

**The Long-Term Debt Ratios of US Multinationals
and
The Securities Laws in the Countries of Subsidiaries**

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Abstract

We examine whether securities laws in the host countries influence the capital structure choice of United States (US) multinationals. We develop firm-level global indices to classify each firm in terms of its exposure to the security laws that govern the rights of security holders in the countries where it has subsidiaries. The results show that the use of long-term debt is positively related to the firm's global standing in terms of common law legal origin, burden of proof, investor protection, disclosure requirements, and public enforcement. The securities laws in a country affect the capital structure of multinationals that has subsidiaries in that country.

I. INTRODUCTION

Capital structure theory suggests that the optimal level of debt a firm may use is determined by balancing the lower costs and tax benefits of debt against the disadvantages of debt such as higher agency costs to debtors and higher risk. Thus, if risk or exposure to agency costs decrease while all else is equal the firm may increase the amount of debt in its capital structure. Portfolio theory suggests international diversification should reduce revenue risk. Thus, if the risk tolerance of shareholders remains constant, international diversification should allow the firm to increase the use of debt in its capital structure. Yet, the empirical evidence seems to suggest the opposite. Lee and Kowk (1988) and Burgman (1996) explain such unexpected findings by arguing that the debtors of internationalized firms are subject to increased agency problems, information asymmetry, and monitoring costs. Thus, multinational firms keep lower proportion of long-term debt to mitigate the increase in the agency costs of debt. Doukas and Pantzalis (2003) suggest firms operating internationally are subject to high

monitoring costs due to more asymmetry in disclosure requirements, less access to information, and exposure to several country specific legal and political factors. Thus, they use less debt to mitigate the increase in debtors' exposure to agency problems arising from diversification.

We examine the relation between the long-term debt ratio of US multinationals and the degree by which securities laws in the host countries protect investors. We propose that the quality of securities laws in a country affects the capital structure choice of the domestic firms as well as the subsidiaries of the multinationals operating in that country. Thus, the capital structure choice of a multinational firm is affected by the securities laws of the countries where its subsidiaries are located. We hypothesize that having subsidiaries in a country with securities laws similar to those of the US may have no impact on the US firm's long-term debt ratio. In contrast, if the host country's securities laws are less protective to investors than those of the US counterparts, the firm's long-term debt ratio will be negatively affected. Thus, firms with the same level of international diversification may have variations in the level of long-term debt in their capital structure. It is our expectation that the impact of internationalization on agency costs and capital structure choice depends on the set of foreign countries in which a multinational firm has subsidiaries.

This study builds on the work of La Porta, Lopez-De-Silanes, and Shleifer (2006). They develop several indices to rank countries based on securities legislation that govern equity issues. They find strong evidence that laws which mandate disclosure requirements and promote liability standards that facilitate investor recovery support the development of stock markets. We expect that the same indices are good proxies for the status of a country in terms of its protection of debtors. For example, according to La Porta et al. (2006, page 5) "Securities laws, in so far as they reduce the costs of contracting and resolving disputes, can encourage equity financing of

firms and stock market development. solving the promoter's problem is important not only for equity markets but for debt markets as well." In addition, we argue that the foreign countries' securities laws that mandate disclosure requirements and promote liability standards that facilitate investor recovery decrease the debtors' agency costs by improving access to information and reducing information asymmetry. With this premise, we use the country-level indices and the US firms' subsidiaries in foreign countries to develop firm-level indices to characterize the global securities laws environments of the sample firms and examine their impact on the long-term debt ratio. We find that the long-term debt ratio is positively affected by the firm-level indices that represent common law legal origin, burden of proof, investor protection, disclosure requirements, and public enforcement. Overall, our unique contributions include the creation of firm-level indices that measure the overall securities laws environment a firm faces and showing that these indices affect a multinational firm's capital structure decision.

Our results are consistent with the findings of Demircuc-Kunt and Maksimovic (1999), Giannetti (2002), and Bancel and Mittoo (2004). They report a negative relation between the degree of investor protection in a country and the cost of debt to domestic firms. Their analysis suggests the higher the level of investor protection the higher is the optimal level of debt in a firm's capital structure. In addition, our conclusions may explain the seemingly contradictory findings of previous studies. In particular, Doukas and Pantzalis (2003) report that in order to mitigate the increase in agency costs, firms operating internationally use less debt in their capital structure. In contrast Akhtar (2005) reports that the level of leverage of Australian multinational corporations does not differ significantly from that of domestic corporations. We show that the effect of international diversification on the long-term debt ratio varies depending on the securities laws in the countries where diversification occurs.

The remainder of this paper is organized as follows. Section II provides a brief literature review of the factors that influence the capital structure decision of multinational and domestic corporations, Section III presents the theoretical issues and the hypotheses, Section IV describes the sample and outlines the research design, Sections V and VI present the findings, and Section VII concludes the study.

II. LITERATURE REVIEW

A. Capital structure choice

Modigliani and Miller (1958) argue if markets are efficient and taxes are absent the capital structure is irrelevant to the firm's value. Following this conclusion, previous studies attempt to find the optimal level of debt based on balancing the costs and benefits. Early studies, for example Ang, Chua, and McConnell (1982), Castanias (1983) and Bradley, Jarrell and Kim (1984), focus on the tax advantage of interest deductibility as the main benefit associated with debt and the costs and risk of bankruptcy as the major cost of leverage. Myers and Majluf (1984) suggest that the growth opportunities of the firm affect the choice between debt and equity. Titman and Wessels (1988) find that the debt levels are negatively related to the "uniqueness" of a firm's line of business and short-term debt ratios are negatively related to firm size. Miao (2005) develops a model to study the interaction between financing and production decisions and demonstrates that high growth industries should have relatively lower leverage.

Myers (1984) introduces the impact of information asymmetry between corporate managers and investors. He suggests that firms may follow a "pecking order" approach to financing whereby their preference is to use first, internally generated cash, second, external debt financing, and third, external equity financing. According to the pecking order theory,

profitability is a key factor that affects the capital structure. Baskin (1989) finds support to the pecking order hypothesis.

Cornell and Shapiro (1987) propose that external stakeholders, such as employees, customers, and suppliers, have implicit claims on the firm and argue that these claims imply that operating cash flows may not be independent from the degree of leverage. For example, a highly levered firm might lose the loyalty of external stakeholders. Barton, Hill, and Sundaram (1989) test the stakeholder theory along with proxies for profitability, growth, risk, and other commonly used determinants. Their results indicate that the level of external stakeholders' interests affects financial leverage negatively.

Jensen (1986) proposes that another significant benefit associated with debt is a reduction in the agency costs of shareholders. He argues that lenders monitor managers to insure compliance with debt covenants and that reduces these agency costs. Harvey, Lins, and Roper (2004) examine whether debt can mitigate the effects of agency and information problems. They focus on emerging market firms for which pyramid ownership structures create potentially extreme agency costs. They report the incremental benefit of debt is concentrated in firms with high expected managerial agency costs and overinvestment problems resulting from high levels of assets in place or limited future growth opportunities. They suggest syndicated term loans are particularly effective at creating value for these firms. Their results support the hypothesis that equity holders value compliance with monitored covenants, particularly when firms are likely to over-invest.

In contrast, previous studies suggest that the agency costs of debtors tend to affect negatively the levels of debt in the capital structure of corporations. For example, Titman and Wessels (1988) and Prowse (1990) examine the effects of agency costs on leverage for US and

Japanese firms. They suggest that debt ratios are inversely related to the firm's potential to engage in risky and suboptimal investments that compromise the interests of debtors. Doukas and Pantzalis (2003) argue that debtors who perceive a high potential for managerial actions that might transfer value from debtors to shareholders are likely to require a high risk premium and that reduces the optimal level of debt for a corporation. Mauer and Sarkar (2005) find that an equity-maximizing firm may over-invest in risky projects and argue that this behavior compromises the interests of debtors and increases the credit spread of risky debt. They illustrate how the agency cost of overinvestment and its effects on corporate financial policy vary with firm and project characteristics. Childs, Mauer, and Ott (2005) find that financial flexibility encourages the choice of short-term debt and as a result reduces the agency costs of under- and overinvestment. However, the reduction in agency costs may not encourage the firm to increase leverage as the firm's debt level choice depends on the type of growth options in its investment opportunity set.

