavian civil law. Source: La Porta et al. (1998).
Disclosure	The Disclosure index equals the arithmetic average of 6 separate indices of information that firms are legally required to include in their prospectuses: (1) Compensation; (2) Shareholders; (3) Inside Ownership; (4) Irregular contracts; (5) Transactions.

(1) Compensation is “[a]n index of prospectus disclosure requirements regarding the compensation of

directors and key officers. Equals one if the law or the listing rules require that the compensation of each director and key officer be reported in the prospectus of a newly-listed firm; equals one-half if only the aggregate compensation of directors and key officers must be reported in the prospectus of a newly-listed firm; equals zero when there is no requirement to disclose the compensation of directors and key officers in the prospectus for a newly-listed firm.”

(2) Shareholders is “[a]n index of disclosure requirements regarding the Issuer’s equity ownership structure. Equals one if the law or the listing rules require disclosing the name and ownership stake of each shareholder who, directly or indirectly, controls ten percent or more of the Issuer’s voting securities; equals one-half if reporting requirements for the Issuer’s 10% shareholders do not include indirect ownership or if only their aggregate ownership needs to be disclosed; equals zero when the law does not require disclosing the name and ownership stake of the Issuer’s 10% shareholders. No distinction is drawn between large-shareholder reporting requirements imposed on firms and those imposed on large shareholders themselves.”

(3) Inside Ownership is “[a]n index of prospectus disclosure requirements regarding the equity ownership of the Issuer’s shares by its directors and key officers. Equals one if the law or the listing rules require that the ownership of the Issuer’s shares by each of its directors and key officers be disclosed in the prospectus; equals one-half if only the aggregate number of the Issuer’s shares owned by its directors and key officers must be disclosed in the prospectus; equals zero when the ownership of Issuer’s shares by its directors and key officers need not be disclosed in the prospectus.”

(4) Irregular contracts is “[a]n index of prospectus disclosure requirements regarding the Issuer’s contracts outside the ordinary course of business. Equals one if the law or the listing rules require that the terms of material contracts made by the Issuer outside the ordinary course of its business be disclosed in the prospectus; equals one-half if the terms of only some material contracts made outside the ordinary course of business must be disclosed; equals zero otherwise.”

(5) Transactions is “[a]n index of the prospectus disclosure requirements regarding transactions between the Issuer and its directors, officers, and/or large shareholders (i.e., “related parties”). Equals one if the law or the listing rules require that all transactions in which related parties have, or will have, an interest be disclosed in the prospectus; equals one-half if only some transactions between the Issuer and related parties must be disclosed in the prospectus; equals zero if transactions between the Issuer and related parties need not be disclosed in the prospectus.”

Source: La Porta et al. (2003)

Accounting

The accounting index is a measure of the quality of accounting standards. The accounting index assigns a rating to companies’ 1990 annual reports on the basis of their inclusion or exclusion of 90 items. The 90 items are divided into 7 categories (general information, income statements, balance sheets, funds flow statement, accounting standards, stock data and special items). For each country, the index is based on examination of a minimum of 3 companies. The companies represent a cross-section of various industries. Seventy percent are industrial companies, while the remaining thirty percent are financial companies. Source: La Porta et al. (1998).

Table 2: Formal Insider Trading Law and Enforceability

This table presents the formal insider trading law and enforcement measures for the sample countries, grouped by legal origin. The columns contain the following variables: (1) *Scope* equals the sum of *Tipping* and *Tippee*; (2) *Sanction* equals the sum of *Damages* and *Criminal*; (3) the aggregate *IT Law* index is the sum of *Scope* and *Sanction*; (4) *Enforced by 1994* equals one if the insider trading prohibition was enforced by 1994, and zero otherwise; (5) *Public Enforcement Power* is the mean of the indices of the securities market supervisor's characteristics and investigative powers; and (6) *Private Enforcement Power* is the product of *Private Right* and the efficiency of the judiciary. All variables are described in detail in Table 1. The superscripts a and c denote statistical significance at the 1% and 10% levels, respectively. N/A means data are not available.

