

Do country level investor protections impact security level contract design? Evidence from foreign bond covenants

Darius Miller* and Natalia Reisel**

*Edwin L. Cox School of Business
Southern Methodist University
Dallas, TX, 75275-0333
(214) 768-4182
dpmiller@cox.smu.edu

**Edwin L. Cox School of Business
Southern Methodist University
Dallas, TX, 75275-0333
(214) 768-3933
nreisel@smu.edu

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Abstract

Better legal protection of investors in a country is a central theme of international corporate governance research. However, investor protections can be derived not only from legal rights provided by countries' laws but also from rights attached to individual securities at the issuer's discretion. Using a cross-country sample of restrictive covenants attached to public corporate bonds, we show that countries' legal investor protections impact security level contract design. When the legal protection of investors in a country is weak, investors are more likely to require security level protections that limit potentially opportunistic actions of managers. The findings suggest that sophisticated issuers and investors can create international contracts that adapt to weak legal institutions and therefore add to our understanding of how the overall investor protection environment is formed.

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What determines the extent of investor protection around the world? Recent research argues that investor protection is ultimately derived from the rights financial securities bring to their owners, since these rights are the means of ensuring investors a fair return in expectations.¹ For example, the legal approach to corporate governance, pioneered by LaPorta, Lopez-de-Silanes, Shleifer and Vishny (1997, 1998; LLSV hereafter) emphasizes the importance of the rights established by countries' laws, which apply broadly to entire classes of securities (debt or equity). These laws vary significantly across countries and have been shown to impact a number of important financial development outcomes.²

Another strand of studies, the optimal contracting literature, emphasizes the importance of the rights attached to individual securities at the discretion of the issuer.³ By providing additional investor protections, these rights facilitate firms' access to external finance. In case of debt, for example, investors may require the right to repossess collateral and put limitations on potentially opportunistic actions of the managers. These rights can vary within the same class of securities in a country.

These two distinct strands of literature show that investor protection can be derived either through the legal rights provided by countries' laws or the rights provided by the issuing

¹ This differs from the traditional Modigliani and Miller (1958) view that securities are defined by their cash flows.

² These include, for example, corporate ownership structures (LLSV (1998), Claessens, Djankov, and Lang 2000), dividend policies (LLSV (2000)), size of firms (Kumar, Rajan, and Zingales (1999)), efficiency of investment allocation (Wurgler (2000)) and economic growth (Demirguc-Kunt and Maksimovic (1998)), Beck, Levine, and Loayza (2000)).

³ See, for example, Hart (1995), Aghion and Bolton (1992), Dewatripont and Tirole (1994), Smith and Warner (1979).

firms. Despite the importance of understanding how the overall investor protection environment is formed, little is known how these two mechanisms are related. To this end, we ask the question: How do *country level* investor protections impact investor protections at the *security level*?

We investigate this question by conducting a cross-country study of restrictive covenants attached to international public corporate bonds issued in the U.S. (“Yankee bonds”). Restrictive covenants are heterogeneous rights attached to individual securities of the firm that are designed to protect bondholders from possible opportunistic behavior of managers by restricting their actions. While corporate bonds are one of the largest sources of external finance for corporations and covenants are ubiquitous in financial contracts such as public debt, private debt and private equity, there is a paucity of evidence on covenant use outside the U.S due, in part, to cross-country differences in reporting requirements. In this study, we exploit the more stringent disclosure requirements for foreign public bonds issued in the U.S. to gather a sample of restrictive covenants from 1,500 bonds issued by firms located in 51 countries, representing almost a half trillion dollars of outstanding debt.

It is important to note, however, that the answer to our question is not obvious as there are two distinct views on how country level investor protection laws impact security level contract design. The legal approach to corporate governance, for example, predicts that bonds issued by firms from weak investor protection countries will be associated with a paucity of bond covenants. The rationale is that, ultimately, the only way to enforce a contract between managers and investors is through legal action of some kind. Absent strong domestic laws and an effective

judiciary or regulator, there is no way to protect investors (see, e.g., Johnson and Shleifer 2000a, 2000b).

An alternative view, based on Coase (1960), is that sophisticated issuers and investors will create contracts that mitigate the effects of poor domestic investor protection. For example, Coffee (1999) and Stulz (1999) argue that international contracts that increase investor protection and allow for a degree of international enforcement will be used when legal protection is weak and domestic enforcement is lax. Therefore, the Coasian approach to corporate governance predicts that firms from weak investor protection countries will include more restrictive covenants in Yankee bonds, which are contracts issued and registered under U.S. securities laws and enforcement.

Our results indicate countries' legal investor protections impact security level contract design. We find that more restrictive covenants are placed, *ceteris paribus*, on bonds from firms located in countries with weak creditor rights. Our results also show that covenant protections are more frequently attached to bonds from firms located in countries with weak public enforcement of securities laws and less financial disclosure.⁴ We also find some evidence that covenant intensity is higher in bonds from firms located in countries with poor shareholder rights. Further, we examine covenants individually and find when investor protections are weak, all restrictive covenant types are more prevalent, including those that restrict financing activities, restrict investment activities and restrict payouts. In addition to country level investor protections, we perform an analysis of firm characteristics that proxy for agency problems within

⁴ Public enforcement of securities laws, from Djankov et al. (2008), measures the laws on the books that specify the level of sanctions available.

the firm and find covenants are more likely to be placed on bonds from firms where bondholders would be most concerned about the actions of managers, such as firms closer to financial distress.

It is important to note that while the last decade of finance research has show that the legal rules that protect creditors matter, the level of enforcement is also likely to be important. Therefore, we follow Djankov et al. (2008) and control for the general quality of law enforcement in our tests. We also subject our findings to a battery of other firm and country level robustness tests. We show that our results are robust to several industry and country controls, as well as when we exclude countries that contain the largest portion of our sample, remove observations during the lending boom of 2004-2006, and omit observations from financial firms. We also investigate if institutional differences unrelated to investor protection can explain our findings by controlling for sovereign credit ceilings. We find that our results are robust.

These findings advance the literature in several ways. First, our finding that more investor protections are included in securities contracts when country level investor protections are weak suggests that markets can adapt to weak legal institutions. These findings complement recent work that has begun to examine how legal protection of shareholders affects firm level governance practices. For example, Klapper and Love (2004), Durnev and Kim (2005), Doidge, Karolyi and Stulz (2007) and Bruno and Claessens (2007) find firms that need external funding adopt stronger governance practices than required by law, especially in weak investor protection regimes.

Second, our findings suggest that laws matter for an important aspect of international corporate finance, the design of public securities issued to outside investors. Therefore, we add public security design as an additional branch to the literature on the economic consequences of investor protections, which previously examined ownership of firms, the development of financial markets, and the allocation of real resources (LLSV (2000)). In this way, we extend previous studies that focused primarily on contract terms of private bank debt. For example, Qian and Strahan (2007) show creditor rights are important in explaining the size, maturity, interest rates, and ownership of bank loans, while Bae and Goyal (2009) argue that the enforceability of contracts also is an important determinant of bank contract terms. Esty and Megginson (2003) and Esty (2006) find creditor rights protection is important in explaining the contract terms and syndicate structures of project finance loans. Our work is also related to studies that examine the impact of legal institutions on countries' aggregate debt maturity (Demirguc-Kunt and Maksimovic (1999)), private firms' access to debt (Giannetti (2003)), and firms' cost of debt (Miller and Puthenpurackal (2002)) and cost of equity (Hail and Leuz (2006)).

Third, while a large literature exists on the choice of covenants for U.S. firms, there is a paucity of evidence on non-U.S. bond covenants.⁵ The paucity of evidence on international covenant protections stands in stark contrast to studies such as Demirguc-Kunt and Maksimovic (1999) and Harvey, Lins and Roper (2004) that argue that the protections afforded to investors from covenants is a key component of investor protection for non-U.S. firms. Therefore, by examining a large cross-country sample of restrictive covenants attached to international bond issues, we are able to provide cross-country evidence on this important aspect of security design.

⁵ A few exceptions are Anderson (1999), Leuz, Deller and Stubernrath (1998) and Qi, Roth and Wald (2009).

We not only examine the firm level proxies for agency problems found to be important in U.S. studies, but extend this literature to investigate how country level institutional factors impact covenant choice, something not possible in single country studies.

Our finding that firms are more likely to attach restrictions to debt contracts when country level investor protections are weak suggests that investor protections at the security level are more valuable in situations when agency problems are extreme, which is consistent with the findings of Harvey, Lins and Roper (2004). When the legal protection of investors in a country is strong, our findings show firms are more likely to retain financial flexibility by reducing the number of restrictions included in debt contracts. Therefore, firms in countries with strong investor protection may be better positioned to take advantage of future growth opportunities. This suggests an additional channel through which strong legal protection of investors can lead to economic growth. Overall, our results point to an important link between country and security level investor protections.

The remainder of the paper proceeds as follows. Section I provides a primer on the Yankee bond market and describes the data. Section II details the design of the empirical strategy employed in the paper. Section III presents results on the country level determinates of covenant protections, while Section IV examines the role of proxies for agency problems in the firm in determining the incidence of restrictive covenants. Section V presents robustness tests, and Section VI concludes.

I. Data

A. Primer on the Yankee Bond Market

Public corporate bonds issued by foreign companies in the U.S. are in many ways an ideal instrument to analyze the relation between country level investor protection and security design.⁶ First, the Yankee bond market, being one of the largest markets for non-U.S. companies to raise corporate debt (second only to the Eurobond market), enables us to gather a large sample of bond contracts from firms located in over 50 countries. In contrast, most domestic corporate bond markets, especially in weak investor protection countries, do not support conventional long term fixed rate debt contracts and can have government regulated contract features. For example, the domestic Brazilian debt contracts examined in Anderson (1999) have premium payments linked to various inflation and exchange rates indexes in order to avoid the interest rate ceiling mandated by the Brazilian constitution.

Second, unlike many other international corporate bond markets (including privately placed Yankee bonds), foreign firms issuing public debt securities in the U.S. must register with the SEC and adhere to disclosure provisions including the 1933 and 1934 Securities Acts. This allows us to gather detailed information on the covenants attached to each security. Third, although public Yankee bonds are issued by firms from many countries, they are underwritten using U.S. underwriters. Therefore, to the extent that bond contracts are “boilerplate” documents, our results will be attenuated. Finally, since the challenge for any cross-country study is to hold as many other factors constant as possible, the homogenous investor base, currency and need for capital is also potentially beneficial.