B. Capital structure choice across countries

Empirical studies of the capital structure in an international setting, for example Remmers, Stonehill, Wright, and Beekhuisen (1974), and Toy, Stonehill, Remmers, Wright and Beekhuisen (1974), find the home country of a corporation is a significant determinant of capital structure. However, they find conflicting evidence regarding the impact of risk, growth, industry, and firm size. Aggarwal (1981) suggests that the industry and the home country are significant determinants of the capital structure of European corporations. Aggarwal and Baliga (1987) report similar observations for Latin American corporations. Davis (1987) examines the effects of tax rates as determinants of Canadian capital structure and shows that the firm's effective tax rate has some bearing on the amount of debt it uses. The author concludes that the Canadian

economy as a whole exhibits stability in the tax and leverage variable over time but the latter is stable for relatively few individual firms. Krishnan, Sivarama, and Moyer (1996) find similarity in the determinants of capital structure across countries and report that much of the variation in capital structure can be explained by profitability, size, and growth. In addition, they suggest the country of origin has a significant influence on the capital structure for Italy, Germany, Japan, and the UK. Bancel and Mittoo (2004) survey corporate managers in 16 European countries on the determinants of capital structure. They find that a country's legal environment is an important determinant of debt policy but plays a minimal role in common stock policy. They also report that firms' financing policies are influenced by both their institutional environment and their international operations. Menendez-Alonso (2003) analyses the effect of diversification strategy on firm capital structure for a sample of Spanish manufacturing firms and finds no significant relationship between the two. This result persists despite using different debt ratios as proxies for leverage and the revenue-based Herfindahl index and the entropy measure as two different proxies of firm diversification. Ojah and Manrique (2005) study the determinants of the corporate debt structure in the Spanish capital market. Their results show that the amount of bank debt firms hold is positively related to firm size, growth potential, information asymmetry, and age but negatively related to information availability. Brounen, De Jong, and Koedijk (2006) survey CFOs in the UK, the Netherlands, Germany, and France on the capital structure choice and compare the results with previous findings from the US. They report the presence of the pecking order behavior, low disparities across countries despite the presence of significant institutional differences, and no substantial evidence that agency problems are important in the capital structure choice. The survey confirms the importance of a target debt ratio in general and the importance of tax effects and bankruptcy costs.

C. Capital structure choice: domestic versus multinational corporations

Lee and Kwok (1988) examine whether US-based multinational corporations (MNC) and domestic corporations have the same amounts of agency costs, bankruptcy costs, and debt ratios. They use the foreign tax ratio as a measure of the magnitude of multinational operations. They report that MNCs do not have lower bankruptcy costs and tend to have lesser debt ratios than domestic firms.

Burgman (1996) examines the systematic differences in the traditional capital structure determinants between MNCs and domestic corporations. The results suggest that political risk and exchange rate risk are relevant to the multinational capital structure decision, MNCs have higher agency costs of debt than purely domestic firms, and international diversification does not lower earnings volatility for MNCs.

Doukas and Pantzalis (2003) report that globally diversified firms tend to use lower proportion of long-term debt in their capital structure. They argue that internationalization increases agency problems, information asymmetry, and monitoring costs for debtors. Thus, firms use less debt to mitigate the effect of agency problems arising from diversification.

In contrast, Akhtar (2005) examines the determinants of capital structure for Australian multinational and domestic corporations. The results show that the level of leverage does not differ significantly between the two groups and that growth, profitability, and size are significant determinants of leverage. For domestic corporations, collateral value of assets is a significant determinant of leverage but bankruptcy costs are not significant. For MNCs, bankruptcy costs and the level of geographical diversification are significant.

D. Securities laws and the capital structure choice

Many studies report that the securities laws and provisions that protect the rights of investors reduce the agency problems of shareholders and debtors. Giannetti (2002) examines the effect of legal rules and financial development in corporate finance decisions using a sample of unlisted firms from around the world. The results suggest that firms are more leveraged in countries where the stock market is less developed and that the countries that favor creditor rights and ensure strict enforcement are positively associated with higher leverage and greater availability of long-term debt. Bancel and Mittoo (2004) find that a country's legal environment is an important determinant of debt policy for domestic firms. Similarly, Klock, Mansi and Maxwell (2004) examine the relation between the cost of debt financing and a governance index that contains various anti-takeover and shareholder protection provisions. They conclude that anti-takeover governance provisions, although not beneficial to common shareholders, are viewed favorably in the bond market. These findings imply that securities laws that protect the rights of investors are likely to promote better corporate governance and lower agency costs.

In contrast, Brounen, De Jong, and Koedijk (2006) survey CFOs in the UK, the Netherlands, Germany, and France on the capital structure choice and report low disparities across countries despite the presence of significant institutional differences. In addition, they find no substantial evidence that agency problems are important in capital structure choice.

To the best of our knowledge, there are no previous studies that consider the relation between the long-term debt ratios of US MNCs and the securities laws environments in which they are operating. This study fills the gap.

III. THEORETICAL ISSUES AND HYPOTHESES

Portfolio theory suggests that international diversification should reduce revenue risk. Thus, if all else remain constant, international diversification should allow the firm to increase

the use of debt in its capital structure. Yet, Lee and Kowk (1988), Burgman (1996), and Doukas and Pantzalis (2003) report that globally diversified firms tend to use a lower proportion of long-term debt in their capital structure to mitigate the effect of agency problems arising from diversification. The authors speculate that several country specific market, legal, and political factors combine to increase the agency problems of debtors. Yet, previous studies stop short of examining the relation between the long-term debt ratio for US MNCs and the securities laws environments in which they have subsidiaries. This study fills this gap.

Theoretically, the securities laws environment in which a firm operates affects the decisions of the firm's managers and stakeholders. LaPorta, Lopez-De-Silanes, Shleifer, and Vishny (1998) argue that securities laws affect the relationship between the firm and i) its insiders, such as shareholders and directors, and ii) certain outside investors, particularly creditors. In particular, the securities laws that mandate disclosure requirements and promote liability standards that facilitate investor recovery improve information dissemination, reduce the costs of monitoring managers, increase the probability of capital recovery from bankrupt firms, and reduce the costs of recovery. Therefore, creditors will supply more capital and accept lower required rates of return. This allows firms to use more long-term debt in their capital structure. Demircuc_Kunt and Maksimovic (1999), Giannetti (2002), and Bancel and Mittoo (2004) confirm that the securities laws environment in a country affects the optimal level of long-term debt in the capital structure of domestic firms.

We propose that the securities laws environment in a country affects the subsidiaries of foreign firms operating in that country. Therefore, a multinational firm is exposed to the same securities laws through its subsidiaries and thus shares the agency problems and the additional debt costs of the domestic firms in the host countries. LaPorta, Lopez-De-Silanes, and Shleifer

(2006) develop indices to characterize each country in terms of various legal, political, and business dimensions. Based on their results, we propose that the effects of international diversification vary depending on the countries in which diversification occurs. For example, consider the cases of two firms. Firm A diversifies only in well established developed countries where the legal, political, and business environments are similar to those of the US. For this firm, the changes in agency costs of debtors may be insignificant and outweighed by the increase in diversification. This firm is not likely to decrease the level of debt it uses. In contrast, firm B diversifies in countries where the legal environments are significantly different from those of the US. This firm is likely to experience an increase in agency costs and deterioration in its overall legal, political, and business environment. As a result, it is likely to reduce the use of debt to keep its overall level of risk constant.

Overall, we propose that international diversification will change the capital structure of a US MNC depending on whether it changes the global securities laws environment of that corporation. Therefore, we examine the following hypotheses:

Hypothesis 1:

The higher the degree of international diversification the lower is the use of long-term debt in the capital structure of firms.

Hypothesis 2:

The level of long-term debt in the capital structure of US MNCs is positively related to the level of diversification in countries where the securities laws environments provide high protection to investors.