Table 2 – Continued

	Scope	Sanction	IT Law	Enforced by 1994	Public Enforcement Power	Private Enforcement Power
	(1)	(2)	(3)	(4)	(5)	(6)
Common Law						
Australia	2.00	1.00	3.00	0	0.88	10.00
Canada	2.00	2.00	4.00	1	0.81	9.25
Hong Kong	2.00	1.00	3.00	1	0.75	0.00
India	1.00	1.00	2.00	0	0.69	0.00
Ireland	2.00	1.00	3.00	0	0.13	8.75
Malaysia	1.00	1.00	2.00	0	0.69	9.00
Singapore	2.00	1.00	3.00	1	0.75	10.00
South Africa	1.00	1.00	2.00	0	0.38	6.00
Thailand	2.00	1.00	3.00	1	0.88	0.00
UK	2.00	1.00	3.00	1	0.63	0.00
USA	2.00	2.00	4.00	1	1.00	10.00
Common Law Average	1.73	1.18	2.91	0.54	0.69	5.73
French Civil Law						
Belgium	2.00	1.00	3.00	1	0.13	0.00
Brazil	2.00	0.00	2.00	1	0.50	5.75
France	2.00	2.00	4.00	1	0.94	0.00
Greece	2.00	0.00	2.00	0	0.38	0.00
Indonesia	1.00	1.00	2.00	0	0.75	0.00
Italy	2.00	1.00	3.00	0	0.50	0.00
Mexico	1.00	0.00	1.00	0	0.25	0.00
Netherlands	2.00	1.00	3.00	1	0.50	0.00
Philippines	1.00	1.00	2.00	0	0.88	0.00
Portugal	2.00	1.00	3.00	0	0.88	5.50
Spain	2.00	1.00	3.00	0	0.50	6.25
French Civil Law Average	1.73	0.82	2.55	0.36	0.56	1.59
German Civil Law						
Austria	2.00	0.00	2.00	0	0.13	0.00
Germany	2.00	1.00	3.00	0	0.25	0.00
Japan	1.00	1.00	2.00	1	0.00	0.00
Luxembourg	2.00	1.00	3.00	0	N/A	N/A
South Korea	2.00	2.00	4.00	1	0.38	6.00
Switzerland	2.00	1.00	3.00	0	0.25	0.00
Taiwan	2.00	1.00	3.00	1	0.38	6.75
German Civil Law Average	1.86	1.00	2.86	0.43	0.23	2.13
Scandinavian Civil Law						
Denmark	2.00	1.00	3.00	0	0.38	0.00
Finland	2.00	1.00	3.00	1	0.38	0.00
Norway	1.00	0.00	1.00	1	0.13	0.00
Sweden	2.00	1.00	3.00	1	0.25	0.00
Scandinavian Civil Law Average	1.75	0.75	2.50	0.75	0.28	0.00
Civil Law Average	1.77	0.86	2.64	0.45	0.41	1.44

	Scope	Sanction	IT Law	Enforced by 1994	Public Enforcement Power	Private Enforcement Power
	(1)	(2)	(3)	(4)	(5)	(6)
Overall Average	1.76	0.97	2.73	0.48	0.51	2.91
t-test of difference in means (common law vs. civil law)	-0.28	1.67 ^c	0.97	0.48	2.86 ^a	3.33 ^a

Table 3: Correlation Matrix

This table presents pairwise correlation coefficients for the dependent variables, the substantive insider trading law measures and the enforcement measures. All variables are described in detail in Table 1. The numbers in parentheses are the probability levels (p-values) at which the null hypothesis of zero correlation can be rejected in two-tailed tests. The superscripts a, b, and c denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 3 – *Continued*