A.1. U.S. Investor Protection Laws and Yankee bonds

⁶ For additional details on the Yankee bond market, see Karolyi and Johnston (1998) and Miller and Puthenpurackal (2002).

Johnson and Shleifer (2000) highlight that domestic contracts may be unable to mitigate poor country level investor protection because weak domestic legal institutions prevent their enforcement. Coffee (1999a) and Stulz (1999), however, propose an alternative Coasian adaptation to domestic contracts: international contracts. Their hypothesis is that international contracts, especially those based on U.S. securities laws, can be more effective than domestic contracts in mitigating agency problems. Yankee bond contracts, being registered U.S. securities, allow for both public and private enforcement actions via the S.E.C or private class action lawsuits. Therefore, restrictive covenant provisions in Yankee bond contracts allow for a natural test of ability of international private contracts to adapt to weak investor protections.

It is important to note that it is not necessary for these international contracts to be the equal of U.S. domestic contracts to be effective. What is necessary, however, is that the Yankee bond contracts are enforceable enough that investors and issuers find it effective to include more restrictive covenant provisions when domestic institutions are weak. To this end, a number of recent studies document that U.S. securities laws are effective in reaching non-U.S. firms, and the financial press also contains evidence that U.S. enforcement is relevant for Yankee bond covenants.^{7,8} However, there still remains significant debate on this issue in both the academic community and popular press, and it is very likely that the issuing firm's local investor protection environment will be relevant for international debt contracts. For example, the laws

⁷ For evidence on the ability of foreign firms to opt-in ("bond") to U.S. investor protections via U.S. registration, see, e.g., Reese and Weisbach (2002), Doidge et al. (2004) and Lel and Miller (2008).

⁸ "The US is a litigious place; that has made drafters of credit documentation very disciplined -- something that is reflected in Yankee documentation," says Michael Fisher, a senior capital markets lawyer at Millbank, Tweed, Hadley & McCloy in Singapore. "Investors have well-defined traditions to protect them, so covenant packages need to be developed carefully. Issuers often discover later on that they cannot operate business as planned. All our issuer clients have come back six to 12 months later and ask us: We want to do this, can we do it? The answer is often no or, you can, but you have to do it in a different way". *Asiamoney*. London: Sep 1997. Vol. 8, Iss. 7; pg. 37.

that govern bankruptcy and property are often determined where the assets of the company are located and where the case is filed (see, e.g. Qin and Strahan (2007) and Westbrook (2000)). Further, LLSV (2000) also emphasize that in the case of bankruptcy, assets located in particular countries remain under the jurisdiction of these countries laws and therefore limit the ability of firms to opt-in to U.S. investor protections. Consistent with this hypothesis that the local investor protection environment is important in the Yankee bond market, Miller and Puthenpurackal (2002) find that Yankee bond investors charge higher yield spreads for firms located in countries with weak creditor protections. Therefore, whether investors and issuers will be willing to write individual contracts that put limitations on potentially opportunistic actions of the managers in weak legal environments is ultimately an empirical issue, and the crux of the Coasian hypothesis of international investor protection that we investigate.

A.2. Domestic Bond Contracts

The above arguments suggest that the attributes of the Yankee bond market enables us to test the hypothesis that international contracts adapt to country level investor protections. However, it is important to recognize that our experiment does not examine the adaptation of pure domestic contracts to the country's legal system, an important issue in its own right but outside the scope of our analysis. In the case of pure domestic public bond contracts, a cross-country study faces several challenges including the necessity to control for effects induced by ownership restrictions, currency inconvertibility and repatriation restrictions (see, e.g., Gande and Puri (2005)). Further, as previously discussed, public corporate bonds may not be a widely available option for certain countries' firms given the underdeveloped local bond market; bonds may contain highly stylized contract features because of government regulation; and data on

convent provisions is often not disclosed because of limited reporting requirements. Therefore, we interpret our results as evidence on the hypothesis that international contracts can to adapt to country level investor protections, conditional on the firm issuing public Yankee bonds.⁹

B. Description of Covenant Database

Our data on restrictive covenants attached to international public bonds come from the 2006 version of Fixed Investment Securities Database (FISD). This database has been widely used in academic research for its coverage of covenants attached to bonds issued by U.S. firms.¹⁰ An important advantage of using this dataset for our purpose is it also provides information about restrictive covenants attached to public bonds issued by foreign firms in the U.S. market.

There are 5,879 corporate Yankee bonds in the database, that is, bonds that are not issued by foreign governments or divisions of U.S. companies. We consider non-convertible bonds with covenant data available. To ensure that the sample includes only corporate bonds with valid information about covenants and other bond characteristics, we discussed the specifics of the covenant data with specialists from Mergent, the company that compiled the FISD. These conversations led us to exclude medium term notes (MTNs), private placements and issues for which subsequent data from prospectuses and other more detailed documents are not available in the database.¹¹ Further, we consider only bonds issued in 1989 or later because Mergent advised

⁹ These differences make comparisons between domestic bond covenants difficult. For example, Anderson (1999) finds that restrictions on additional debt are less prevalent than in the U.S domestic market while some types of restrictions on dividends are more prevalent than in U.S., but given the number of differences in investor base, interest payment structure, currency and regulation, it is hard to attribute this difference to any one institutional difference between the U.S. and Brazil.

¹⁰ See, for example, Chava, Kumar, and Warga (2007) and Reisel (2008) among others.

¹¹ Private placements include Rule 144a Yankee bonds that are exempt from SEC disclosure requirements and, therefore, have incomplete coverage of covenant data.

us that the quality of covenant data before 1989 is lower than afterward. This procedure resulted in a sample of 1,592 bonds issued by 796 companies.

We compliment our bond data with county indexes and firm financial data. The creditor rights index comes from Djankov, Mcliesh, and Shleifer (2007). The disclosure index is from Bushman, Piotroski, and Smith (2004). The anti-self-dealing and public enforcement indexes are from Djankov et. al (2008). We exclude observations for which none of the indexes is available, that leaves us with 1,500 bond issues.

Firm financial data are collected from Worldscope. We manually match each issuer with Worldscope data using company names. Additionally, we checked for any company name changes using internet searches to ensure as many matches as possible. We should note that, in many cases, foreign industrial companies issue their bonds via divisions, coded as financial in FISD. Therefore, it is important to trace each bond to its parent company to get accurate firm characteristics. 911 bonds issued by 443 companies have financial data available on Worldscope. In our tests, we provide results based on samples with and without firm level financial data.

C. Descriptive Statistics

Descriptive statistics for bond issues in the full sample and the Worldscope sub-sample are presented in Table 1. We first note that restrictive covenants are indeed prevalent in international public debt offerings with the median bond having 3 restrictive covenants attached to it. The Yankee bond market is generally known as one of the few markets that foreign companies can issue large amounts of long maturity fixed rate long debt (Karolyi and Johnston, (1998)). The sample statistics are consistent with this notion. For example, the average offering

amount is 486.56 million dollars and most of the bonds have maturities between 5 and 15 years. The majority of the bonds in the full sample, 84.47%, are senior bonds, only 5.67% are secured.¹² Almost half of the bond issues in the sample are callable, 45.00%; 11.20% of the bonds are issued before 1995 and 53.80% are issued after 1999. The Worldscope sub-sample is similar to the full sample in the terms of bond characteristics.

Panel B of Table 1 presents frequencies by country. There are 51 countries in the full sample. The highest frequencies of the bond issues are from Canada, 31.27%, and UK, 13.73%. These frequencies are consistent with studies on Yankee bonds that employ data from *Securities Data Company* (Miler and Puthenpurackal (2002)). There are 38 countries in the Worldscope sub-sample. Similar to the full sample, the highest frequencies of the bond issues are from Canada and UK, 35.46% and 14.05%, respectively. In later robustness tests, we show our findings are robust when these countries are removed from the sample. Panel C of Table 1 shows issuing firm characteristics for the Worldscope sample. Consistent with previous studies, our Yankee bond firms are, on average, large and profitable.

D. Covenant Types and Frequencies

We begin by documenting the prevalence of covenants attached to corporate bond contracts issued by non-U.S. firms. Following Smith and Warner (1979), we group covenants into three major categories: Restrictions on financing activities, restrictions on investment activities, and restrictions on payouts.¹³ Panel A of Table 2 presents the frequencies by covenant type.

¹² Our results are not sensitive to the exclusion of secured bonds.

¹³ Our groupings are also consistent with Nash, Netter and Poulsen (2003).

Restrictions on Financing Activities: Restrictions on financing activities are important for bondholders as they directly mitigate claim dilution. Claim dilution is harmful in at least two ways: Additional debt may both increase the likelihood of bankruptcy and reduce recovery amounts. 55.47% of the bond issues in the full sample (55.45% in the Worldscope sub-sample) include restrictions on financing activities. These covenants limit future issue of debt or sale-leaseback transactions. 26.96% of the bonds in the full sample include additional debt covenants such as restrictions on issuance of any debt with initial maturity of one year or longer; restrictions on incurring additional debt, with limits on absolute dollar amount of debt outstanding or percentage of total capital; restrictions on issuance of additional debt unless the issuer achieves or maintains certain profitability levels.

49.97% include negative pledge covenants that bar the issue of secured debt unless the issuer secures the current issue on a pari passu basis. 32.62% of the contracts in the full sample include restrictions on sale-leaseback transactions, a way to raise capital by selling some specific asset to an entity that simultaneously leases the asset back to the organization for a fixed term and agreed-upon rate. Sale-leaseback agreements represent liabilities to a firm in the form of a claim senior to that of debtholders and, hence, are similar to senior debt. The frequencies of the restrictions on additional debt, negative pledge and sale-leaseback covenants in the Worldscope sub-sample are very similar to the frequencies in the full sample (21.74%, 50.66%, and 33.41%, respectively).