Hypothesis 1 is tested by previous studies with mixed results. For example, Doukas and Pantzalis (2003) report that firms operating internationally use less long-term debt in their capital

structure while Akhtar (2005) reports that the level of leverage of Australian multinational corporations does not differ significantly from the leverage of domestic corporations. We revisit this hypothesis for confirmation and to test it jointly with Hypothesis 2.

Using the country-level indices developed by LaPorta, Lopez-De-Silanes, and Shleifer (2006), we create firm-level indices that represent a multinational firm's standing on various dimensions of securities laws. Theoretically, outsiders in general and creditors in particular are interested in the rules of law that provide for the enforcement of contracts and liability standards, promote and enforce disclosure requirements, and protect the rights of investors. However, the literature on corporate governance indicates that these rules are somehow correlated. LaPorta, Lopez-De-Silanes, Shleifer, and Vishny (1998) and LaPorta, Lopez-De-Silanes, and Shleifer (2006) suggest that common law countries have more extensive mandatory disclosure requirements and liability standards that make it easier for investors to recover damages they suffer due to the activities of corporate insiders. Similarly, they argue that legal systems based on common law have more enhanced protection to outside investors than those based on other legal systems. For example, common law countries have better investor protection. Thus, a firm that scores high in the common law index is also expected to score high in other dimensions of the securities laws environment.

Therefore, Hypothesis 2 is tested using the common law index as an indicator of the overall quality of the securities laws environment. In addition, we test Hypothesis 2 using specific indices that measure the quality of securities laws in terms of burden of proof, investor protection, disclosure requirements, and public enforcement. Although these indices are developed to measure the protection of investors in initial public offerings of equity we feel these legal factors are essential in protecting outside investors' interests in the firm and allowing them

to make more informed decisions about their investment. For firms that score high in these indices, we expect low information asymmetry, low level of monitoring costs, high probability of capital recovery from bankrupt firms, and low costs of recovery, hence, a low level of agency problems for shareholders and debtors alike. Accordingly, the long-term debt ratios of these firms are expected to be greater than those of the other internationally diversified firms.

We also develop a firm-level political risk index to account for the firm's exposure to political risk based on the country credit ratings obtained from Institutional Investor. We expect firms scoring high in this index to be riskier and expose investors to a higher level of agency problems.

IV. DATA AND RESEARCH DESIGN

The sample consists of US non-financial firms that have sales in 2000-2001 exceeding \$20 million per year. Sales information is extracted from the Compustat North America. We identify the subsidiaries of the sample firms by reviewing "Who Owns Whom: North America," a directory of corporate affiliations that provides the worldwide subsidiaries of North American firms. We classify the first level subsidiaries by country. This classification results in a preliminary sample of 504 firms in 2000 and 545 firms in 2001 totaling 1049 firm years. For these firm-years we collect relevant balance sheet and income statement data from the Compustat North America. Excluding the firms for which data is missing reduced the sample to 866 firm years related to 483 firms. Table 1 lists the data requirements and their sources.

[Table 1] about Here

Table 2 shows that we use three different variables to examine the impact of the firm's international diversification on the long-term debt ratio. First, we use a simple internationalization dummy that takes the value of 1 if the firm has foreign subsidiaries and 0

otherwise. Second, we employ the percentage of foreign sales to total sales as a proxy for internationalization. Table 3 shows the value of this internationalization index ranges from 0 to 1. Third, we use the first principal component of the percentage of foreign sales, the percentage of foreign income, and the percentage of foreign subsidiaries of a firm as an indicator of the firm's international involvement. Table 3 shows this internationalization factor ranges from - 1.831 to 4.152.

[Table 2] about Here

[Table 3] about Here

LaPorta, Lopez-De-Silanes, and Shleifer (2006) provide the legal origin for 49 countries and develop indices to classify these countries according to their securities legislations that deal with investor protection, disclosure requirement, burden of proof, and public enforcement.¹ These 49 countries host approximately 93% of the foreign subsidiaries of US firms included in the sample. We use this information to create firm-level indices to classify firms on the basis of these factors. For a given firm and a given factor, the index is a weighted average of the factor's ratings in the countries where the firm has subsidiaries. The weight of a country rating is the proportion of the firm's subsidiaries in that country.

We acknowledge that the firm-level indices that we are proposing may introduce measurement errors. These indices are structured by giving the various subsidiaries equal weights. Thus, the indices do not incorporate the relative importance of each subsidiary to the multinational corporation. It would be more appropriate to use weights such as the ratio of subsidiary assets to total firm assets or the ratio of subsidiary revenues to total firm revenues. Unfortunately, the data required to calculate asset- or revenue-based weights are not available.

¹ Table II of La Porta et. al. (2006) provides the legal origin and the data for the burden of proof (known as the liability standard), disclosure, and public enforcement indices. The data for the investor protection index are obtained from the website <http://mba.tuck.dartmouth.edu/pages/faculty/rafael.laporta/publications.html>.

We use equal weights for subsidiaries to overcome this data problem. Our approach is justified by previous studies. For example, Doukas and Pantzalis (2003) use the number of foreign countries where the firm has subsidiaries as a measure of the firm's foreign involvement. Similarly, Allayannis, Ihrig, and Weston (2001) measure the degree of a firm's geographic dispersion by constructing the Hirschman-Herfindahl concentration index over all countries where the firm operates and using the number of subsidiaries in a country as an indicator of the concentration in that country.

Similarly, we develop a firm-level political risk index. For a given firm, this index is a weighted average of the political risk ratings (obtained from Institutional Investor) of the countries that host the firm's subsidiaries. The weight of a particular country is the proportion of the firm's subsidiaries the country hosts. Table 2 provides the formulas used to estimate the various indices.

Our analysis assumes that the country-level indices are stable over time. Demirguc-Kunt, and Maksimovic (1999) support this assumption as they argue that the legal systems of the countries do not change significantly from year to year. However, the firm-level indicators that we construct for MNCs are expected to change whenever the number and/or the mix of their foreign subsidiaries changes.

In order to answer our research questions we use pooled cross sectional data to test different specifications of the following model:

$$\begin{aligned}
LTD_{i,t} = & a_0 + a_1(Size_{i,t}) + a_2(NDTS_{i,t}) + a_3(Inside_{i,t}) + a_4(Inside_{i,t})^2 + a_5(Current\ to\ Total \\
& Assets_{i,t}) + a_6(Institute_{i,t}) + a_7(Dividend\ to\ Profit_{i,t}) + a_8(Profitability_{it}) + a_9(Industry \\
& Dummy_{i,t}) + a_{10}(Internationalization_{i,t}) + a_{11}(Agency_{i,t}) + a_{12}(Common\ Law_{i,t}) + \\
& a_{13}(Burden\ of\ Proof_{i,t}) + a_{14}(Investor\ Protection_{i,t}) + a_{15}(Disclosure_{i,t}) + a_{16}(Public \\
& Enforcement_{i,t}) + a_{17}(Political\ Risk_{i,t}) + \varepsilon_{i,t} \tag{1}
\end{aligned}$$

The long-term debt ratio (*LTD*) is the dependent variable. Size, non-debt tax shield (*NDTS*), Inside, Current to Total Assets, Institute, Dividend to Profit, Profitability, and industry dummies are firm-level control variables. These variables are defined in Table 1. The remaining variables are test variables whose construction is explained in Table 2.

Table 3 provides descriptive statistics on all the control and test variable. It shows that the sample firms represent a wide array of firms in terms of size, profitability, ownership structure, and potential for agency costs. Similarly, the dependent and test variables vary over wide ranges. For example, the common law index ranges from 0.092 to 1. On average, the common law index is 0.791.

Table 4 shows the correlation between the independent variables. The common law, burden of proof, investor protection, disclosure, public enforcement, and political risk indices are highly correlated. Therefore, we test each variable separately in the regressions. In total, six regressions are performed to test the impact of the various indices that are related to securities laws.

[Table 4] about Here

V. THE LEGAL ORIGIN AS A PREDICTOR OF THE LONG-TERM-DEBT RATIO

This section examines the relation between the long-term debt ratio of a multinational firm and the legal origin of the host countries in which it has subsidiaries. Common law

countries normally have more investor friendly securities laws and greater protection to outside investors. Therefore, we propose that the debt ratios of firms who score high in the common law index are higher than the debt ratios of firms who score low.