	(1) Own'shp Dispersion	(2) Stock Price Synchr.	(3) Stock Mkt. Turn.	(4) Scope	(5) Sanction	(6) IT Law	(7) Enf. By 1994	(8) Pub. Enf.	(9) Priv. Enf.
Dependent Variables									
(1) Ownership Dispersion	1.00								
(2) Stock Price Synchronicity	-0.19 (0.31)	1.00							
(3) Stock Market Turnover	0.39 ^b (0.03)	-0.15 (0.42)	1.00						
Insider Trading Law Measures									
(4) Scope	0.13 (0.47)	-0.39 ^b (0.03)	0.36 ^b (0.04)	1.00					
(5) Sanction	0.53 ^a (0.00)	-0.37 ^b (0.04)	0.24 (0.18)	0.24 (0.18)	1.00				
(6) IT Law	0.44 ^a (0.01)	-0.48 ^a (0.01)	0.37 ^b (0.03)	0.74 ^a (0.00)	0.83 ^a (0.00)	1.00			
Enforcement Measures									
(7) Enforced by 1994	0.52 ^a (0.00)	-0.11 (0.55)	0.24 (0.18)	0.26 (0.13)	0.29 ^c (0.10)	0.35 ^b (0.04)	1.00		
(8) Public Enforcement Power	0.01 (0.96)	-0.28 (0.13)	-0.09 (0.60)	0.08 (0.66)	0.47 ^a (0.01)	0.38 ^b (0.03)	0.06 (0.76)	1.00	
(9) Private Enforcement Power	0.19 (0.28)	-0.05 (0.78)	-0.01 (0.96)	0.15 (0.40)	0.34 ^c (0.06)	0.32 ^c (0.07)	0.02 (0.92)	0.33 ^c (0.07)	1.00

Table 4: Do Insider Trading Laws Matter?

This table presents ordinary least squares regressions for the dependent variables: ownership dispersion (Panel A); stock price synchronicity (Panel B); and stock market turnover (Panel C). The independent variables include the insider trading law variables: *Scope*, *Sanction*, and *IT Law*. The control variables include: the alternative disclosure variables; anti-director rights (Panels A and B); legal origin dummy variables; the log of GDP per capita; and the growth of GDP per capita (in Panels B and C). All variables are described in detail in Table 1. Robust standard errors are reported in parentheses. The superscripts a, b, and c denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 4 – *Continued*
 Panel A: *Ownership Dispersion*

Independent Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Scope	-0.0066 (0.0603)			0.0274 (0.0527)	0.0220 (0.0643)				
Sanction		0.1133 ^a (0.0287)				0.1080 ^a (0.0401)	0.1050 ^a (0.0316)		
IT Law (Scope + Sanction)			0.0642 ^b (0.0306)					0.0520 ^c (0.0281)	0.0629 ^b (0.0296)
Disclosure				0.2800 ^c (0.1506)		0.0319 (0.1503)		0.1866 (0.1412)	
Accounting					0.0044 (0.0034)		0.0026 (0.0026)		0.0041 (0.0028)
Anti-Director Rights	0.0397 ^b (0.0187)	0.0291 (0.0182)	0.0371 ^c (0.0196)	0.0343 (0.0210)	0.0392 ^c (0.0219)	0.0288 (0.0182)	0.0295 (0.0207)	0.0329 (0.0197)	0.0358 (0.0223)
French Civil Law	-0.0474 (0.0612)	-0.0279 (0.0539)	-0.0321 (0.0555)	0.0414 (0.0919)	-0.0021 (0.0936)	-0.0190 (0.0810)	0.0012 (0.0819)	0.0228 (0.0858)	0.0106 (0.0865)
German Civil Law	0.0663 (0.0963)	0.0814 (0.0717)	0.0962 (0.0823)	0.1471 (0.0961)	0.1187 (0.1084)	0.0888 (0.0902)	0.1115 (0.0891)	0.1375 (0.0927)	0.1386 (0.0973)
Scandinavian Civil Law	0.0476 (0.0693)	0.0995 (0.0692)	0.1005 (0.0712)	0.1353 (0.0944)	0.0505 (0.0656)	0.1058 (0.0803)	0.0966 (0.0735)	0.1414 (0.0848)	0.0956 (0.0697)
Log of GDP Per Capita	0.0262 (0.0275)	0.0141 (0.0182)	0.0012 (0.0231)	0.0214 (0.0262)	0.0138 (0.0345)	0.0151 (0.0193)	0.0111 (0.0257)	0.0086 (0.0245)	-0.0036 (0.0305)
Constant	0.2295 (0.2337)	0.2323 (0.1805)	0.2692 (0.2036)	-0.0125 (0.2519)	-0.0200 (0.3673)	0.2026 (0.2444)	0.0783 (0.2946)	0.0882 (0.2544)	0.0290 (0.3268)
Number of Observations	31	31	31	31	29	31	29	31	29
R ²	0.39	0.57	0.49	0.47	0.45	0.57	0.59	0.53	0.54