Restrictions on Investment Activities: Restrictions on investment activities such as mergers are often thought to mitigate the risk-shifting problem (sometimes referred to as the asset substitution problem or overinvestment) suggesting that bondholders could lose from an

expropriation effect. Restrictions on mergers are almost always paired with restrictions on asset sales (see Reisel (2008) for details). 56.67% of bond contracts in the full sample (56.83% in the Worldscope sub-sample) include such restrictions. A merger covenant does not always completely prohibit mergers or consolidations, but often allow them conditionally. In some cases, the covenants place certain requirements on the profitability and leverage of the new entity. Restrictions on asset sales limit the ability of the issuer to sell assets or limit the issuer's use of the proceeds from the sale of assets.

Restrictions on Payouts: These restrictions directly designed to protect bondholders from possible wealth transfer. Black (1976) points out there is no easier way for a company to escape the burden of debt than to pay out all of its assets in the form of a dividend and leave creditors holding a worthless obligation. Restrictions on payouts limit dividend-related payments made to shareholders or other entities to a certain percentage of net income or some other accounting ratio. Further, this category includes restrictions on share repurchases and redemption of subordinated debt. 25.53% of the bond contracts in the full sample (20.40% in the Worldscope sub-sample) restrict payouts to shareholders and other entities.

Overall, the results in Table 2 suggest that restrictive covenants are prevalent in international debt contracts. Further, Panel B of Table 2 presents a correlation analysis and shows similar to studies of U.S. public bond covenants, the presence of covenants is positively correlated. However, the correlation is far from perfect, indicating that the presence of covenants and their type may determined by firm and country characteristics.

As an example, Appendix A provides the covenant details for STATS ChipPAC Ltd., Singapore that are included in the prospectuses for 6.75% Senior Notes due 2011. The covenants

restrict payouts, additional debt, mergers, and the transfer of assets. As noted above, the covenants do not completely restrict the activities but rather allow them conditionally and are often written as a function of financial ratios.

To investigate the determinates of international covenant protections, we next turn to multivariate analysis.

II. Research Design

To examine the determinants of international covenant protection, we estimate several variations of two main regression models. The first is a Poisson regression where the dependent variable is the total number of restrictive covenants attached to a sample bond and the independent variables include country indexes of investor protection and control variables.¹⁴ This allows us to examine how the intensity of covenant protection is related to the degree of investor protection at the country level. The second is a Probit regression where the dependent variable is the inclusion of a specific type of restrictive covenant. This model allows us to examine the likelihood that legal protections affect the inclusion of each covenant type. Finally, we re-estimate both models including firm level characteristics. These allow us to test whether proxies for agency problems at the firm level matter in international covenant choice and examine whether the impact of country indexes on the covenant choice remains after controlling for firm characteristics. We also include in the models several country, industry and time controls. We follow Peterson (2009) and correct for possible serial correlation and heteroskedasticity by clustering at the firm level and including year indicator variables.¹⁵

¹⁴ As robustness check, we also estimate negative binomial regressions and find our conclusions unchanged.

¹⁵ Firm level clustering is important since we can have more than one bond issued by a particular firm.

Our covenant selection rule can be summarized as follows:

$$\text{Covenant} = f(\text{country characteristics, firm characteristics, time effects}).$$

We recognize that other bond characteristics may influence the choice of covenants; however, these characteristics are endogenous to the design of the bond contracts - including them directly in the model may produce biased estimates. Thus, we interpret our covenant selection rule as a reduced form model where the explanatory variables represent exogenous factors that explain the (endogenous) determinates of covenant protections.¹⁶ This approach addresses the issue that other bond characteristics such as coupon or maturity may be determined simultaneously with covenants as these characteristics are also likely to be a function of country and firm characteristics.¹⁷ Qian and Strahan (2007) among others use this approach to address the issue of simultaneity of bond characteristics.

We include the following test and control variables in our models.

Country level Measures of Investor Protection: We focus on four different measures of investor protection at the country level. The first, and perhaps most important, is the legal protection afforded to creditors from Djankov, McLiesh and Shleifer (2007). The index, which ranges from zero to four, measures the number of laws that exist in a country that limit borrower expropriation. We use data from year 2003 since DMS (2006) shows that creditor rights change little through time. Given this index, as well as the others employed in our analysis, is not a

¹⁶ Lee (1976) and Heckman (1976) developed estimation procedure for selection models with endogenous variables. Lee (1978) and Willis and Rosen (1979) are among the first to apply this procedure. Both papers develop reduced form models of selection and demonstrate that they produced consistent estimates (p.421 and 14, respectively).

¹⁷ The reduced form model fits well the purpose of our study as we are interested in capturing the impact of exogenous variables such as country indexes on the choice of covenant.

continuous variable, we follow previous research and create an indicator variable that equals one if the country index is equal to or above the median index value from DMS (2006) and zero otherwise.¹⁸ We also create similar indicator variables from the index of financial disclosures from Bushman, Piotroski and Smith (2006) that rank countries on financial disclosures such as segments, research and development, capital expenditures, accounting policies and subsidiaries. LLS (2006) argue that corporate disclosure is one of the most important aspects of investor protection and the availability of financial information would likely be important to public bondholders.¹⁹

We also are interested in how the enforcement of investor protection laws (on the books) matters given the large literature that suggests that enforcement is also a crucial component of investor protection. To measure this, we use the public enforcement index from Djankov et al. (2008) that measures the fines and prison terms for managers who are found guilty of illegal private benefit consumption.

We also examine the role, if any, that the legal protections of *shareholders* have on the incidence of covenant additions. The association is not obvious, as stronger shareholder protections may mitigate conflicts between insiders and all stakeholders or, alternatively, could escalate shareholder/bondholder conflicts. We employ a measure of shareholder protection, the anti-self-dealing index from Djankov et al. (2008), which measures how difficult it is for minority shareholders to thwart the consumption of private benefits by controlling shareholders

¹⁸ The median creditor rights score from Djankov et. al (2008) is two. For papers that also use this kind of specification, see Leuz, Lins and Warnock (2008) and references contained within.

¹⁹ We employ this measure of actual disclosures as other indexes of disclosure such as those contained in LLS (2006) measure disclosures that specifically apply to shareholder's benefits and are not necessarily relevant to bondholders.

and responds to the criticism of the LLSV anti-director rights index (see, e.g. Spamann (2006)). Djankov et al. (2008) argue that self-dealing is the central problem of corporate governance in most countries.

Firm level Proxies for Agency Problems in the Firm: We also examine whether the choice of restrictive covenant is related to potential agency problems within the firm. We are motivated by U.S. based studies that argue that likelihood of financial distress and structure of investment opportunities may affect the covenant choice. Nash, Netter, and Poulsen (2003), Bradley and Roberts (2004), and Reisel (2008), for example, show that covenants are more likely to be used when the firm is close to financial distress as the agency problems are likely to be severe in this type of firms. Also, Myers (1977) and Brealey and Myers (1996) suggest that agency problems are most severe for firms with high growth opportunities. Further, in our cross-country setting, agency problems are often likely to be extreme, which Harvey, Lins and Roper (2004) argue increases the importance of covenant protection.

However, given the paucity of evidence on covenant determination outside these U.S.-based studies, it is an open question whether firm level factors are important to investors, especially in light of the potential importance of country level investor protections in covenant choice. Further, adding firm level characteristics to our models will allow us to verify the robustness of our previously documented country level legal protection results.

Our proxies for financial distress are book leverage, interest coverage ratio, and profitability.²⁰ Leverage is calculated as total debt divided by total assets; interest coverage is a

²⁰ Previous research has shown that these variables are related to the probability of default (see, for example, Fabozzi and Fabozzi (1995)).

ratio of EBIT to interest expenses; profitability is calculated as EBIT divided by total assets.²¹ We also include firm size as Smith and Warner (1979) contend that smaller firms are more likely to experience financial distress as well as to control for differences in firm size across countries. Further, Graham (2000) argues that large firms face low information costs when borrowing. In a recent study, Hadlock and Pierce (2008) find that firm size is also a prominent determinant of the firm's financial constraint status. Thus, the agency problems are likely to be severe in small firms. We measure firm size using total assets. Additionally, we include capital expenditures to proxy for firm's investment opportunities.

Control Variables: We include several controls for unobserved country, industry and year effects. Following Djankov et al. (2008), we assess the effects of our regulation variables after controlling for the efficiency of the judiciary in each country, measured by the number of days to resolve a commercial dispute. We also include GDP growth per country since growth opportunities in a country may be related to the incidence of covenant provisions (Anderson 1999). Finally, our models also include year and 1-digit industry indicator variables.²²

III. Country level Determinants of International Covenant Protections

A. Determinants of Covenant Intensity

Table 3 presents results for the estimation of Poisson regressions, where the dependent variable is the number of covenants attached to each bond and the independent variables are country level investor protection proxies as well as controls for GDP growth, efficiency of the

²¹ Winsorizing financial ratios for each country at 1% level does not affect the results.

²² Using 2-digit SIC results in a small number of observations within each group.

legal system, and year indicator variables. Panel A presents results for the first country level variable of interest: creditor rights. Across all model specifications, we find that when the country's legal protection of creditors is weaker, there are more restrictive covenants attached to firms' bonds. For example, Model (1) shows that the coefficient on median/above creditor rights is negative and significant (-0.25, p-value = 0.001), controlling for year indicator variables. We also calculated (but did not tabulate) the incidence rate ratio (IRR) for each country index. The IRR for the creditor rights dummy is 0.78, which indicates the covenant rate is 0.78 times lower in countries with strong creditor rights. In other words, the number of covenants decrease by 22% when the creditor rights dummy variable changes from 0 (countries with weak creditor rights) to 1 (countries with strong creditor rights). Model (2) reports that when controls for GDP growth, efficiency of the legal system as well as year dummies are added, the coefficient on creditor rights remains similar in magnitude and significant (-0.25, p-value = 0.009). Model (3) examines the comparability of the Worldscope sub-sample and also finds the coefficient on Creditor Rights is negative and significant (-0.47, p-value = 0.000). Overall, the results from Panel A of Table 3 suggest that when country level creditor rights are weak, bondholders require more restrictive covenants.

Panel B of Table 3 reports how countries' disclosure laws impact the demand for security level covenant provisions using Bushman et al.'s (2006) disclosure index. Across all models, we find that the coefficient on above median disclosure is negative and significant. For example, in model (2) that examines the full sample and controls for GDP growth, efficiency of the legal system and year effects, the coefficient on Disclosure is -0.28 (p-value = 0.001). In the Worldscope sub-sample, Model (3), the coefficient on Disclosure is -0.41 (p-value = 0.000).