Our analysis of this proposition is summarized in Table 5. We divide the sample into five groups based on the Common Law Index. Groups 1, 2, and 3 include all the multinational corporations that operate in at least one non-common law country. These corporations are ranked from lowest to highest based on their standing in the common law index and then equally divided among the three groups. Group 1 includes the 1/3 of firms with the low levels of the common law index indicating that the majority of the foreign subsidiaries of these firms fall in non-common law countries. Group 2 contains the 1/3 of firms that have medium common law index while Group 3 includes the 1/3 of the firms with the highest level of the common law index. A firm in Group 3 has at least one subsidiary in a non-common law country. Group 4 represents US multinational firms operating only in common law countries while group 5 represents purely domestic firms.

[Table 5] about Here

Table 5 reports the mean and the standard deviation of the long-term debt ratio for each group of firms. The mean is increasing with the common law index. The increase in the long-term debt use from Group 1 to 2 is approximately 3.72%, which is statistically significant at the 10% level. Further, there is a statistically (10% level) significant increase of 5.14% in the long-term debt ratio as we move from Group 4 (purely common law) to Group 5 (purely domestic). These results imply that i) the long-term debt ratio is lower for the firms that are internationally diversified, even if these firms operate only in common law countries and ii) among the

internationally diversified firms the long-term debt ratio rises with the proportion of subsidiaries located in common law countries. These findings are consistent with our hypothesis.

In the next section, we examine this finding in a multivariate environment where we control for other determinants of the capital structure. In addition, we test the impact of several other indices that represent the firm's global exposure to securities laws that are less protective to outside investors.

VI. ANALYSIS OF MULTIPLE PREDICTORS

This section reports the results of examining simultaneously the effects of several predictors. First, we run regression analysis to examine the impact of the internationalization variables on the long-term debt ratio while we control for industry membership and several firm specific factors that are shown by previous studies to affect the firm's capital structure decision. Second, we add a variable to represent the potential for agency costs. Third, we run six additional regressions to examine respectively the effects of the common law, burden of proof, investor protection, disclosure requirements, public enforcement, and political risk indices. We test each hypothesized predictor separately given the high correlation between the various predictors (see Table 4).

A. The long-term debt ratio and internationalization

We use the three international diversification variables shown in Table 2 to test Hypothesis 1 that multinational corporations have lower debt ratios than domestic firms. The results are reported in Columns 1, 2, and 3 of Table 6. In all three regressions, the coefficient of the internationalization variable is negative but insignificant. It indicates that international diversification negatively affects the long-term debt ratio of firms but the effects are not significant.

[Table 6] about Here

These results seem to be consistent with Akhtar (2005) who reports that the level of leverage of Australian multinational corporations does not differ significantly from the leverage of domestic corporations but inconsistent with studies that report a significant positive relationship. For example, Lee and Kowk (1988), Burgman (1996), and Doukas and Pantzalis (2003) suggest that international diversification exposes the firm to a higher level of potential agency costs of debt and that leads the firm to reduce its reliance on long-term debt as a source of financing. We test their hypothesis with Regressions 4, 5, and 6 in Table 6. These regressions differ from Regressions 1, 2, and 3 respectively by including a variable to control for the agency costs of debt. For the three regressions, the coefficient of *Agency 1* is negative and significant at the 5% level. It indicates that the long-term debt ratio of firms is negatively affected by the level of agency costs of debt. The higher the potential for agency costs the lower is the long-term debt ratio. Therefore, if a firm diversifies in an international market where the potential for agency costs is higher the firm is likely to lower its use of long-term debt. Overall, our results show that international diversification on its own may not necessarily lead the firm to lower its long-term debt ratio. Instead, international diversification may increase the agency costs of debt and this increase pressures the firm to lower its use of long-term debt.

We test the robustness of this conclusion by controlling for agency costs using the proxies *Agency2* or *Agency3* instead of *Agency1* (this analysis is omitted for brevity but it is available from the authors upon request). We find that including different proxies for agency costs in the regressions does not change our qualitative results. In particular, we find the coefficient of *Agency2* is negative as expected but it is not significant. This is consistent with the results of Doukas and Pentzalis (2003). In contrast, we find *Agency3* is highly correlated with

NDTS (Pearson's correlation coefficient is 0.86). Including both *Agency3* and *NDTS* in the same regression causes multi-collinearity and slightly changes the significance of the other variables and the regression equation. We avoided these problems by including *Agency3* in the regressions after excluding *NDTS*. These regressions show the coefficient of *Agency3* is negative and highly significant and the sign and significance of the other test variables remain robust.

B. Long-term debt ratio, legal origin, and securities laws

This section is designed to analyze Hypothesis 2 that the firm-level legal origin, burden of proof, investor protection, disclosure requirements, and public enforcement indices are important determinants of the capital structure choice of US multinational corporations. We test each of these indices separately given that they are highly correlated.

Common law legal origin

In order to account for a multinational firm's exposure to non-common law legal systems we classify countries into two groups. We assign '1' to the countries with common law legal origin and '0' to countries with other legal origins. Then we create a common law index for a firm as the weighted average of the legal origins of the countries where the firm's subsidiaries are located. As the US has a common law legal origin, each purely domestic firm has a common law index equal to 1. As well, we account for the subsidiaries located in the US. The common law index of a domestic subsidiary is equal to 1. Therefore, the common law index is greater for firms with greater proportion of subsidiaries in the countries with common law legal origin. It is always greater than zero and less than or equal to 1. We expect the firm that scores high in the common law index to involve lower monitoring problems and lower anticipated agency costs. Accordingly, such firms are expected to use a higher proportion of long-term debt in their capital structure.

Column 2 of Table 7 shows a positive and significant coefficient for the common law index. This is consistent with our hypothesis that firms in common law countries use larger proportion of long-term debt in their capital structure.

[Table 7] about Here

Burden of proof

This index measures a country's score in liability standards that shift greater burden of proof from the plaintiff to the defendant. The result of this shifting is a drop in the costs of the plaintiff to prove a claim based on liability (La Porta et al. 2006). In other words, outside investors in countries that score high in the burden of proof index incur lower costs in litigation cases against corporate insiders. Greater level of burden of proof, therefore, is favorable towards creditors and shareholders in making insiders more accountable for their inappropriate actions. Thus a firm that stands high in the *Burden of Proof Index* is expected to involve lower monitoring and agency costs, and accordingly, is expected to keep higher proportion of long-term debt in its capital structure. The positive coefficient of *Burden of Proof Index* in Column 4 of Table 7 is consistent with this hypothesis.

Investor protection

This index is described by La Porta et al. (2006) as a combination of a country's disclosure requirements, liability standards, and anti director rights. A country that scores high in this index provides greater protection of investors' money. Accordingly, a greater level of investor protection requires lesser monitoring costs on the part of outsiders. Therefore, a firm that scores high in the investor protection index (i.e. the firms operating in the countries with greater level of investor protection) should anticipate low level of agency problems and is likely to keep a large proportion of long-term debt in its capital structure. Column 5 of Table 7 shows

the investor protection index has a positive and significant coefficient. This implies the proportion of long-term debt in the capital structure is positively related to investor protection.

Disclosure requirements

This index refers to a country's standard in requiring fair disclosure of corporate information such as insiders' compensation, ownership of large shareholders and insiders, issuer's contracts that are outside the normal course of business, transactions involving firm's directors, managers and large shareholders. Overall, a country that scores high in disclosure requirements is expected to maintain fair disclosure of material facts to the public. This makes it possible for outsiders of a firm to make more informed decisions about their investment in the firm's securities. Overall, such laws are likely to reduce monitoring and agency costs for investors. We expect firms that score high in the disclosure index will have a low level of agency problems. Thus they can keep a higher proportion of long-term debt in their capital structure. The positive and significant coefficient of the disclosure index (Column 6 of Table 7) confirms our expectations that the firm's use of long-term debt is positively related to the disclosure index.