Table 4 – *Continued*
 Panel B: *Stock Price Synchronicity*

Independent Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Scope	-2.9072 ^b (1.3337)			-2.7789 ^c (1.4712)	-2.3176 ^c 1.1417				
Sanction		-2.5627 ^a (0.9722)				-4.8846 ^a (1.3810)	-3.1257 ^a (1.0273)		
IT Law (Scope + Sanction)			-2.2440 ^b (0.8791)					-2.6985 ^a (1.0177)	-2.2516 ^b (0.8473)
Disclosure				1.0351 (4.7464)		13.7033 ^a (4.4974)		6.9757 ^c (3.8257)	
Accounting					0.1535 ^b (0.0693)		0.2374 ^a (0.0637)		0.1912 ^a (0.0569)
Anti-Director Rights	-1.4169 ^b (0.6276)	-1.0140 (0.6766)	-1.1550 ^c (0.6274)	-1.4423 ^b (0.6059)	-1.3121 ^b (0.4951)	-1.1947 ^b (0.4756)	-0.9485 ^c (0.5499)	-1.3435 ^b (0.5172)	-1.1133 ^b (0.4960)
French Civil Law	-1.8504 (2.3225)	-1.8928 (2.3607)	-1.9994 (2.2342)	-1.5354 (2.7316)	1.0979 (2.5937)	1.9808 (2.0350)	1.7161 (2.2893)	0.0065 (2.2036)	1.2164 (2.2868)
German Civil Law	-1.1424 (2.4054)	-0.5711 (2.5948)	-1.2541 (2.5676)	-0.8182 (2.6502)	1.4428 (2.2462)	2.8303 (1.9207)	2.5268 (2.1789)	0.4358 (2.2997)	1.4642 (2.2157)
Scandinavian Civil Law	0.9137 (2.1509)	0.9764 (2.0989)	0.3177 (2.3164)	1.2276 (2.3001)	1.9887 (2.2241)	3.6915 (2.1827)	1.3965 (2.2755)	1.8103 (2.3181)	1.0464 (2.3922)
Log of GDP Per Capita	-0.7256 (0.6923)	-1.2102 ^c (0.6466)	-0.6407 (0.7093)	-0.7428 (0.7012)	-1.4517 ^a (0.5131)	-0.7041 (0.4481)	-1.7965 ^a (0.4613)	-0.3458 (0.6428)	-1.2364 ^b (0.5447)
Growth of GDP Per Capita	0.4739 (0.3892)	0.5822 (0.4151)	0.5696 (0.4163)	0.4720 (0.3895)	0.6693 ^c (0.3674)	0.6578 ^b (0.3005)	0.8159 ^b (0.3411)	0.5771 (0.3483)	.7700 ^b (0.3558)
Constant	80.2186 ^a (6.9145)	80.7139 ^a (6.2473)	79.5747 ^a (6.1285)	79.3425 ^a (8.1925)	73.495 ^a (7.6710)	67.0850 ^a (5.9803)	68.4562 ^a (4.3487)	72.7086 ^a (6.5650)	70.2672 ^a (4.9611)
Number of Observations	30	30	30	30	28	30	28	30	28
R ²	0.46	0.51	0.54	0.47	0.56	0.65	0.67	0.60	0.67