Therefore, we find that when corporate disclosure practices are high, investors require fewer restrictive covenants attached to public corporate bonds. For example, for Model (3) we estimate that the the number of covenants is 34% lower in countries with a high level of disclosure of accounting information than in countries with a lower level of disclosure (IRR = 0.66). This result is also consistent with the hypothesis that investor protection impacts security design, as LLS (2006) note that mandated corporate disclosure is one of the most important aspects of investor protection.

Panel C of Table 3 tests if the strength of public enforcement impacts security design. We find that in models (2) and (3) that control for GDP growth, efficiency of the legal system and year effects, the coefficients on above median public enforcement are negative and significant (-0.24, p-value=0.002 and -0.34, p-value=0.002, respectively). Therefore, in addition to the importance of creditor rights in determining covenant intensity, we also find that in countries with better public enforcement laws, investors require fewer restrictive covenants. IRRs for models (2) and (3) are 0.78 and 0.71, respectively.

Table 3 also presents results for the relation between covenant intensity and countries' legal protection of shareholders. As previously mentioned, the association is not obvious, as stronger shareholder protections may mitigate conflicts between insiders and all stakeholders or alternatively, could escalate shareholder/bondholder conflicts. Results from Panel D of Table 3 show that across all models, the coefficient on anti-self-dealing is statistically insignificant. The result, perhaps, is not surprising given the potential countervailing forces which could require more detailed firm level control variables to disentangle the effects, something we pursue in Section IV.B.

B. Determinates of Individual Covenant Types

While the previous results document that the investor protection environment at the country level impacts the number of covenants attached to public corporate bonds, left unanswered is the question how each specific type of covenant is affected by the country level protection of investors. Specifically, is the relation between the intensity of covenant protection and investor protection driven by specific types of covenants or is the relation prevalent across all types of restrictive covenants? To address this question, we re-estimate our models using probit specifications that measure the likelihood of each specific type of covenant protection in both the full and Worldscope sub-samples using specifications that control for GDP growth, efficiency of the judiciary as well as year indicator variables (controls not tabulated for brevity). Table 4 presents these results.

The first class of covenants we examine are those that restrict financing activity. These include additional debt, negative pledge and sales-leaseback covenants. The first column of results are for the Probit model where the dependent variable equals one if the bond contract contains any of the three types of restrictions on financing activities. We find that for both the full sample and the Worldscope sub-sample, in countries with better creditor protections, bonds are less likely to include restrictions on financing activities (-0.54, p-value = 0.003 and -0.72, p-value = 0.000, respectively). When we examine each type of restriction on financing individually, we find that the coefficient on creditor rights is negative and significant across all samples and covenant types. Further, when we examine covenants that restrict investment activities or restrict payouts (the last two columns of Table 4), three of the four coefficients on above median creditor rights are negative and statistically significant. Therefore, the results

suggest that a country's legal protection of creditors significantly impacts the likelihood of all restrictive covenants.

Table 4 also presents results for other country level investor protections. For example, we find the coefficient on disclosure is negative and significant for every type of restrictive covenant in both the full sample and Worldscope sub-sample. For public enforcement, we find the coefficient for restrictions on financing activities is negative and significant in the full sample, a result that is driven by the additional debt covenant. Similar to the Poisson models results, the coefficients on shareholder protection (anti-self dealing) are generally not significant. Overall, the results from Table 4 are consistent with the hypothesis that the previously documented impact of country level investor protections is felt across all restrictive covenant types.

IV. Firm level Determinants of Covenant Protections

A. Firm level Determinants of Covenant Intensity

Table 5 presents results for the Worldscope sub-sample, which allows us to investigate the role that firm level characteristics play in international covenant choice. We run four models where our firm level proxies for financial distress potential and investment opportunities are included with each of our country level investor protection measures. This allows us to investigate the incremental power of these firm level characteristics in determining the intensity of covenant protection as well as verify our country level results with the additional firm level characteristics. All specifications also include industry indicator variables.

Models (1) – (4) present results when firm level financial characteristics are included with each country level investor protection index and controls for GDP growth, efficiency of the

legal system, year and industry. Across each model specification, we find that smaller firms, highly leveraged firms, firms with lower interest coverage ratios, and less profitable firms are more likely to have a larger number of restrictive covenants. Given these firms are closer to financial distress, these results suggest that more covenants are placed on the firms where bondholders would be most concerned about the actions of managers. This result is consistent with the hypothesis that financial distress proximity is an important determinant of the number of covenants attached to international bonds. Further, our results show that firm level financial ratios, in addition to country level investor protections, are important determinates of international covenant protection.

Our proxy for investment opportunities, capital expenditures, is not statistically significant in this specification. This result is perhaps not too surprising as U.S. based studies show often conflicting results on the importance of growth opportunities in explaining the covenant protections for U.S. corporate bonds. For example, Nash, Netter, and Poulsen (2003) find some evidence of a negative relation between growth opportunities and restrictive covenants. This is consistent with Kahan and Yermack (1998) who argue that covenants are harmful in the presence of investment opportunities because they inefficiently limit managerial discretion as well as the findings of Gilson and Warner (1998) that fast-growing firms experiencing a performance decline tend to remove restrictive covenants by replacing bank debt with junk bonds that have less restrictive covenants. Bradley and Roberts (2004), however, find that high growth firms are more likely to include restrictive covenants.

Finally, it is also important to note that the coefficients on the country level investor protection proxies such as creditor rights remain correctly signed and significant, confirming our

earlier findings. Interestingly, the coefficient on legal shareholder protection (anti-self-dealing laws) becomes negative and significant when firm level proxies are included. Therefore, the results suggest that stronger protection of shareholders also lowers the number of restrictive covenants attached to corporate bonds, which is consistent with the hypotheses that these laws reduce the conflicts between managers and all stakeholders consistent with Harvey, Lins and Roper (2004).

B. Firm level Determinates of Individual Covenant Types

To verify the importance of country level legal protections on covenant choice, we re-examine our Probit models on each covenant type adding firm level financial characteristics. Table 6 presents these results, with Panels A – D reporting results for each country level investor protection proxy. Several results are worth noting. Perhaps most importantly, across all panels and covenant types, we continue to find that after controlling for firm level financial variables, country level investor protections, specifically creditor rights, impact the likelihood that restrictive covenants will be attached to corporate bonds.

Inspection of the firm level financial variables also yields several insights. For example, across all panels, firm size is negatively related to the likelihood of every covenant type. This is consistent with U.S. studies that find firm size is an important determinant of the covenant structure as small firms face high agency cost of debt.²³ Moreover, we find that across the panels leverage is positively associated with covenants that restrict additional debt and covenants that restrict additional payouts. These specific covenants have been found in U.S. based studies

²³ See Nash, Netter, and Poulsen (2003), Bradley and Roberts (2004), and Reisel (2008) regarding impact of firm size on the covenant structure.

to be attached to the most risky firms and therefore are thought to be among the most costly covenants available to investors (Reisel, 2008). We also find across the panels that interest coverage is important in the determination of covenants that restricted additional debt, which is consistent with the notion that investors are concerned with the firm's ability to service additional debt. Further, we find that profitability is significantly related across the panels to likelihood that bonds will include restrictions of investments. Given these covenants often restrict mergers and asset sales, it is consistent with the hypothesis that investors are most likely to want to restrict these kinds of activities when the firms are less profitable. Overall, the results suggest that firm level proxies for severity of agency problems are also important determinants of restrictive covenants in foreign bonds.

V. Robustness Tests

In this section, we perform variations of the tests we conduct in Section IV. The purpose of this analysis is to gauge the sensitivity of our results to the exclusion of certain observations and to alternative specifications of the tests. Where tabulated, we report results for the Poisson models that examine the determinates of covenant intensity, including the full set of country and firm level variables.

A. Exclusion of Financial Firms

One potential concern is that the inclusion of financial firms in our sample may be responsible for our results. While it is important to note that all of our results hold when we use industry indicator variables, we also provide results when financial firms are removed from the sample. Panel A of Table 7 reports that when bonds issued by financial firms are removed from

the sample, the coefficients on our main variables of interest remain correctly signed and significant.²⁴

B. Exclusion of years 2004-2006

Table 2 reports that the frequency of covenants attached to foreign bonds drop dramatically in the later part of our sample period. This decline in the frequency of covenant protections for foreign bonds has also been noted in the popular press.²⁵ In addition, this decrease has been found in studies of covenants attached to U.S. firms' securities (Demiroglu and James (2008)) and generally coincides with the "lending boom" during this time-period. To make sure our results are not driven by these atypical years, we re-ran our models with the years 2004, 2005 and 2006 excluded from the data. As Panel B of Table 7 reports, all our results are robust to the exclusion of these firm-year observations.

C. Exclusion of firms from Canada and United Kingdom

Given that Canada and the U.K. are the two countries with the greatest number of observations in our sample, an obvious concern is that our results may be driven by observations in either of these countries. Panel C (B) of Table 7 presents results when we omit observation from Canada (U.K). We continue to find country level investor protections impact the intensity of covenant protections. Thus, our results are robust to the exclusion of observations from Canada and the U.K.

D. Alternative control for institutional differences across countries

²⁴ While 233 bonds out of 911 in the Worldscope sub-sample are issued by financial firms, only 50 of these firms have data on capital expenditures. Thus, all specifications that include controls for the firm characteristics are based predominantly on non-financial firms.

²⁵ See Wong (2007).

Another potential concern is that our results are driven by some institutional differences across countries not related to legal investor protections. While we control for cross-country differences using GDP growth and efficiency of the judiciary system, in this section we consider an alternative control – country ceilings (of foreign currency bond ceilings). Country ceilings are credit ratings assigned to each country by ratings agencies such as Moody’s that put limits on the maximum rating of a bond issue within a country.²⁶ In other words, generally Yankee bonds do not have ratings higher than the country ceiling.²⁷ To the extent that country ceiling may capture probability of default not captured by firm level variables, the country ceiling may affect the choice of covenant. Country ceilings, however, may also be a function of the legal investor protections. Thus, we first regress country ceiling on a country index and then include the residual as a control in our regression of the covenant choice (the residual in this case incorporates the information without the influence of the country index). Panel E of Table 7 reports the results. Consistent with the earlier results, we find that poor creditor rights, disclosure or public enforcement are associated with higher covenant intensity. The impact of the anti-self-dealing index on the covenant choice is insignificant.