Public enforcement

This index refers to the characteristics of the securities market supervisors in terms of the fair process of their appointment, tenure, focus (separate supervisors for different types of firms), and the rule making and investigative power of these supervisors. In addition, public enforcement also covers legal sanctions applicable to directors, distributors and accountants for misleading outside investors. A country scoring high in public enforcement generally means this country is interested in the well functioning and development of its securities markets. Therefore, a firm that operates in such a country is expected to be more cooperative with outsiders in their monitoring activities and the firm's corporate insiders and accountants are less likely to mislead

outsiders. Accordingly, we expect a firm operating in an environment of high public enforcement to have low agency costs and high proportion of long-term debt in its capital structure. The positive and significant coefficient of the public enforcement index (Column 7 of Table 7) corroborates our expectation.

Political risk

This index measures the stability of a country's political system, business environment, and Government, the degree of financial market development, and the extent by which foreign exchange regulations are market friendly. We propose that the exposure of MNCs to political risk affects their long-term debt use. Unlike the factors related to the quality of legal intuitions, *Political Risk* has negative implications for firm value. Countries scoring high in terms of their political risk (*100-Country Credit Rating*) are expected to score low in terms of their legal environment. A greater level of political risk makes an investment in a country more risky and increases monitoring costs of foreign investors in such countries. Obviously, a high score in the *Political Risk Index* of a firm means a high level of monitoring costs for outsider investors. Therefore, such firms may expect increased level of agency problems and lower proportion of long-term debt in their capital structure. Column 8 in Table 8 shows that the coefficient of the *Political Risk index* is negative but statistically insignificant.

We examine the robustness of these conclusions in two ways. First, we repeat the analysis shown in Table 7 using the two other internationalization variables. Table 8 shows the results when we use the percentage of foreign sales and Table 9 reports the results when we use the first principle component of the percentage of foreign sales, the percentage of foreign income, and the percentage of foreign subsidiaries. The observations that may be obtained from Tables 8 and 9 are qualitatively equivalent to those reported from Table 7. Second, we repeat all

the regressions using a sub-sample that excludes domestic firms. The coefficients of the common law, burden of proof, disclosure, investor protection and public enforcement indices continue to be positive and significant at the 5% level or better. This analysis is omitted for brevity.

[Table 8] about Here

[Table 9] about Here

Overall, our results on the relation between a US firm's choice of capital structure and its global securities laws environment are consistent with the existing literature that examines the cross country differences in capital structure. In particular, our results corroborate the findings of Demircug-Kunt and Maksimovic (1999) who report that firms in countries with effective securities laws tend to use larger proportion of long-term debt in their capital structure and lower proportion of short term debt. Our results are also consistent with Giannetti (2002) who suggests that in countries that have good creditor protection it is easier for firms to obtain loans and concludes that the quality of legal institutions is associated with greater access to long-term debt.

C. Analysis of the control variables

Previous studies, for example Aggarwal (1981), Myers and Majluf (1984), Titman and Wessels (1988), Barton, Hill, and Sundaram (1989), Krishnan, Sivarama, and Moyer (1996), Burgman (1996), and Childs, Mauer, and Ott (2005), suggest that industry differences, and several firm-level variables other than those related to securities laws are potentially related to the firm's choice of long-term debt. Our regressions include controls for these factors. Our observations from including these controls are as follows:

Firm size

We control for firm size by including in the regressions the natural log of sales as a variable. The coefficient of this variable is negative and significant indicating the long-term debt

ratio is negatively associated with size. This supports the argument that larger firms have more resources and they are likely to create internal capital markets. This reduces their need for outside financing. This finding seems at odds with the results of Doukas and Pentzalis (2003).

Table 4 shows that firm size is highly correlated with all the test variables. We conducted analysis after excluding size. The significance of the test variables slightly increased. However, our results remain qualitatively unchanged. This analysis is omitted for brevity.

Non-Debt Tax Shield (NDTS)

Doukas and Pentzalis (2003) and Titman and Wessels (1988) argue that *NDTS* reduces the benefits of debt financing. As more income is sheltered from taxes through non-debt tax shields, the debt ratio of a firm is expected to drop. Consistent with these arguments, we find that leverage is negatively (significant at the 5% level) associated with *NTDS*.

Insider ownership

Previous studies, for example Doukas and Pentzalis (2003), argue that higher insider ownership of shares tends to reduce agency costs. This reduction allows the firm to use a higher level of debt in its capital structure. We use the variable *Inside*, which represents the percentage of shares owned by insiders such as directors and officers, to control for the linear impact of insider ownership and *Inside*² to account for any non-linear effects. We find the long-term debt ratio of firms is positively but insignificantly associated with *Inside* but negatively and significantly associated with *Inside*².

Current to total assets ratio

Childs, Mauer, and Ott (2005), suggest that the desire of firms to rely on natural hedging strategies may create a negative relation between the long-term debt ratio and the current to total asset ratio. Natural hedging implies matching the maturities of assets and liabilities to avoid

interest rate and liquidity risk. For these firms, the larger the current to total asset ratio the lower should be the long-term debt ratio as the firm would rely more and more on short-term debt. Our results confirm the hypothesized negative relation and suggest it is significant at the 1%.

Institutional ownership

Doukas and Pentzalis (2003) suggest that institutional investors are likely to affect the long-term debt ratio negatively. They propose that these investors are more likely to prefer low debt ratios as, if desirable, they can create their own home-made leverage. In addition, institutions may monitor managements more actively and reduce the agency costs of debt. We use the variable *Institute*, which measures the percentage of shares held by institutional investors, to control for the impact of institutional ownership. Consistent with Doukas and Pentzalis (2003), we find the firm's long-term debt ratio is negatively (significant at the 1% level) related to *Institute*.

Growth opportunities of the firm

Previous studies, for example Titman and Wessels (1988), Barton, Hill, and Sundaram (1989), Krishnan, Sivarama, and Moyer (1996), Burgman (1996), report that the long-term debt ratio is positively related to the growth opportunities of the firm. At the same time, the liquidity theory of dividends suggests that a high dividend payout ratio indicates lack of growth opportunities. Therefore, we expect a negative relationship between the debt ratio and the dividend payout ratio. We use the *Dividend to Profit* ratio as a proxy for the payout ratio and to control for the growth opportunities of the firm. The results confirm the existence of a negative but insignificant relation.

Profitability

Aggarwal (1981), Myers and Majluf (1984), Titman and Wessels (1988), Barton, Hill, and Sundaram (1989), Krishnan, Sivarama, and Moyer (1996), Burgman (1996) suggest that the debt level of a firm is positively related to the firm's profitability. We use the ratio of earnings before extra ordinary items to sales as a proxy for the firm's profitability. We include this variable in the regression equations. The results confirm the existence of a positive although insignificant relation.

Overall, our results suggest that the long-term debt ratio is negatively related to firm size, the non-debt tax shield, the level of insider ownership, current to total assets ratio, and institutional ownership. The profitability and the growth opportunities of the firm seem to be insignificant in determining the long-term debt ratios of multinational firms.

VII. CONCLUSION

We examine whether the long-term debt ratios of US multinational corporations are related to the degree of investor protection provided by the securities laws of the countries where they have subsidiaries. The results show a positive relationship. A firm that is expected to expand its operations (acquire a subsidiary) in a country with unfavorable securities legislation, for example poor disclosure requirements and investor protection, is likely to decrease the level of long-term debt in its capital structure.

The results extend the literature in several ways. First, we extend the contributions of La Porta et al (1998) and La Porta et al (2006) by using their results to develop firm-level indices and showing that these indices are related to the capital structure of multinational firms. Second, we extend the results of Demirguc-Kunt and Maksimovic (1999) and Giannetti (2002) that the securities laws in a country affect the capital structure of domestic firms. We show that the securities laws of a country also affect the capital structure of multinationals that has subsidiaries

in that country. Third, the results confirm the findings of Doukas and Pentzalis (2003) that the multinational firms face higher agency costs of debt and they use less debt to mitigate the adverse impact of such costs. Fourth, our conclusions show that the relationship between the international diversification of a domestic firm and its long-term debt ratio varies depending on the securities laws in the countries where diversification occurs. Therefore, studying this relationship using a sample of multinationals headquartered in one country and another sample of multinationals headquartered in another country may not necessarily lead to the same conclusions. This is perhaps why Doukas and Pantzalis (2003) report that the long-term debt ratios of US multinationals are negatively related to international diversification while Akhtar (2005) reports that the leverage of Australian multinationals does not differ significantly from the leverage of domestic Australian corporations.