Table 4 – *Continued*
 Panel C: *Stock Market Turnover*

Independent Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Scope	26.9504 (18.5936)			31.0102 (18.888)	35.2977 ^c (19.9048)				
Sanction		20.5811 ^c (11.7673)				30.8760 ^c (18.0758)	19.1473 ⁴² (11.4564)		
IT Law (Scope + Sanction)			19.4157 ^c (10.2335)					20.9316 ^c (12.0507)	19.2353 ^c (10.2337)
Disclosure				31.3557 (56.0299)		-58.8215 (71.0572)		-21.8199 (57.3087)	
Accounting					1.4338 ^c (0.7110)		0.6226 (0.5429)		0.8900 ^c (0.5954)
French Civil Law	-1.3613 (14.1303)	5.3716 (14.1536)	4.4471 (13.3826)	9.8757 (29.6645)	16.4909 (21.6796)	-12.9811 (28.4249)	14.4556 (19.3081)	-3.0687 (27.3983)	16.9328 (19.2896)
German Civil Law	49.6448 ^c (28.5899)	49.4565 (29.9006)	53.5676 ^c (27.8088)	59.8128 ^b (25.2840)	67.8067 ^b (28.9938)	35.1233 (27.8449)	57.6334 ^c (31.3980)	47.9280 ^c (25.0427)	64.7721 ^b (29.4608)
Scandinavian Civil Law	-0.5551 (13.2938)	1.4722 (10.7969)	6.6676 (13.4714)	10.1154 (19.7240)	2.4975 (16.0194)	-11.2689 (22.7186)	2.7876 (11.5944)	1.2692 (20.6916)	8.2764 (14.6858)
Log of GDP Per Capita	2.7778 (7.7347)	7.5848 ^b (3.7151)	2.4953 (5.0229)	2.2211 (7.4208)	-1.7813 (7.3606)	5.3526 (5.1774)	6.2407 (4.0969)	1.5332 (6.6947)	0.7248 (5.5466)
Growth of GDP Per Capita	-2.0513 (2.1903)	-2.8561 (2.3470)	-2.7947 (2.3433)	-1.9669 (2.4136)	-1.3550 (2.5925)	-3.3982 (2.6060)	-2.3811 (2.7061)	-2.9070 (2.4482)	-2.2630 (2.7800)
Constant	-17.7795 (52.8786)	-35.6633 (44.3976)	-21.6623 (43.6627)	-47.6604 (97.4333)	-96.2524 (73.398)	26.7628 (100.02)	-69.2798 (61.0779)	2.4070 (95.4537)	-71.7266 (63.6001)
Number of Observations	31	31	31	31	29	31	29	31	29
R ²	0.40	0.41	0.44	0.41	0.44	0.44	0.41	0.45	0.46

⁴² *p*-value of 10.9%.

Table 5: Taking Enforceability into Account

This table presents ordinary least squares regressions for the dependent variables: ownership dispersion (Panel A); stock price synchronicity (Panel B); and stock market turnover (Panel C). The independent variables include the insider trading law variables: *Scope*, *Sanction*, and *IT Law*. The control variables include: the actual and potential enforcement variables; anti-director rights (Panels A and B); legal origin dummy variables; the log of GDP per capita; and the growth of GDP per capita (in Panels B and C). All variables are described in detail in Table 1. Robust standard errors are reported in parentheses. The superscripts a, b, and c denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 5 – Continued
 Panel A: Ownership Dispersion