E. Multiple country indexes

In our previous tests, we analyze the impact of each index separately given the often high correlations between indexes. We also run un-tabulated regression including all country indexes – creditor rights, disclosure, public enforcement and anti-self-dealing. We continue to find strong

²⁶ In some cases, country ceiling are higher than government bond ratings. For example, in 2008(foreign currency) government bond rating for Argentina was B3 while country ceiling was B2, which is one notch higher.

²⁷ We should note that, while bond ratings are a function of covenant attached to the bond, country ceilings are not.

impact of the investor protection on the covenant intensity; an exception is the anti-self-dealing index, which is insignificant.

VI. Conclusion

In this paper we test how country level legal protections of investors affect the level of investor protections at the security level. We find that when country level protections of investors are weak, investors require more restrictive covenants on public corporate bonds. Restrictive covenant intensity is higher on bonds from firms located in countries with weak creditor rights, less disclosure, and weak public enforcement of securities laws. We also find some evidence that covenant intensity is higher in bonds from firms located in countries with poor shareholder rights. Further, we find that when investor protections at the country level are weak, all restrictive covenant types are more prevalent, including those that restrict financing activities, restrict investment activities and restrict payouts. Finally, in addition to country level investor protections, we perform an analysis of firm characteristics that proxy for agency problems within the firm and find they are also important determinants of international covenant choice. The findings suggest that sophisticated issuers and investors can create international contracts that adapt to poor domestic investor protection and therefore add to our understanding of how the overall investor protection environment is formed.

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Appendix A

This appendix provides examples of covenants restricting financing, investment and payouts activities of STATS ChipPAC Ltd.(Singapore) that are included in the prospectuses for 6.75%, Senior Notes due 2011.

Restricted Payments

STATS ChipPAC shall not, and shall not permit any Restricted Subsidiary, directly or indirectly, to make a Restricted Payment if at the time that STATS ChipPAC or the Restricted Subsidiary makes the Restricted Payment:

(1) a Default shall have occurred and be continuing (or would result as a result of making the Restricted Payment);

(2) STATS ChipPAC is not able to Incur an additional \$1.00 of Indebtedness under paragraph (a) of the covenant described under “— Limitation on Indebtedness;” or

(3) the aggregate amount of the Restricted Payment and all other Restricted Payments since the Issue Date would exceed the sum, without duplication, of:²⁸

(A) 50% of the Consolidated Net Income accrued during the period, treated as one accounting period, from the beginning of the fiscal quarter immediately following the fiscal quarter during which the notes are originally issued to the end of the most recent fiscal quarter for which internal financial statements are available on or prior to the date of the Restricted Payment, or, in case Consolidated Net Income shall be a deficit, minus 100% of the deficit;

(B) the aggregate Net Cash Proceeds received by STATS ChipPAC from the issuance or sale of, or capital contribution relating to, its Capital Stock, other than Disqualified Stock, subsequent to the Issue Date, other than an issuance or sale to a Subsidiary of STATS ChipPAC and other than an issuance or sale to an employee stock ownership plan or to a trust established by STATS ChipPAC or any of its Subsidiaries for the benefit of employees to the extent that the purchase by the plan or trust is financed by Indebtedness of the plan or trust to STATS ChipPAC or any of its Subsidiaries or Indebtedness guaranteed by STATS ChipPAC or any of its Subsidiaries, and the Fair Market Value of property, other than cash that would constitute Temporary Cash Investments or a Related Business, received by STATS ChipPAC or a Restricted Subsidiary subsequent to the Issue Date as a contribution to its common equity capital, other than from a Subsidiary of STATS ChipPAC or that was financed with loans from STATS ChipPAC or any Restricted Subsidiary;

(C) the amount by which Indebtedness of STATS ChipPAC or any Restricted Subsidiary is reduced on the STATS ChipPAC consolidated balance sheet upon the conversion or exchange, other than by a Subsidiary of STATS ChipPAC subsequent to the Issue Date, of any Indebtedness of STATS ChipPAC or any Restricted Subsidiary convertible or exchangeable for STATS ChipPAC Capital Stock, other than Disqualified Stock, less the amount of any cash, or the Fair Market Value of any other property, distributed by STATS ChipPAC or any Restricted Subsidiary upon the conversion or exchange; and

(D) an amount equal to the sum of (i) the net reduction in Investments in any Person resulting from dividends, repayments of loans or advances or other transfers of assets subsequent to the Issue Date, in each case, to STATS ChipPAC or any Restricted Subsidiary from the Person, and (ii) the portion, proportionate to STATS ChipPAC’s equity interest in the Subsidiary, of the Fair Market Value of the net assets of an Unrestricted Subsidiary at the time the Unrestricted Subsidiary is designated a Restricted Subsidiary; provided, however, that this sum shall not exceed, in the case of any Person, the amount of Investments previously made, and treated as a Restricted Payment, by

²⁸ There are some exceptions to these restrictions that are included in the prospectuses.

STATS ChipPAC or any Restricted Subsidiary in the Person.

Limitation on Indebtedness

(a) STATS ChipPAC shall not, and shall not permit any Restricted Subsidiary to, Incur, directly or indirectly, any Indebtedness, except that STATS ChipPAC may Incur Indebtedness if, after giving pro forma effect to the Incurrence, the Consolidated Coverage Ratio exceeds 2.0 to 1.0.

(b) Notwithstanding the provisions of paragraph (a), STATS ChipPAC and its Restricted Subsidiaries may Incur the following Indebtedness:

(1) Indebtedness of STATS ChipPAC or any Guarantor Incurred under any Credit Facilities; provided, however, that, immediately after giving effect to the Incurrence, the aggregate principal amount of all Indebtedness incurred under this clause (1) and then outstanding does not exceed the greater of (A) \$100.0 million and (B) the sum of (x) \$20.0 million, (y) 50% of the book value of the inventory of STATS ChipPAC and that of the Restricted Subsidiaries and (z) 80% of the book value of the accounts receivables of STATS ChipPAC and that of the Restricted Subsidiaries; provided, further, that the Indebtedness may only be Incurred by a Restricted Subsidiary that is a Guarantor if the Indebtedness, when added together with the amount of all other Indebtedness Incurred by Restricted Subsidiaries that are Guarantors under this clause (1) and then outstanding, does not exceed an amount equal to 50% of the greater of (x) the amount in clause (A) above and (y) the amount determined in clause (B) above;

(2) Indebtedness of STATS ChipPAC or any Restricted Subsidiary owed to and held by STATS ChipPAC or a Guarantor; provided, however, that any subsequent issuance or transfer of any Capital Stock which results in a Restricted Subsidiary ceasing to be a Restricted Subsidiary or any subsequent transfer of the Indebtedness (other than to STATS ChipPAC or another Restricted Subsidiary) will be considered, in each case, to constitute the Incurrence of the Indebtedness by the issuer of that Indebtedness;

(3) Indebtedness consisting of the notes, other than Additional Notes;

(4) Indebtedness outstanding on the Issue Date, other than Indebtedness described in clause (1), (2), (3), (7), (8), (9) or (14) of this paragraph (b);

(5) Refinancing Indebtedness relating to Indebtedness Incurred under paragraph (a) or under clause (2), (3), (4), (6) or this clause (5) of this paragraph (b); provided, however, that to the extent the Refinancing Indebtedness directly or indirectly Refinances Indebtedness of a Subsidiary Incurred under clause (6) of this paragraph (b), the Refinancing Indebtedness shall be Incurred only by that Subsidiary;

(6) Indebtedness of a Person Incurred and outstanding on or prior to the date on which the Person was acquired by the STATS ChipPAC or a Restricted Subsidiary, other than Indebtedness Incurred in anticipation of, in connection with, or to provide all or any portion of the funds or credit support utilized to consummate, the transaction or series of related transactions where the Person was acquired by STATS ChipPAC or a Restricted Subsidiary; provided, however, that after giving pro forma effect to the transaction or series of related transactions, (a) the Consolidated Coverage Ratio increases as a consequence of the incurrence and related acquisition and (b) the Consolidated Coverage Ratio is at least 1.5 to 1.0;

(7) Indebtedness of STATS ChipPAC Korea in an amount not to exceed \$20.0 million in the aggregate;

(8) Indebtedness of STATS ChipPAC Malaysia in an amount not to exceed \$1.0 million in the aggregate;

(9) Indebtedness of STATS ChipPAC China in an amount not to exceed \$30.0 million aggregate principal amount;

(10) Hedging Obligations of STATS ChipPAC or any Restricted Subsidiary under Interest Rate Agreements and Currency Agreements entered into in the ordinary course of business and not for the purpose of speculation;

(11) Indebtedness of STATS ChipPAC or any Restricted Subsidiary in the form of performance bonds, completion guarantees and surety or appeal bonds entered into by STATS ChipPAC and the

Restricted Subsidiaries in the ordinary course of their business;

(12) Indebtedness consisting of the Note Guarantees and Guarantees of other Indebtedness otherwise permitted under the indenture;

(13) Indebtedness of STATS ChipPAC or any Restricted Subsidiary arising from the honoring by a bank or other financial institution of a check, draft or similar instrument inadvertently (except in the case of daylight overdrafts) drawn against insufficient funds in the ordinary course of business, provided that the Indebtedness is satisfied within five business days of Incurrence;

(14) Indebtedness, including Capital Lease Obligations, Incurred by STATS ChipPAC or any of the Guarantors to finance the purchase, lease or improvement of real or personal property or equipment, whether through the direct purchase of assets or the Capital Stock of any Person owning the assets, in an aggregate principal amount which, when added together with the amount of Indebtedness Incurred under this clause (14) and then outstanding, does not exceed the greater of (A) \$50.0 million and (B) 5% of Total Assets (in each case including any Refinancing Indebtedness of that Indebtedness);