The findings should be of interest to academics, practitioners, corporate stakeholders, and policy makers around the world. For academics, the results improve our understanding of how corporations make their financing decisions. For practitioners and other corporate stakeholders, the findings show the magnitude of changes in agency costs due to international diversification. The results can help policy makers around the world in designing strategies and regulations to encourage foreign direct investment into their countries by reducing the agency costs expected by foreign investors.

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Table 1: Firm-Specific Variables and their Sources

Variable	Definition	Source
<i>LTD</i>	Long-term debt divided by long-term debt plus debt in current liabilities plus market value of equity	Estimated
<i>NDTS</i>	Non-debt tax shield = {[Operating Income - Interest Expense -(Taxes Paid/Tax Rate)]/Sales }, where not available the tax rate is assumed to be 43%	Estimated
<i>Size</i>	Natural log of total sales	Estimated
<i>Inside</i>	Percentage of shares held by insiders	Compustat
<i>Current to Total Assets</i>	Current Assets to total assets	Compustat
<i>Institute</i>	Percentage of shares held by institutional investors estimated as at current quarter	Compustat
<i>Dividends to Profit</i>	Cash dividend divided by earnings before extraordinary items	Estimated
<i>Profitability</i>	Earnings before extraordinary items divided by sales	Estimated
<i>Agency 1</i>	Market value of equity to Book value of equity	Estimated
<i>Agency 2</i>	Total Assets divided by Gross Fixed Assets	Estimated
<i>Agency 3</i>	[(Operating Income before Depreciation – Taxes - Interest Expense -Dividends)/(Total Assets)]. Represents free cash flow by total assets	Estimated

Table 2: Firm-level indices based on international operations

Index	Calculation
<i>Internationalization Dummy</i>	‘1’ for a multinational firm and ‘0’ for a domestic firm. A firm is classified as a multinational firm if it has at least one foreign subsidiary
<i>Internationalization (ForSales)</i>	Foreign sales as percentage of total sales
<i>Internationalization Factor</i>	First principal component of % foreign sales, % foreign income and % foreign subsidiaries
<i>Common Law Index</i>	$\sum_{i=1}^{i=N_j} \frac{S_{j,i}}{TS_j} \times CommonLaw_i$
<i>Burden of Proof Index</i>	$\sum_{i=1}^{i=N_j} \frac{S_{j,i}}{TS_j} \times BurdenProof_i$
<i>Investor Protection Index</i>	$\sum_{i=1}^{i=N_j} \frac{S_{j,i}}{TS_j} \times InvestorProtection_i$
<i>Disclosure Index</i>	$\sum_{i=1}^{i=N_j} \frac{S_{j,i}}{TS_j} \times DisclosureRequirements_i$
<i>Public Enforcement Index</i>	$\sum_{i=1}^{i=N_j} \frac{S_{j,i}}{TS_j} \times PublicEnforcement_i$
<i>Political Risk Index</i>	$\sum_{i=1}^{i=N_j} \frac{S_{j,i}}{TS_j} \times Ln(1 - CountryRiskRating_i)$

Notes:

1. TS_j N_j $S_{j,i}$ refer respectively to the number of foreign subsidiaries of firm j , the total number of subsidiaries that belong to firm j , the number of countries in which firm j has subsidiaries, and the number of subsidiaries of firm j in country i .
2. $CommonLaw_i$ is assigned a value of 1 if Country i has a common law legal origin or 0 otherwise. The legal origins are obtained from La Porta et al (2006)
3. $InvestorProtection_i$, $DisclosureRequirements_i$, $BurdenProof_i$, and $PublicEnforcement_i$, refer respectively to Country i 's ratings in terms of investor protection, disclosure requirements, burden of proof, and public enforcement.
4. $Ln(\bullet)$ is the natural logarithm function, and $CountryRiskRating_i$ is the country risk rating of Country i obtained from Institutional Investor.

Table 3: Descriptive Statistics of Test and Control Variables

Variable	N	Mean	Standard Deviation	Minimum	Maximum
<i>Size</i>	866	6.936	1.617	3.199	12.236
<i>NDTS</i>	866	-0.004	0.118	-1.751	0.996
<i>Inside%</i>	866	6.264	14.113	0.000	100.000
<i>Current to Total Assets</i>	866	0.481	0.214	0.000	0.960
<i>Institute%</i>	866	57.231	35.323	0.000	100.000
<i>Dividend to Profit</i>	866	0.199	0.915	-4.756	16.126
<i>Profitability</i>	866	-0.064	1.248	-29.470	0.706
<i>Agency1</i>	866	3.903	9.632	0.017	147.271
<i>Agency2</i>	866	7.247	14.460	1.084	283.091
<i>Agency3</i>	866	0.072	0.102	-1.546	0.511
<i>Internationalization (ForSales)</i>	866	0.238	0.228	0.000	1
<i>Internationalization (Factor)</i>	866	0.000	1.324	-1.837	4.178
<i>Common Law Index</i>	866	0.791	0.222	0.092	1.000
<i>Burden of Proof Index</i>	866	0.833	0.159	0.347	1.000
<i>Investor Protection Index</i>	866	0.828	0.164	0.405	1.000
<i>Disclosure Index</i>	866	0.884	0.108	0.472	1.000
<i>Public Enforcement Index</i>	866	0.766	0.127	0.317	0.900
<i>Political Risk Index</i>	866	2.220	0.271	1.793	3.585

Table 4: Pearson's Correlation Coefficients

<i>Variable</i>	<i>Size</i>	<i>NDTS</i>	<i>Inside%</i>	<i>Current to Total Assets</i>	<i>Institute%</i>	<i>Dividend to Profit</i>	<i>Profitability</i>	<i>Agency1</i>	<i>Agency2</i>	<i>Agency3</i>	<i>Internationalization Dummy</i>	<i>Internationalization (ForSales)</i>	<i>Internationalization Factor</i>	<i>Common Law Index</i>	<i>Burden of Proof Index</i>	<i>Investor Protection Index</i>	<i>Disclosure Index</i>	<i>Public Enforcement Index</i>
<i>NDTS</i>	0.16																	
<i>Inside%</i>	-0.16	-0.08																
<i>Current to Total Assets</i>	-0.28	0.01	0.09															
<i>Institute%</i>	0.24	0.18	-0.15	-0.01														
<i>Dividend to Profit</i>	0.08	0.04	-0.02	-0.10	0.03													
<i>Profitability</i>	0.07	-0.03	0.02	0.06	0.10	0.02												
<i>Agency1</i>	0.13	0.03	0.02	0.01	0.08	0.00	0.03											
<i>Agency2</i>	-0.10	-0.01	-0.01	0.17	0.07	-0.04	0.00	0.01										
<i>Agency3</i>	0.18	0.86	-0.09	0.01	0.24	0.01	0.05	0.09	-0.05									
<i>Internationalization Dummy</i>	0.17	0.09	0.02	0.16	0.14	0.08	0.02	0.07	-0.09	0.13								
<i>Internationalization (ForSales)</i>	0.08	0.04	0.07	0.15	0.30	0.01	0.05	0.04	-0.06	0.09	0.34							
<i>Internationalization Factor</i>	0.08	0.08	0.05	0.19	0.18	0.03	0.06	0.06	-0.09	0.12	0.54	0.83						
<i>Common Law Index</i>	-0.08	-0.03	-0.01	-0.25	-0.12	0.01	-0.02	-0.12	0.06	-0.09	-0.47	-0.47	-0.68					
<i>Burden of Proof Index</i>	-0.03	-0.04	0.01	-0.24	-0.06	-0.01	0.00	-0.09	0.05	-0.08	-0.52	-0.45	-0.72	0.89				
<i>Investor Protection Index</i>	-0.05	-0.04	0.00	-0.25	-0.09	0.00	-0.01	-0.10	0.06	-0.09	-0.52	-0.47	-0.72	0.95	0.97			
<i>Disclosure Index</i>	-0.04	-0.04	0.00	-0.24	-0.09	-0.02	-0.02	-0.09	0.06	-0.09	-0.54	-0.45	-0.72	0.94	0.92	0.96		
<i>Public Enforcement Index</i>	-0.04	-0.02	-0.01	-0.25	-0.10	0.01	-0.01	-0.11	0.06	-0.08	-0.53	-0.44	-0.69	0.92	0.88	0.96	0.92	
<i>Political Risk Index</i>	0.23	0.10	-0.04	0.08	0.10	0.08	0.07	0.15	-0.08	0.12	0.46	0.34	0.56	-0.60	-0.64	-0.63	-0.66	-0.59