Independent Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Scope				-0.0215 (0.0494)	-0.0357 (0.0682)	-0.0060 (0.0611)						
Sanction							0.0990 ^a (0.0284)	0.1331 ^a (0.0373)	0.1165 ^a (0.0286)			
IT Law (Scope + Sanction)										0.0519 ^c (0.0273)	0.0781 ^b (0.0330)	0.0664 ^b (0.0307)
Enforced by 1994	0.0936 ^b (0.0427)			0.0954 (0.0432)			0.0675 ^c (0.0391)			0.0754 ^c (0.0440)		
Public Enforcement Power		0.0905 (0.0924)			0.1161 (0.1008)			-0.0925 (0.1011)			-0.0728 (0.0913)	
Private Enforcement Power			-0.0010 (0.0088)			-0.0010 (0.0090)			-0.0037 (0.0078)			-0.0031 (0.0080)
Anti-Director Rights	0.0298 ^c (0.0175)	0.0312 (0.0227)	0.0409 ^c (0.0216)	0.0285 (0.0182)	0.0269 (0.0223)	0.0406 ^b (0.0219)	0.0231 (0.0168)	0.0363 ^c (0.0211)	0.0320 (0.0218)	0.0294 (0.0176)	0.0436 ^c (0.0231)	0.0397 ^c (0.0229)
French Civil Law	-0.0513 (0.0607)	-0.0524 (0.0612)	-0.0494 (0.0654)	-0.0528 (0.0614)	-0.0561 (0.0617)	-0.0497 (0.0667)	-0.0334 (0.0517)	-0.0191 (0.0563)	-0.0362 (0.0587)	-0.0385 (0.0562)	-0.0246 (0.0588)	-0.0390 (0.0605)
German Civil Law	0.0808 (0.0772)	0.0944 (0.0923)	0.0646 (0.1060)	0.0743 (0.0803)	0.0904 (0.0966)	0.0629 (0.1111)	0.0888 (0.0662)	0.0571 (0.0632)	0.0676 (0.0810)	0.1009 (0.0738)	0.0813 (0.0769)	0.0853 (0.0921)
Scandinavian Civil Law	0.0377 (0.0551)	0.0746 (0.0685)	0.0442 (0.0914)	0.0299 (0.0597)	0.0691 (0.0744)	0.0424 (0.0971)	0.0845 (0.0633)	0.0829 (0.0692)	0.0799 (0.0913)	0.0809 (0.0633)	0.0914 (0.0716)	0.0845 (0.0949)
Log of GDP Per Capita	0.0095 (0.0212)	0.0268 (0.0204)	0.0252 (0.0239)	0.0150 (0.0260)	0.0371 (0.0289)	0.0267 (0.0297)	0.0046 (0.0181)	0.0099 (0.0200)	0.0165 (0.0200)	-0.0064 (0.0222)	-0.0057 (0.0250)	0.0027 (0.0249)
Constant	0.3549 (0.2156)	0.1812 (0.2177)	0.2293 (0.2366)	0.3451 (0.2229)	0.1462 (0.2345)	0.2261 (0.2463)	0.3201 ^c (0.1781)	0.2854 (0.1989)	0.2173 (0.1834)	0.3603 ^c (0.2015)	0.3189 (0.2174)	0.2579 (0.2088)
Number of Observations	31	31	31	31	31	31	31	31	31	31	31	31
R ²	0.49	0.41	0.39	0.49	0.42	0.39	0.62	0.59	0.58	0.55	0.50	0.50