(15) Indebtedness Incurred by STATS ChipPAC or any of the Restricted Subsidiaries constituting reimbursement obligations under letters of credit issued in the ordinary course of business including, without limitation, letters of credit to procure raw materials, or relating to workers' compensation claims or self-insurance, or other Indebtedness relating to reimbursement-type obligations regarding workers' compensation claims;

(16) Indebtedness of STATS ChipPAC issued to any of its directors, employees, officers or consultants or a Restricted Subsidiary in connection with the redemption or purchase of Capital Stock that, by its terms, is subordinated to the notes, is not secured by any of the assets of STATS ChipPAC or the Restricted Subsidiaries and does not require cash payments prior to the Stated Maturity of the notes and Refinancing Indebtedness of that Indebtedness, in an aggregate principal amount which, when added together with the amount of Indebtedness Incurred under this clause (16) and then outstanding, does not exceed \$5.0 million;

(17) Indebtedness arising from agreements of STATS ChipPAC or a Restricted Subsidiary providing for indemnification, adjustment of purchase price, earn-out or other similar obligations, in each case, incurred or assumed in connection with the disposition of any business, assets or a Restricted Subsidiary of STATS ChipPAC, other than guarantees of Indebtedness incurred by any Person acquiring all or any portion of the business, assets or Restricted Subsidiary for the purpose of financing the acquisition; provided that the maximum assumable liability of all the Indebtedness shall at no time exceed the gross proceeds actually received by STATS ChipPAC and the Restricted Subsidiaries in connection with the disposition; and

(18) Indebtedness of STATS ChipPAC or a Guarantor in an aggregate principal amount which, together with all other Indebtedness of STATS ChipPAC and the Guarantors outstanding on the date of Incurrence (other than Indebtedness permitted by clauses (1) through (17) above or paragraph (a) above) does not exceed \$40.0 million.

Merger, Consolidation or Sale of Assets

STATS ChipPAC shall not consolidate with or merge with or into, or convey, transfer or lease, in one transaction or a series of related transactions, all or substantially all its assets to, any Person, unless:

(1) the resulting, surviving or transferee Person, referred to as a "Successor Company," shall be a Person organized and existing under the laws of Singapore or of the United States of America, any State thereof or the District of Columbia and the Successor Company, if not STATS ChipPAC, shall expressly assume, by a supplemental indenture executed and delivered to the trustee, in form satisfactory to the trustee, all the obligations of STATS ChipPAC under the indenture, the notes and the registration rights agreement;

(2) immediately after giving effect to the transaction, and treating any Indebtedness which becomes an obligation of the Successor Company or any Subsidiary as a result of the transaction as having been

Incurred by the Successor Company or the Subsidiary at the time of the transaction, no Default shall have occurred and be continuing;

(3) immediately after giving effect to the transaction, (A) the Successor Company would be able to Incur an additional \$1.00 of Indebtedness under paragraph (a) of the covenant described under “— Limitation on Indebtedness” or (B) the Consolidated Coverage Ratio for the Successor Company and its Restricted Subsidiaries would be equal to or greater than the same ratio for STATS ChipPAC and its Restricted Subsidiaries immediately prior to the transaction;

(4) STATS ChipPAC shall have delivered to the trustee an officers’ certificate and an opinion of counsel, each stating that the consolidation, merger or transfer and any supplemental indenture comply with the indenture;

(5) if the merging corporation is organized and existing under the laws of Singapore and the Successor Company is organized and existing under the laws of the United States of America, any State thereof or the District of Columbia or if the merging corporation is organized and existing under the laws of the United States of America, any State thereof or the District of Columbia and the Successor Company is organized and existing under the laws of Singapore (any such event, a “Foreign Jurisdiction Merger”), STATS ChipPAC shall have delivered to the trustee an opinion of counsel that the holders of notes will not recognize income, gain or loss for U.S. Federal income tax purposes as a result of the transaction and will be taxed in the same manner and on the same amounts and at the same times as would have been the case if the transaction had not occurred; and

(6) in the event of a Foreign Jurisdiction Merger, STATS ChipPAC shall have delivered to the trustee an opinion of counsel from Singapore or other applicable jurisdiction that (A) any payment of interest or principal under or relating to the notes or the Note Guarantees will, after the consolidation, merger, conveyance, transfer or lease of assets, be exempt from the Taxes described under “— Redemption Upon Changes in Withholding Taxes” and (B) no other taxes on income, including capital gains, will be payable by holders of the notes under the laws of Singapore or any other jurisdiction where the Successor Company is or becomes organized, resident or engaged in business for tax purposes relating to the acquisition, ownership or disposition of the notes, including the receipt of interest or principal thereon, provided that the holder does not use or hold, and is not deemed to use or hold the notes in carrying on a business in Singapore or other jurisdiction where the Successor Company is or becomes organized, resident or engaged in business for tax purposes; provided, however, that clause (3) above shall not apply (x) if, in the good faith determination of the Board of Directors of STATS ChipPAC, whose determination shall be evidenced by a resolution of the Board of Directors, the principal purpose and effect of the transaction is to change the jurisdiction of incorporation of STATS ChipPAC or (y) in the case of a merger of STATS ChipPAC with or into one of its Wholly Owned Subsidiaries.

The Successor Company shall be the successor to STATS ChipPAC and shall succeed to, and be substituted for, and may exercise every right and power of, STATS ChipPAC under the indenture, the notes and the registration rights agreement and STATS ChipPAC, except in the case of a lease, shall be automatically released from its obligations under the indenture, the notes and the registration rights agreement.

Table 1. Descriptive Statistics for Bond Issues

The sample consists of Yankee bonds issued between 1989 and 2006. The data come from the 2006 version of FISD. The Worldscope sub-sample includes bonds issued by companies with financial information available on Worldscope. Offering amount is in US dollars. Leverage is total debt to total assets; interest coverage is EBIT to interest expenses; profitability is EBIT to total assets; capital expenditure is capital expenditures to total assets.

Panel A. Bond Characteristics and Frequencies by Time Period

	Full sample (N=1,500)			Worldscope sub-sample (N=911)		
	Mean	Median	Std. dev.	Mean	Median	Std. dev.
Offering amount (Mill.)	486.56	250.00	2,214.41	544.91	300.00	2,679.91
Number of covenants per bond	2.75	3	2.69	2.62	3	2.52
Percentage of transactions:						
Senior	84.47			84.19		
Subordinated	9.86			10.21		
Senior Secured	5.67			5.60		
Callable	45.00			44.79		
Low maturity	19.20			18.55		
High maturity	13.93			15.04		
1989-1994	11.20			11.86		
1995-1999	35.00			31.61		
2000-2006	53.80			56.53		

Panel B. Frequencies by Country

	Full sample (N=1,500)		Worldscope sub-sample (N=911)	
	No.	Percentage	No.	Percentage
Argentina	24	1.6	10	1.1
Australia	48	3.2	34	3.73
Austria	16	1.07	7	0.77
Belgium	3	0.2	1	0.11
Bermuda	13	0.87		
Brazil	32	2.13	14	1.54
Canada	469	31.27	323	35.46
Switzerland	11	0.73	16	1.76
Chile	27	1.8	18	1.98
China	3	0.2		
Columbia	2	0.13		
Czech Republic	1	0.07	1	0.11
Germany	112	7.47	90	9.88
Demark	6	0.4	5	0.55
Ecuador	1	0.07		
Spain	21	1.4	12	1.32
Finland	5	0.33	4	0.44
France	73	4.87	33	3.62
United Kingdom	206	13.73	128	14.05
Greece	3	0.2	3	0.33
Hong Kong	13	0.87	8	0.88
Croatia	1	0.07		
Hungary	1	0.07		
India	12	0.8	7	0.77
Ireland	16	1.07	8	0.88
Iceland	1	0.07		
Israel	2	0.13	1	0.11
Italy	25	1.67	12	1.32

Jordan	1	0.07	1	0.11
Japan	22	1.47	20	2.2
Kazakhstan	2	0.13		
Republic of Korea (South)	37	2.47	15	1.65
Kuwait	3	0.2		
Lebanon	3	0.2		
Luxembourg	7	0.47		
Mexico	57	3.8	41	4.5
Malaysia	2	0.13	3	0.33
Netherlands	120	8	44	4.83
Norway	19	1.27	2	0.22
New Zealand	5	0.33	5	0.55
Pakistan	1	0.07		
Philippines	9	0.6	8	0.88
Poland	9	0.6	1	0.11
Portugal	15	1	3	0.33
Romania	1	0.07		
Russian Federation	6	0.4	3	0.33
Singapore	7	0.47	5	0.55
Slovakia	1	0.07		
Sweden	23	1.53	7	0.77
Thailand	1	0.07	1	0.11
Venezuela	2	0.13	2	0.22

Panel C. Firm Characteristics for the Worldscope sub-sample

	Mean	Median	Std. Dev.	N
Total Assets	82,595.69	9,924.89	186,932.43	911
Leverage	38.85	35.62	20.01	895
Interest Coverage	12.17	2.66	191.21	860
Profitability	0.05	0.05	0.10	873
Capital Expenditures	28.14	9.85	81.75	724

Table 2. Descriptive Statistics for Bond Covenants

The sample consists of Yankee bonds issued between 1989 and 2006. The data are from the 2006 version of FISD. The Worldscope sub-sample includes bonds issued by companies with financial information available on Worldscope. Restrictions on financing activities include negative pledge covenants, restrictions on sale-leasebacks and further issuance of additional debt. Restrictions on investment activities limit risky investments and mergers. Restrictions on payouts limit dividends and other distributions to shareholders and others.