Table 5: Common Law Index and Long-term Debt Use

Firm Type	Multinational				Domestic	All
Groups	1	2	3	4	5	
Common Law Index Level	Low	Medium	High	Purely Common Law		
<i>Number of Observations</i>	176	176	177	165	172	866
<i>Average Common Law Index</i>	0.439	0.675	0.857	1.000	1.000	0.791
<i>Average LTD</i>	15.46%	19.18%	21.97%	23.82%	28.95%	0.218
<i>Standard Deviation – LTD</i>	16.50%	21.46%	22.22%	23.95%	27.80%	0.231
<i>Difference in Average LTD (Group_{i+1}-Group_i)</i>		3.72%*	2.79%	1.85%	5.14%*	
<i>T-Statistic for the Difference in Means</i>		1.823	1.20	0.74	1.82	

***, **, * indicate respectively significance at the 1%, 5%, and 10% levels.

Groups 1, 2, and 3 are obtained as follows. First, we rank corporations that operate in at least one non-common law country from lowest to highest based on their standing in the common law index. Second, we divide these corporations equally among the three groups. Group 4 represents US multinational firms operating only in common law countries while group 5 represents purely domestic firms.

Table 6: The Long-term Debt Ratio, Internationalization, and the Potential for Agency Costs

Variable	Regression			Regression		
	1	2	3	4	5	6
<i>Intercept</i>	0.538 7.29	0.529 7.23	0.521 (7.15)	0.528 7.19	0.519 7.12	0.512 (7.06)
<i>Size</i>	-0.011** (-2.18)	-0.012*** (-2.35)	-0.012** (-2.39)	-0.009* (-1.88)	-0.010** (-2.02)	-0.010** (-2.07)
<i>NDTS</i>	-0.145** (-2.17)	-0.150** (-2.30)	-0.146** (-2.22)	-0.143** (-2.15)	-0.149** (-2.27)	-0.144** (-2.19)
<i>Inside x100</i>	0.167 (1.27)	0.168 (1.27)	0.156 (1.18)	0.166 (1.28)	0.168 (1.28)	0.156 (1.19)
<i>Inside2 x1000</i>	-0.030** (-2.02)	-0.030** (-1.96)	-0.030* (-1.89)	-0.030** (-1.98)	-0.030* (-1.92)	-0.030* (-1.85)
<i>Current to Total Assets</i>	-0.402*** (-9.87)	-0.402** (-9.90)	-0.402*** (-9.97)	-0.395*** (-9.71)	-0.395*** (-9.74)	-0.396*** (-9.82)
<i>Institute x100</i>	-0.113*** (-4.56)	-0.107*** (-4.22)	-0.112*** (-4.51)	-0.111*** (-4.48)	-0.104*** (-4.13)	-0.110*** (-4.43)
<i>Dividend to Profit</i>	-0.002 -0.37	-0.003 (-0.53)	-0.003 (-0.50)	-0.003 -0.41	-0.004 (-0.55)	-0.003 (-0.53)
<i>Profitability</i>	0.008 1.35	0.008 (1.41)	0.008 (1.44)	0.008 1.36	0.008 (1.42)	0.008 (1.44)
<i>Year & Industry Control</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>
<i>Internationalization Dummy</i>	-0.031 -1.36			-0.029 -1.29		
<i>Internationalization (ForSales)*100</i>		-0.504 (-1.52)			-0.499 (-1.51)	
<i>Internationalization (Factor)</i>			-0.007 (-1.28)			-0.007 (-1.20)
<i>Agency 1 x100</i>				-0.178** (-2.31)	-0.182** (-2.36)	-0.180** (-2.31)
<i>Adj.R²</i>	18.5%	18.4%	18.4%	18.9%	18.9%	18.8%
<i>Observations</i>	866	866	866	866	866	866

***, **, * indicate respectively significance at the 1%, 5%, and 10% levels. The definitions of the variables are provided in Tables 1 and 2. The t-statistics are based on robust standard errors.

Table 7: The Long-term Debt Ratio and Securities Laws – A Dummy Variable that is Given the Value of 1 for a Multinational Firm and 0 for a Domestic Firm Represents Internationalization

Variable	1	2	3	4	5	6	7	8
<i>Intercept</i>	0.538 7.29	0.528 7.19	0.452 5.48	0.407 4.67	0.414 4.70	0.370 3.63	0.382 4.19	0.540 6.34
<i>Size</i>	-0.011** (-2.18)	-0.009* (-1.88)	-0.009* (-1.76)	-0.009* (-1.83)	-0.009* (-1.81)	-0.009* (-1.87)	-0.009* (-1.83)	-0.009* (-1.79)
<i>NDTS</i>	-0.145** (-2.17)	-0.143** (-2.15)	-0.145** (-2.19)	-0.143** (-2.16)	-0.145** (-2.19)	-0.144** (-2.17)	-0.147** (-2.21)	-0.143** (-2.14)
<i>Inside x100</i>	0.167 (1.27)	0.166 (1.28)	0.144 (1.11)	0.137 (1.06)	0.137 (1.05)	0.138 (1.05)	0.128 (0.98)	0.165 (1.26)
<i>Inside2 x1000</i>	-0.030** (-2.02)	-0.030** (-1.98)	-0.030* (-1.78)	-0.030* (-1.75)	-0.030* (-1.73)	-0.030* (-1.73)	-0.030* (-1.65)	-0.030** (-1.96)
<i>Current to Total Assets</i>	-0.402*** (-9.87)	-0.395*** (-9.71)	-0.382*** (-9.34)	-0.380*** (-9.35)	-0.381*** (-9.35)	-0.383*** (-9.42)	-0.379*** (-9.37)	-0.394*** (-9.71)
<i>Institute x100</i>	-0.113*** (-4.56)	-0.111*** (-4.48)	-0.108*** (-4.38)	-0.111*** (-4.51)	-0.110*** (-4.45)	-0.110*** (-4.45)	-0.109*** (-4.42)	-0.111*** (-4.48)
<i>Dividend to Profit</i>	-0.002 -0.37	-0.003 -0.41	-0.003 -0.49	-0.003 -0.46	-0.003 -0.49	-0.003 -0.44	-0.003 -0.56	-0.002 -0.39
<i>Profitability</i>	0.008 1.35	0.008 1.36	0.008 1.33	0.008 1.32	0.008 1.31	0.008 1.34	0.008 1.32	0.008 1.37
<i>Year & Industry Control</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Internationalization (Dummy)</i>	-0.031 -1.36	-0.029 -1.29	-0.015 -0.60	-0.008 -0.30	-0.009 -0.36	-0.009 -0.35	-0.006 -0.24	-0.027 -1.15
<i>Agency 1 x100</i>		-0.178** (-2.31)	-0.169** (-2.22)	-0.170** (-2.23)	-0.169** (-2.25)	-0.172** (-2.26)	-0.167** (-2.24)	-0.177** (-2.27)
<i>Common Law Index</i>			0.063* (1.81)					
<i>Burden of Proof Index</i>				0.112** (2.26)				
<i>Investor Protection Index</i>					0.103** (2.09)			
<i>Disclosure Index</i>						0.151** (2.08)		
<i>Public Enforcement Index</i>							0.150*** (2.44)	
<i>Political Risk Index</i>								-0.007 (-0.27)
<i>Adj.R²</i>	18.5%	18.9%	19.1%	19.2%	19.2%	19.2%	19.3%	18.8%
<i>Observations</i>	866	866	866	866	866	866	866	866

***, **, * indicate respectively significance at the 1%, 5%, and 10% levels. The definitions of the variables are provided in Tables 1 and 2. The t-statistics are based on robust standard errors.