Table 5 – Continued
 Panel B: Stock Price Synchronicity

Independent Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Scope				-2.9244 ^b (1.3519)	-1.9265 (1.8126)	-2.9624 ^b (1.3473)						
Sanction							-2.6544 ^b (1.1035)	-2.0109 ⁴³ (1.2476)	-2.6516 ^b (1.0519)			
IT Law (Scope + Sanction)										-2.340 ^b (0.9172)	-2.0673 ⁴⁴ (1.2459)	-2.3245 ^a (0.8813)
Enforced by 1994	-0.1769 (1.3976)			0.1072 (1.3063)			0.4858 ^b (1.4535)			0.6346 (1.2337)		
Public Enforcement Power		-5.3478 ^b (2.5648)			-3.9459 (3.1283)			-2.5011 (3.0489)			-0.9170 (3.4579)	
Private Enforcement Power			0.0508 (0.2234)			0.0764 (0.2170)			0.1079 (0.2159)			0.1209 (0.1995)
Anti-Director Rights	-1.2587 (0.6794)	-0.7249 (0.7291)	-1.3200 ^c (0.7428)	-1.4285 (0.6558)	-0.9626 (0.7680)	-1.4850 ^b (0.7084)	-1.0534 (0.7027)	-0.8126 (0.8067)	-1.0974 (0.7601)	-1.2135 ^c (0.6676)	-1.0700 (0.8068)	-1.2543 ^c (0.7136)
French Civil Law	-1.6554 (2.4639)	-1.3480 (2.3921)	-1.5674 (2.2183)	-1.8648 (2.4257)	-1.5490 (2.4005)	-1.6882 (2.1550)	-1.9611 (2.4402)	-1.6923 (2.5118)	-1.6665 (2.2999)	-2.0924 (2.3228)	-1.9176 (2.4453)	-1.7491 (2.1200)
German Civil Law	-0.2148 (2.4688)	-1.8505 (2.4211)	-0.0064 (2.2334)	-1.1374 (2.4422)	-2.0434 (2.4908)	-0.8732 (2.2551)	-0.5366 (2.6089)	-1.2638 (2.4254)	-0.1785 (2.4557)	-1.2367 (2.5747)	-1.4543 (2.4212)	-0.8374 (2.4457)
Scandinavian Civil Law	1.9536 (2.1994)	0.4691 (2.1035)	2.1981 (1.7971)	0.8867 (2.2917)	0.1830 (2.2088)	1.3143 (1.9180)	0.8475 (2.1365)	0.5013 (2.0359)	1.5369 (1.9214)	0.1249 (2.3259)	0.1952 (2.2174)	0.9250 (2.1684)
Log of GDP Per Capita	-1.4764 ^b (0.6821)	-1.6771 ^a (0.6350)	-1.5546 ^b (0.6887)	-0.7426 (0.7236)	-1.1127 (0.7979)	-0.7746 (0.6966)	-1.2975 ^c (0.6931)	-1.3524 ^c (0.7028)	-1.2900 ^c (0.6662)	-0.7316 (0.7491)	-0.7376 (0.8861)	-0.7106 (0.7317)
Growth of GDP Per Capita	0.4824 (0.4246)	0.4509 (0.3999)	0.4652 (0.3973)	0.4679 (0.4236)	0.4574 (0.4102)	0.4629 (0.4052)	0.5591 (0.4376)	0.5485 (0.4242)	0.5705 (0.4186)	0.5385 (0.4353)	0.5583 (0.4246)	0.5557 (0.4203)
Constant	81.5445 (7.6556)	85.2112 ^a (6.6202)	82.1680 ^a (7.6077)	80.4138 ^a (7.4534)	83.2360 ^a (6.8390)	80.6158 ^a (7.2799)	81.6011 (6.8444)	82.5223 ^a (6.4775)	81.2793 ^a (6.4614)	80.6896 ^a (6.7418)	80.3273 ^a (6.6216)	80.1710 ^a (6.3741)
Number of Observations	30	30	30	30	30	30	30	30	30	30	30	30
R ²	0.40	0.48	0.41	0.47	0.50	0.47	0.51	0.52	0.52	0.55	0.54	0.55

Table 5 – Continued

⁴³ *p*-value of 12.2%.

⁴⁴ *p*-value of 11.2%.