Panel A. Frequencies (%)

	Full Sample				Worldscope sub-sample			
	All Years	1989-1994	1995-1999	2000-2006	All Years	1989-1994	1995-1999	2000-2006
Restrictions on financing activities (total)	55.47	79.52	78.29	35.69	55.45	77.36	75.35	39.81
Additional debt	26.96	24.54	43.05	16.98	21.74	19.42	33.33	15.73
Negative pledge	49.97	73.05	70.10	32.09	50.66	70.09	69.10	36.31
Sale-leaseback	32.62	45.51	49.71	18.84	33.41	44.86	47.57	23.11
Restrictions on investment activities	56.67	83.97	75.43	39.28	56.83	83.00	72.38	43.11
Restrictions on payouts	25.53	21.34	41.33	16.11	20.40	17.31	32.64	14.17

Panel B. Correlations

The table reports Pearson correlation coefficients; p-values are in parentheses

	Full sample						Worldscope sub-sample					
	1	2	3	4	5	6	1	2	3	4	5	6
1. Restrictions on financing activities (total)	1						1					
2. Additional debt	0.55 (0.00)	1					0.48 (0.00)	1				
3. Negative pledge	0.90 (0.00)	0.39 (0.00)	1				0.91 (0.00)	0.34 (0.00)	1			
4. Sale-leaseback	0.63 (0.00)	0.37 (0.00)	0.61 (0.00)	1			0.64 (0.00)	0.33 (0.00)	0.62 (0.00)	1		
5. Restrictions on investment activities	0.84 (0.00)	0.52 (0.00)	0.74 (0.00)	0.60 (0.00)	1		0.82 (0.00)	0.46 (0.00)	0.73 (0.00)	0.61 (0.00)	1	
6. Restrictions on payouts	0.53 (0.00)	0.92 (0.00)	0.39 (0.00)	0.36 (0.00)	0.51 (0.00)	1	0.46 (0.00)	0.91 (0.00)	0.34 (0.00)	0.30 (0.00)	0.44 (0.00)	1

Table 3. Poisson Regression of Covenant Choice: Country indexes

The sample consists of Yankee bonds issued between 1989 and 2006. The bond data are from the 2006 version of FISD. Firm financial data are from Worldscope. Restrictions on financing activities include negative pledge covenants, restrictions on sale-leasebacks and further issuance of additional debt. Restrictions on investment activities limit risky investments and mergers. Restrictions on payouts limit dividends and other distributions to shareholders and others. The dependent variable is the number of restrictive covenants. Anti-self-dealing index and enforcement index are from Djankov et. al (2008); creditor rights index is from Djankov, McLiesh, and Shleifer(2007), disclosure index is from Bushman, Piotroski, and Smith (2003). Efficiency of the legal system is measured as log(Time to collect on a bounced check). Country Index Dummies are equal to 1 if the country index is above or equal median and 0 otherwise. Leverage is total debt to total assets; interest coverage is EBIT to interest expenses; profitability is EBIT to total assets; capital expenditure is capital expenditures to total assets. The constant is term is included but not reported. The results are adjusted for clustering at the firm level. ***, **, * indicate significance at 1%, 5%, and 10%, respectively.

Panel A. Creditor Rights

	Full Sample		Worldscope sub-sample
	(1)	(2)	(3)
Creditor rights dummy	-0.25***	-0.25***	-0.47***
GDP growth		0.03	0.12***
Efficiency of the legal system		0.04	0.06
Year dummies	Yes	Yes	Yes
N	1,481	1,473	896
Log Pseudolikelihood	-3,318.88	-3,314.74	-1,952.86

Panel B. Disclosure

	Full Sample		Worldscope subsample
	(1)	(2)	(3)
Disclosure dummy	-0.27***	-0.28***	-0.41***
GDP growth		-0.02	0.06
Efficiency of the legal system		0.16*	0.33***
Year dummies	Yes	Yes	Yes
N	1,456	1,436	872
Log Pseudolikelihood	-3,318.88	-3,206.26	-1,906.80

Table 3. (continued)

Panel C. Public Enforcement

	Full sample		Worldscope subsample
	(1)	(2)	(3)
Anti-self-dealing dummy	-0.10	-0.24 ^{***}	-0.34 ^{***}
GDP growth		0.03	0.08 [*]
Efficiency of the legal system		0.30 ^{***}	0.50 ^{***}
Year dummies	Yes	Yes	Yes
N	1,494	1,473	896
Log Pseudolikelihood	-3,372.13	-3,315.19	-1,960.52

Panel D. Anti-self-dealing

	Full Sample		Worldscope subsample
	(1)	(2)	(3)
Enforcement dummy	0.03	-0.02	-0.02
GDP growth		0.01	0.07
Efficiency of the legal system		0.19 ^{**}	0.34 ^{***}
Year dummies	Yes	Yes	Yes
N	1,494	1,473	896
Log Pseudolikelihood	-3,375.49	-3,330.21	-1977.46

Table 4. Probit of Covenant Choice: Country Indexes

The sample consists of Yankee bonds issued between 1989 and 2006. The data are from the 2006 version of FISD. The Worldscope sub-sample includes bonds issued by companies with financial information available on Worldscope. Restrictions on financing activities include negative pledge covenants, restrictions on sale-leasebacks and further issuance of additional debt. Restrictions on investment activities limit risky investments and mergers. Restrictions on payouts limit dividends and other distributions to shareholders and others Anti-self-dealing index and enforcement index are from Djankov et. al (2008); creditor rights index is from Djankov, McLiesh, and Shleifer(2007), disclosure index is from Bushman, Piotroski, and Smith (2003). Country Index Dummies are equal to 1 if the country index is above or equal median and 0 otherwise. The constant term, GDP growth, the efficiency of the judiciary and year dummies are included but not reported. The results are adjusted for clustering at the firm level. ***, **, * indicate significance at 1%, 5%, and 10%, respectively.

Country Index Dummy	Restrictions on financing activities (total)	Additional debt	Negative pledge	Sales-leaseback	Restrictions on investment activities	Restrictions on payouts
Creditor rights						
Full sample	-0.54 ^{***}	-0.54 ^{***}	-0.61 ^{***}	-0.54 ^{***}	-0.20	-0.54 ^{***}
Worldscope sub-sample	-0.72 ^{***}	-0.68 ^{***}	-0.69 ^{***}	-0.43 ^{**}	-0.44 ^{**}	-0.67 ^{***}
Disclosure						
Full sample	-0.83 ^{***}	-0.35 ^{**}	-0.91 ^{***}	-0.62 ^{***}	-0.51 ^{***}	-0.30 [*]
Worldscope sub-sample	-0.72 ^{***}	-0.54 ^{***}	-0.68 ^{***}	-0.89 ^{***}	-0.49 ^{***}	-0.45 ^{**}
Public Enforcement						
Full sample	-0.31 [*]	-0.14 ^{**}	-0.23	-0.07	-0.59 ^{***}	-0.18
Worldscope sub-sample	-0.27	-0.43	-0.25	-0.26	-0.47	-0.47 ^{***}
Anti-self-dealing						
Full sample	0.04	-0.24	-0.11	0.05	0.51 ^{***}	-0.15
Worldscope sub-sample	-0.08	-0.28	-0.13	-0.09	0.32 [*]	-0.22

Table 5. Poisson Regression of Covenant Choice: Impact of Financial Ratios

The sample consists of Yankee bonds issued between 1989 and 2006. The bond data are from the 2006 version of FISD. Firm financial data are from Worldscope. Restrictions on financing activities include negative pledge covenants, restrictions on sale-leasebacks and further issuance of additional debt. Restrictions on investment activities limit risky investments and mergers. Restrictions on payouts limit dividends and other distributions to shareholders and others. The dependent variable is the number of restrictive covenants. Anti-self-dealing index and enforcement index are from Djankov et. al (2008); creditor rights index is from Djankov, McLiesh, and Shleifer(2007), disclosure index is from Bushman, Piotroski, and Smith (2003). Efficiency of the legal system is measured as log(Time to collect on a bounced check). Country Index Dummies are equal to 1 if the country index is above or equal median and 0 otherwise. Leverage is total debt to total assets; interest coverage is EBIT to interest expenses; profitability is EBITDA to total assets; capital expenditure is capital expenditures to total assets. The constant term is included but not reported. The results are adjusted for clustering at the firm level. ***, **, * indicate significance at 1%, 5%, and 10%, respectively.

	Creditor rights	Disclosure	Public Enforcement	Anti-self-dealing
	(1)	(2)	(3)	(4)
Country index dummy	-0.29***	-0.35***	-0.28***	-0.22**
Log(Total assets)	-0.14***	-0.13***	-0.14***	-0.15***
Leverage	0.01***	0.01***	0.01***	0.01***
Interest coverage	-0.00***	-0.00**	-0.00**	-0.00***
Profitability	-0.66**	-0.80***	-0.63**	-0.70**
Capital expenditures	0.00	-0.00	-0.00	-0.00
GDP growth	0.04	-0.00	0.02	0.05
Efficiency of the legal system	-0.12	0.06	0.22**	0.12
Year dummies	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes
N	699	678	699	699
Log Pseudolikelihood	-1,469.04	-1,427.68	-1,467.87	-1,473.55

Table 6. Probit of Covenant Choice: Impact of Financial Ratios

The sample consists of Yankee bonds issued between 1989 and 2006. The bond data are from the 2006 version of FISD. Firm financial data are from Worldscope. Restrictions on financing activities include negative pledge covenants, restrictions on sale-leasebacks and further issuance of additional debt. Restrictions on investment activities limit risky investments and mergers. Restrictions on payouts limit dividends and other distributions to shareholders and others. Anti-self-dealing index and enforcement index are from Djankov et. al (2008); creditor rights index is from Djankov, McLiesh, and Shleifer(2007), disclosure index is from Bushman, Piotroski, and Smith (2003). Country Index Dummies are equal to 1 if the country index is above or equal median and 0 otherwise. Leverage is total debt to total assets; interest coverage is EBIT to interest expenses; profitability is EBIT to total assets; capital expenditure is capital expenditures to total assets. The constant term, year and 1-digit SIC code dummies are included but not reported. All specifications also include GDP growth and the efficiency of the judiciary. The results are adjusted for clustering at the firm level. ***, **, * indicate significance at 1%, 5%, and 10%, respectively.