Table 8: The Long-term Debt Ratio and Securities Laws – Internationalization is represented by the Percentage of Foreign Sales to Total Sales

Variable	1	2	3	4	5	6	7	8
<i>Intercept</i>	0.529 7.23	0.519 7.12	0.446 5.47	0.405 4.74	0.410 4.75	0.366 3.70	0.381 4.30	0.539 6.27
<i>Size</i>	-0.012*** (-2.35)	-0.010** (-2.02)	-0.009* (-1.85)	-0.009* (-1.88)	-0.009* (-1.86)	-0.009* (-1.92)	-0.009* (-1.86)	-0.010* (-1.87)
<i>NDTS</i>	-0.150** (-2.30)	-0.149** (-2.27)	-0.148** (-2.25)	-0.145** (-2.19)	-0.147** (-2.23)	-0.146** (-2.21)	-0.149** (-2.24)	-0.148** (-2.25)
<i>Inside x100</i>	0.168 (1.27)	0.168 (1.28)	0.144 (1.10)	0.139 (1.07)	0.139 (1.06)	0.140 (1.06)	0.131 (1.00)	0.165 (1.26)
<i>Inside2 x1000</i>	-0.030** (-1.96)	-0.030* (-1.92)	-0.030* (-1.75)	-0.030* (-1.74)	-0.030* (-1.72)	-0.030* (-1.72)	-0.030* (-1.65)	-0.030* (-1.90)
<i>Current to Total Assets</i>	-0.402** (-9.90)	-0.395*** (-9.74)	-0.382*** (-9.36)	-0.380*** (-9.34)	-0.380*** (-9.35)	-0.382*** (-9.41)	-0.379*** (-9.35)	-0.394*** (-9.73)
<i>Institute x100</i>	-0.107*** (-4.22)	-0.104*** (-4.13)	-0.105*** (-4.17)	-0.109*** (-4.28)	-0.107*** (-4.24)	-0.107*** (-4.22)	-0.106*** (-4.21)	-0.105*** (-4.15)
<i>Dividend to Profit</i>	-0.003 (-0.53)	-0.004 (-0.55)	-0.004 (-0.57)	-0.003 (-0.50)	-0.003 (-0.54)	-0.003 (-0.48)	-0.004 (-0.59)	-0.003 (-0.52)
<i>Profitability</i>	0.008 (1.41)	0.008 (1.42)	0.008 (1.35)	0.008 (1.34)	0.008 (1.33)	0.008 (1.36)	0.008 (1.33)	0.008 (1.43)
<i>Year & Industry Control</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Internationalization (ForSales)*100</i>	-0.504 (-1.52)	-0.499 (-1.51)	-0.240 (-0.67)	-0.174 (-0.49)	-0.189 (-0.53)	-0.203 (-0.58)	-0.174 (-0.50)	-0.458 (-1.31)
<i>Agency 1 x100</i>		-0.182** (-2.36)	-0.170** (-2.24)	-0.171** (-2.25)	-0.170** (-2.27)	-0.173** (-2.29)	-0.168** (-2.26)	-0.179** (-2.31)
<i>Common Law Index</i>			0.064* (1.89)					
<i>Burden of Proof Index</i>				0.111** (2.34)				
<i>Investor Protection Index</i>					0.103** (2.18)			
<i>Disclosure Index</i>						0.151** (2.18)		
<i>Public Enforcement Index</i>							0.148*** (2.56)	
<i>Political Risk Index</i>								-0.112 (-0.43)
<i>Adj.R²</i>	18.4%	18.9%	19.1%	19.2%	19.2%	19.2%	19.3%	18.8%
<i>Observations</i>	866	866	866	866	866	866	866	866

***, **, * indicate respectively significance at the 1%, 5%, and 10% levels. The definitions of the variables are included in Tables 1 and 2. The t-statistics are based on robust standard errors.

Table 9: The Long-term Debt Ratio and Securities Laws – Internationalization is represented by the first principal component of % foreign sales, % foreign income, and % foreign subsidiaries

Variable	1	2	3	4	5	6	7	8
<i>Intercept</i>	0.521 (7.15)	0.512 (7.06)	0.436 (5.24)	0.377 (4.17)	0.384 (4.22)	0.321 (2.97)	0.351 (3.80)	0.526 (5.78)
<i>Size</i>	-0.012** (-2.39)	-0.010** (-2.07)	-0.009** (-1.95)	-0.010** (-2.04)	-0.010** (-2.00)	-0.010** (-2.08)	-0.010** (-2.02)	-0.010** (-1.96)
<i>NDTS</i>	-0.146** (-2.22)	-0.144** (-2.19)	-0.147** (-2.23)	-0.143** (-2.18)	-0.146** (-2.22)	-0.144** (-2.19)	-0.148** (-2.24)	-0.143** (-2.18)
<i>Inside x100</i>	0.156 (1.18)	0.156 (1.19)	0.130 (1.00)	0.121 (0.93)	0.120 (0.92)	0.121 (0.93)	0.112 (0.86)	0.155 (1.18)
<i>Inside2 x1000</i>	-0.030* (-1.89)	-0.030* (-1.85)	-0.030* (-1.68)	-0.030* (-1.67)	-0.030 (-1.63)	-0.030 (-1.63)	-0.020 (-1.56)	-0.030* (-1.84)
<i>Current to Total Assets</i>	-0.402*** (-9.97)	-0.396*** (-9.82)	-0.384*** (-9.41)	-0.382*** (-9.40)	-0.382*** (-9.39)	-0.385*** (-9.48)	-0.381*** (-9.41)	-0.395*** (-9.82)
<i>Institute x100</i>	-0.112*** (-4.51)	-0.110*** (-4.43)	-0.110*** (-4.43)	-0.115*** (-4.62)	-0.113*** (-4.55)	-0.112*** (-4.53)	-0.111*** (-4.51)	-0.110*** (-4.44)
<i>Dividend to Profit</i>	-0.003 (-0.50)	-0.003 (-0.53)	-0.004 (-0.60)	-0.003 (-0.53)	-0.004 (-0.58)	-0.003 (-0.49)	-0.004 (-0.65)	-0.003 (-0.51)
<i>Profitability</i>	0.008 (1.44)	0.008 (1.44)	0.008 (1.33)	0.007 (1.27)	0.007 (1.27)	0.008 (1.31)	0.008 (1.27)	0.008 (1.45)
<i>Industry & Year Control</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Internationalization (Factor)</i>	-0.007 (-1.28)	-0.007 (-1.20)	0.002 (0.31)	0.007 (0.86)	0.006 (0.75)	0.005 (0.72)	0.006 (0.83)	-0.006 (-0.88)
<i>Agency 1 x100</i>		-0.180** (-2.31)	-0.168** (-2.21)	-0.169** (-2.23)	-0.168** (-2.25)	-0.172** (-2.28)	-0.166** (-2.25)	-0.178** (-2.27)
<i>Common Law Index</i>			0.082** (2.03)					
<i>Burden of Proof Index</i>				0.157*** (2.58)				
<i>Investor Protection Index</i>					0.144*** (2.42)			
<i>Disclosure Index</i>						0.211*** (2.44)		
<i>Public Enforcement Index</i>							0.198*** (2.89)	
<i>Political Risk Index</i>								-0.007 (-0.24)
<i>Adj.R²</i>	18.4%	18.8%	19.1%	19.3%	19.2%	19.2%	19.3%	18.8%
<i>Observations</i>	866	866	866	866	866	866	866	866

***, **, * indicate respectively significance at the 1%, 5%, and 10% levels. The definitions of the variables are included in Tables 1 and 2. The t-statistics are based on robust standard errors.