Panel C: Stock Market Turnover

Independent Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Scope				26.1177 (21.0829)	17.2454 (20.3102)	27.2463 (19.3509)						
Sanction							19.7731 ⁴⁵ (12.1186)	10.0731 (11.5384)	22.0245 ^c (12.7460)			
IT Law (Scope + Sanction)										18.9793 ⁴⁶ (11.3750)	12.9257 (10.4570)	20.42712 ^c (10.8154)
Enforced by 1994	9.2013 (14.0127)			7.5422 (14.1537)			3.7740 (14.2576)			2.7863 (14.4431)		
Public Enforcement Power		55.5603 ^c (31.8653)			47.0251 (34.4179)			42.1356 (33.7340)			31.9367 (33.0583)	
Private Enforcement Power			-0.7277 (1.4938)			-0.8370 (1.4719)			-1.3313 (1.6079)			-1.3695 (1.4571)
French Civil Law	-0.0486 (13.5708)	7.3559 (15.2629)	-3.2909 (12.2868)	-0.9308 (14.4379)	5.6188 (16.4537)	-4.5308 (12.4419)	5.3421 (14.2097)	8.3421 (14.9276)	0.7590 (12.8487)	4.4846 (13.5546)	7.3194 (14.4576)	-0.4643 (12.1665)
German Civil Law	46.5509 (31.1966)	69.0136 ^b (32.3192)	39.5482 (30.2577)	51.9813 ^c (27.6955)	69.0419 ^b (31.4813)	45.2049 (28.3108)	50.4861 (30.4224)	65.7722 ^b (32.4770)	42.7064 (28.5226)	54.2743 ^c (27.5510)	64.8756 ^b (31.3890)	46.7182 ^c (26.3694)
Scandinavian Civil Law	-9.5145 (9.5399)	13.1235 (17.1079)	-13.2001 (15.8993)	-1.5891 (14.0109)	14.9122 (17.4540)	-5.8100 (17.9810)	0.6849 (10.9855)	12.7931 (17.2217)	-6.3229 (14.5588)	6.0348 (14.2590)	14.0401 (17.6501)	-1.2813 (16.5294)
Log of GDP Per Capita	8.1455 ^a (3.0651)	11.6735 ^a (4.4322)	10.6583 ^c (5.4826)	1.4532 (6.2321)	6.7779 (8.5399)	3.4150 (8.4832)	6.9060 ^b (3.2951)	10.0784 ^a (3.8010)	8.5533 ^c (4.5704)	2.0926 (4.0410)	5.9574 (5.9207)	3.2755 (5.5698)
Growth of GDP Per Capita	-2.6580 (2.0693)	-1.6114 (2.3937)	-1.9602 (2.5094)	-2.5298 (1.9685)	-1.6674 (2.3665)	-1.9188 (2.3129)	-3.0645 (2.1445)	-2.1057 (2.4197)	-2.7005 (2.3573)	-2.9550 (2.1061)	-2.2876 (2.5116)	-2.6158 (2.3458)
Constant	-22.4006 (31.8967)	-92.6610 (59.1352)	-39.4033 (49.4607)	-6.1335 (38.3266)	-71.6429 (74.0632)	-19.9307 (56.6206)	-29.5993 (39.0809)	-78.4720 (52.8018)	-39.3088 (48.6120)	-17.4892 ^c (35.8571)	-58.7005 (60.9365)	-24.7167 (47.8712)
Number of Observations	31	31	31	31	31	31	31	31	31	31	31	31
R ²	0.36	0.44	0.35	0.40	0.45	0.40	0.41	0.45	0.42	0.44	0.46	0.45

⁴⁵ *p*-value of 11.6%.

⁴⁶ *p*-value of 10.9%.

Table 6 – Full Regression Models

This table presents ordinary least squares regressions for the dependent variables: ownership dispersion (columns 1 and 2); stock price synchronicity (columns 3 and 4); and stock market turnover (columns 5 and 6). The independent variables include: *Public Enforcement Power*Sanction*; *Private Enforcement Power*; anti-director rights; legal origin dummy variables; the log of GDP per capita; and the growth of GDP per capita. All variables are described in detail in Table 1. Robust standard errors are reported in parentheses. The superscripts a, b, and c denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Ownership Dispersion		Stock Price Synchronicity		Stock Market Turnover	
	(1)	(2)	(3)	(4)	(5)	(6)
Public Enforcement Power*Sanction	0.0991 ^b (0.0443)	0.1023 ^b (0.0410)	-3.7773 ^a (1.1150)	-3.9098 ^a (1.2280)	35.7708 ^a (12.9571)	39.3389 ^a (12.0731)
Private Enforcement Power		-0.0029 (0.0083)		0.1140 (0.2046)		-2.0432 (1.3847)
Accounting	0.0038 (0.0027)	0.0037 (0.0029)	0.1967 ^a (0.0596)	0.1970 ^a (0.0566)	0.8296 (0.5852)	0.8216 (0.5011)
Anti-Director Rights	Yes	Yes	Yes	Yes	No	No
Legal Origin Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Log of GDP Per Capita	Yes	Yes	Yes	Yes	Yes	Yes
Growth of GDP Per Capita	No	No	Yes	Yes	Yes	Yes
Constant	0.0480 (0.3186)	0.0412 (0.3173)	70.9056 ^a (3.9095)	71.4369 ^a (3.9345)	-89.0423 (55.7175)	-93.7257 ^c (53.5822)
Number of Observations	29	29	28	28	29	29
R ²	0.54	0.54	0.67	0.68	0.50	0.52

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