Panel A. Creditor Rights

	Restrictions on financing activities (total)	Additional debt	Negative pledge	Sales-leaseback	Restrictions on investment activities and asset sales	Restrictions on payouts
Creditor rights dummy	-0.52**	-0.53**	-0.49**	-0.21	-0.45**	-0.54*
Log(Total assets)	-0.15***	-0.43***	-0.11**	-0.18***	-0.08*	-0.52***
Leverage	0.01*	0.02***	-0.00	-0.01	0.01	0.01***
Interest coverage	-0.00	-0.03*	-0.00	-0.01**	-0.00	-0.02
Profitability	-1.03	0.02	-1.11	-0.41	-1.40*	0.08
Capital expenditures	0.00	0.00	0.00	-0.01**	-0.00	0.00
GDP growth	0.10	-0.01	0.10	0.14	0.06	-0.07
Efficiency of the legal system	-0.39	0.21	-0.66***	-0.09	-0.33	0.07
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
N	651	676	689	694	639	673
Pseudo R ²	0.29	0.35	0.24	0.17	0.23	0.39

Table 6 . continued

Panel B. Disclosure

	Restrictions on financing activities (total)	Additional debt	Negative pledge	Sales-leaseback	Restrictions on investment activities and asset sales	Restrictions on payouts
Disclosure dummy	-0.81 ^{***}	-0.67 ^{***}	-0.76 ^{***}	-0.79 ^{***}	-0.57 ^{***}	-0.40 [*]
Log(Total assets)	-0.11 ^{**}	-0.47 ^{***}	-0.08	-0.16 ^{***}	0-.05	-0.55 ^{***}
Leverage	0.01 ^{**}	0.02 ^{***}	0.00	-0.00	0.01 ^{**}	0.02 ^{***}
Interest coverage	-0.00	-0.03 [*]	-0.00	-0.00	0.00	-0.02
Profitability	1.29	-0.22	-1.42 ^{**}	-0.79	-1.56 [*]	-0.12
Capital expenditures	0.00	0.00	0.00	-0.00 ^{**}	0.00	0.00
GDP growth	0.10	-0.08	0.08	0.13	0.03	-0.16
Efficiency of the legal system	0.03	0.51 ^{**}	-0.30	0.13	0.00	0.30
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
N	631	655	668	673	619	652
Pseudo R ²	0.30	0.36	0.24	0.19	0.23	0.39

Table 6. continued

Panel C. Public Enforcement

	Restrictions on financing activities (total)	Additional debt	Negative pledge	Sales-leaseback	Restrictions on investment activities and asset sales	Restrictions on payouts
Anti-self-dealing dummy	-0.23	-0.53 ^{**}	-0.22	-0.33 [*]	-0.57 ^{***}	-0.51 ^{**}
Log(Total assets)	-0.15 ^{***}	-0.42 ^{***}	-0.11 ^{**}	-0.18 ^{***}	-0.08 [*]	-0.51 ^{***}
Leverage	0.01 [*]	0.02 ^{***}	-0.00	-0.01	0.01	0.02 ^{***}
Interest coverage	-0.00	-0.03 [*]	-0.00	-0.01 ^{**}	0.00	-0.03
Profitability	-1.03	0.22	-1.10	-0.40	-1.39 [*]	0.26
Capital expenditures	0.00	0.00	0.00	-0.01 ^{**}	0.00	0.00
GDP growth	0.06	-0.06	0.05	0.14	0.03	-0.13
Efficiency of the legal system	0.04	0.83 ^{***}	-0.24	0.22	0.22	0.70 ^{***}
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
N	651	676	689	694	639	673
Pseudo R2	0.29	0.33	0.24	0.17	0.25	0.38

Table 6. continued

Panel D. Anti-self-dealing

	Restrictions on financing activities (total)	Additional debt	Negative pledge	Sales-leaseback	Restrictions on investment activities and asset sales	Restrictions on payouts
Enforcement dummy	-0.50 ^{***}	-0.87 ^{***}	-0.50 ^{***}	-0.32	0.03	-0.79 ^{***}
Log(Total assets)	-0.18 ^{***}	-0.49 ^{***}	-0.14 ^{***}	-0.20 ^{***}	-0.09 [*]	-0.57 ^{***}
Leverage	0.01 [*]	0.02 ^{***}	-0.00	-0.01	0.01	0.02 ^{***}
Interest coverage	-0.00	-0.03 ^{**}	-0.00	-0.01 ^{**}	-0.00	-0.02
Profitability	-1.14	-0.20	-1.22 [*]	-0.51	-1.39 [*]	-0.15
Capital expenditures	-0.00	-0.00	0.00	-0.01 ^{**}	0.00	0.00
GDP growth	0.18	0.15	0.17 [*]	0.19	-0.00	0.06
Efficiency of the legal system	0.09	0.81 ^{***}	-0.21	0.12	-0.07	0.64 ^{**}
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
N	651	676	689	694	639	673
Pseudo R2	0.30	0.34	0.25	0.17	0.23	0.39

Table 7. Poisson Regression of Covenant Choice: Robustness Checks

The sample consists of Yankee bonds issued between 1989 and 2006. The bond data are from the 2006 version of FISD. Firm financial data are from Worldscope. Restrictions on financing activities include negative pledge covenants, restrictions on sale-leasebacks and further issuance of additional debt. Restrictions on investment activities limit risky investments and mergers. Restrictions on payouts limit dividends and other distributions to shareholders and others. The dependent variable is the number of restrictive covenants. Anti-self-dealing index and enforcement index are from Djankov et. al (2008); creditor rights index is from Djankov, McLiesh, and Shleifer(2007), disclosure index is from Bushman, Piotroski, and Smith (2003). Efficiency of the legal system is measured as log(Time to collect on a bounced check). Country Index Dummies are equal to 1 if the country index is above or equal median and 0 otherwise. Leverage is total debt to total assets; interest coverage is EBIT to interest expenses; profitability is EBIT to total assets; capital expenditure is capital expenditures to total assets. The constant term is included but not reported. Country ceiling residual is residual from a regression of country ceiling on the appropriate country index. The results are adjusted for clustering at the firm level. ***, **, * indicate significance at 1%, 5%, and 10%, respectively.

Panel A. Exclude financial companies

	Creditor rights	Disclosure	Public Enforcement	Anti-self-dealing
	(1)	(2)	(3)	(4)
Country index dummy	-0.29**	-0.34***	-0.24***	-0.26***
Log(Total assets)	-0.14***	-0.14***	-0.14***	-0.15***
Leverage	0.01***	0.01***	0.01***	0.01***
Interest coverage	-0.00***	-0.00***	-0.00**	-0.00***
Profitability	-0.66**	-0.80***	-0.64**	-0.71**
Capital expenditures	0.00	0.00	0.00	0.00
GDP growth	0.03	-0.00	0.01	0.06
Efficiency of the legal system	-0.14	0.04	0.18*	0.12
Year dummies	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes
N	649	636	649	649
Log pseudolikelihood	-1,382.34	-1,349.78	-1,382.44	-1,380.86

Table 7. (continued)

Panel B. Exclude years 2004-2006

	Creditor rights	Disclosure	Public Enforcement	Anti-self-dealing
	(1)	(2)	(3)	(4)
Country index dummy	-0.34 ^{***}	-0.40 ^{***}	-0.24 ^{***}	-0.22 ^{**}
Log(Total assets)	-0.13 ^{***}	-0.13 ^{***}	-0.13 ^{***}	-0.15 ^{***}
Leverage	0.01 ^{***}	0.01 ^{***}	0.01 ^{***}	0.00 ^{***}
Interest coverage	-0.00 ^{***}	-0.00 ^{**}	-0.00 [*]	-0.00 ^{**}
Profitability	-0.77 ^{***}	-0.93 ^{***}	-0.74 ^{***}	-0.82 ^{***}
Capital expenditures	0.00	-0.00	-0.00	-0.00
GDP growth	0.06	0.01	0.03	0.07
Efficiency of the legal system	-0.10	0.11	0.25 ^{**}	0.18 [*]
Year dummies	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes
N	612	591	612	612
Log Pseudolikelihood	-1,271.82	-1,227.85	-1,273.92	-1,275.67

Table 7. (continued)

Panel C. Exclude United Kingdom

	Creditor rights	Disclosure	Public Enforcement	Anti-self-dealing
	(1)	(2)	(3)	(4)
Country index dummy	-0.36***	-0.42***	-0.26***	-0.43***
Log(Total assets)	-0.16***	-0.15***	-0.17***	-0.18***
Leverage	0.01***	0.01***	0.01***	0.01***
Interest coverage	-0.00***	-0.00**	-0.00**	-0.00***
Profitability	-0.64	-1.00	-0.61	-0.78
Capital expenditures	-0.00	-0.00	-0.00	-0.00
GDP growth	0.06	0.01	0.02	0.12**
Efficiency of the legal system	-0.07	0.15	0.18	0.32***
Year dummies	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes
N	607	588	607	607
Log Pseudolikelihood	-1,294.81	-1,254.77	-1,297.97	-1,288.70

Table 7. (continued)

Panel D. Exclude Canada

	Creditor rights	Disclosure	Public Enforcement	Anti-self-dealing
	(1)	(2)	(3)	(4)
Country index dummy	-0.43 ^{***}	-0.37 ^{***}	-0.34 ^{***}	-0.15
Log(Total assets)	-0.08 ^{***}	-0.08 ^{***}	-0.08 ^{***}	-0.10 ^{***}
Leverage	0.01 ^{***}	0.01 ^{***}	0.01 ^{**}	0.01 ^{***}
Interest coverage	0.00	0.00	0.00	0.00
Profitability	-0.99 ^{***}	-1.02 ^{***}	-0.81 ^{***}	-0.90 ^{***}
Capital expenditures	-0.00	-0.00	-0.00	-0.00
GDP growth	0.06 [*]	-0.01	0.03	0.04
Efficiency of the legal system	-0.01	-0.02	0.28 ^{***}	0.12
Year dummies	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes
N	399	378	399	399
Log Pseudolikelihood	-743.46	-715.75	-745.74	-755.14

Table 7. (continued)

Panel E. Control for Country Ceilings

	Creditor rights	Disclosure	Public Enforcement	Anti-self-dealing
	(1)	(2)	(3)	(4)
Country index dummy	-0.18**	-0.34***	-0.15*	-0.07
Log(Total assets)	-0.12***	-0.14***	-0.14***	-0.14***
Leverage	0.01***	0.01***	0.01***	0.01***
Interest coverage	-0.00**	-0.00***	-0.00**	-0.00**
Profitability	-0.79**	-0.80**	-0.78***	-0.78***
Capital expenditures	0.00	-0.00	0.00	-0.00
Country Ceiling residual	0.03***	0.03*	0.03***	0.03***
Year dummies	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes
N	699	680	701	701
Log Pseudolikelihood	-1458.43	-1430.05	-1461.57	-1466.44