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Does Mandatory Risk Information Disclosure Affect Bank Debt Design? Cross-Country Evidence from Yankee Bond Covenants[☆]

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Abstract

This paper investigates the impact of mandatory risk disclosure on the design of foreign bank debt. The Basel II and III Accords require the public disclosure of bank regulatory information under the Pillar 3 or market discipline framework. The new information details bank risk exposures and management strategies, capital adequacy and remuneration practices to enhance market discipline through transparency. We target foreign issuers of US (“Yankee”) to test whether banks domiciled in Pillar 3 regimes increase debt raising in an overseas market and face reduced demand from investors for covenants. Pillar 3 reporting reduces the propensity of banks to raise debt capital abroad, a finding that is attenuated when the banks are domiciled in countries with superior creditor rights protections. Pillar 3 reporting increases the imposition of covenants in Yankee bonds, particularly for banks domiciled in countries with weaker debt law enforcement standards and stronger shareholder rights.

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1. Introduction

Since the late 1990's the Basel Committee has designed and released reforms to raise the level and quality of regulatory capital in the international banking system. Included in these reforms were expanded disclosure requirements (Pillar 3) intended to improve bank transparency and to enhance market discipline. Most countries with well-organised banking markets have adopted these measures, which make risk management information that was hitherto only shared between bank managers and regulators publicly available for the first time. Pillar 3 reporting complements regulatory filings and International Financial Reporting Standards (IFRS). The aim of Pillar 3 is to allow market discipline to operate as sharing of information facilitates assessment of the bank by others, including investors, analysts, customers, other banks, and rating agencies, which leads to improved corporate governance. This paper traces when countries adopt Pillar 3 reporting and studies whether changes in market discipline affects the design of debt instruments issued by the affected banks.

The literature makes two distinctions of market discipline (Flannery, 2001): (1) direct market discipline refers to the influence market participants exercise directly on the behaviour of a financial institution; and (2) indirect market discipline refers to supervisory intervention triggered by signals generated by the market. Market discipline in these two instances works through price adjustments of the cost of debt or equity, and, with it, the willingness of investors to supply funds to a bank, and as a potential trigger for supervisory attention (Llewellyn (2009)). In turn, market discipline leads to two potential responses (see Bushman (2014) for a comprehensive review article). First, price and volume adjustments are triggered whenever risk disclosures fail to inspire a satisfactory level of confidence and investors in equity or debt react by imposing a higher price to compensate for the higher risk to which they are exposed or for their lack of sufficient knowledge. Second, market

participants react to the disclosures by modifying other transaction terms or by simply refusing to enter into new business with the bank.

The efficacy of market discipline is still an open debate in the literature. Early work on the issue precedes Pillar 3 reporting and could therefore not definitively identify a causal relationship. For example, Bliss and Flannery (2002) and Baumann and Nier (2004), while useful in presenting patterns suggestive of the usefulness of bank disclosure for market discipline, admit that their methodology does not provide strong evidence that stock or bond investors regularly influence managerial actions. The introduction of Pillar 3 reporting that we target in this paper is essentially an exogenous shock to the provision of regulatory information that is well suited for the before-and-after analysis we perform in this paper. Vauhkonen (2012) shows theoretically that regulators can improve the safety of a banking system by tightening disclosure requirements through measures such as Pillar 3 reporting. Bischof, Daske, Elfers and Hail (2015) provide evidence that Pillar 3 reporting makes a unique contribution to the banking industry in that banks increase their risk disclosures notwithstanding having been subjected to such reporting under accounting (IFRS 7) standards.

Our first hypothesis is that the improved risk information disclosure environments brought about by the adoption of Pillar 3 reporting helps banks raise more capital. We trace the debt raising made by banks domiciled in Pillar 3 adopting countries in an overseas market, the U.S. specifically – so-called Yankee bond issuances. Formally stated, our first hypothesis is as follows:

H1: *Pillar 3 reporting increases the ability of banks to raise capital abroad and, with it, the probability of Yankee bond issuance by non-U.S. banks.*

However, based on the findings of the law and finance literature, starting with La Porta et al. (1997, 1998), it could be argued that banks raise capital abroad to circumvent

impediments at home, thus saving interest expenses or avoiding more restrictive bond covenants (see Djankov, McLiesh and Shleifer (2007) and Haselmann, Pistor and Vig (2009), for international evidence and Mansi, Maxwell and Wald (2009) and Qi and Wald (2008), for U.S. domestic findings). Following this logic, Banerjee and Noe (2016) show theoretically that jurisdictions with stronger creditor rights (i.e., a stronger bargaining position for creditors in debt renegotiations) capture a larger share in the total debt being issued by a multinational firm. Desai, Foley and Hines (2004) provide empirical evidence consistent with this prediction - U.S.-based multinational firms incur higher leverage and pay less interest in countries with stronger creditor rights. A plausible counterfactual to our first hypothesis can therefore be stated as follows:

H1a: *Pillar 3 reporting improves bank transparency at home and ability to raise capital domestically, thus reducing the probability of bond issuance in the U.S. by banks domiciled in such countries.*

While pursuing our first hypothesis, we are concerned about whether Pillar 3 reporting is merely a substitute for existing legal arrangements. For example, Miller and Reisel (2011) and Qi, Roth and Wald (2011) find that there is a negative correlation between the strength of creditor rights in a bank's home country and the number of covenants imposed on the banks' debt when raising capital in the U.S. Yankee bond market. If the improved information environment that follows the adoption of Pillar 3 reporting serves to complement or strengthen existing creditor rights protections, and this information is known to U.S. lenders, then our second hypothesis is as follows:

H2: *Pillar 3 reporting reduces the number of covenants imposed on foreign bank Yankee bonds due to transmission of information effects.*

If, however, Pillar 3 reporting serves to expose problems about the risk exposures and management practices of financial institutions at home, the counterfactual may be plausible.

Moreover, if the improved information environment represented by the new risk reporting regime encourages debt raising by banks, the increased leverage only exacerbates distress and failure risk (Ashcraft, 2008). Creditors abroad may demand the imposition of more covenants as expressed formally in our alternative hypothesis as follows:

H2a: *Pillar 3 reporting increases the number of covenants on foreign bank Yankee bonds.*

Evidence from U.S. studies of non-bank firms suggests that strong shareholder rights can harm bondholders by increasing the likelihood of wealth transfers to shareholders (Klock, Mansi, and Maxwell, 2005; Cremers, Nair, and Wei, 2007; Chava, Livdan, and Purnanandam, 2009). In the banking literature, early evidence suggests that stock market participants care about market discipline (e.g. Brewer and Lee, 1986, and Distinguin, Rous and Tarazi, 2006). In our context, with regulatory information being made more accessible to equity markets, it is reasonable to expect shareholders to have a strengthened ability to monitor bank management. Our third hypothesis is therefore as follows:

H3: *The change in the information environment represented by the commencement of Pillar 3 reporting strengthens shareholder rights in issuer banks' countries of domicile and encourages holders of Yankee bonds to demand more covenants.*

However, Miller and Reisel (2011) find that stronger shareholder rights in the countries of non-bank issuers are not necessary harmful to U.S. bondholders. Abstracting from this evidence gives us an alternative to the third hypothesis, formally stated as follows:

H3a: *The commencement of Pillar 3 reporting has no impact on shareholder rights and the number of covenants on Yankee bonds.*

We summarise our results of the effects of Pillar 3 reporting on issuers of Yankee bonds as follows. First we show that the commencement of Pillar 3 reporting in a country reduces the propensity of banks located in that jurisdiction to raise debt capital abroad. This is in contrast to the prediction of our first main hypothesis. However, this finding is

attenuated when the banks are domiciled in countries with superior creditor rights protections. Second, the change in market discipline represented by Pillar 3 reporting increases the use of covenants in Yankee bonds. This is inconsistent with our second major hypothesis. Alternative measures of creditor rights protections yield broadly similar findings. We show that this result is more salient for banks domiciled in countries with weak debt law enforcement standards. Third, the interaction of improved risk disclosure post Pillar 3 reporting with shareholder rights has the effect of increasing the usage of covenants. This finding is in line with the prediction of our third main hypothesis.

Our main contribution to the information disclosure and banking literatures is in the form of providing direct, quasi-experimental empirical evidence on effects of market discipline on the behavior of debt issuers.¹ This is the first study to investigate whether market discipline “crosses borders” in the sense that we attempt to find evidence of U.S. debt investors influencing the behaviour of overseas issuers.

From the perspective of practitioners and regulators, this paper helps shed light onto the dynamics of off-shore borrowing. The U.S. Yankee bond market is one of the most important sources of debt capital in the world, second only to the Eurobond market (Miller and Reisel, 2011). Our study is timely in that internationally, banks are increasing their use of offshore wholesale financing as favourable global credit conditions lure them into overseas capital markets.² The increasing levels of exposure to overseas debt market calls for an in-depth understanding of the implications of recent regulatory changes to the information environment banks operate in. The commencement of Pillar 3 reporting that we target in this

¹ We acknowledge that the timing of Pillar 3 reporting commencement is known to banks well in advance and this may already start shaping their security design strategies. However, in our context this possibility has the effect of reducing the significance of our regression results.

² For example, according to press reports (see “Banks ramp up reliance on offshore capital markets”, *Australian Financial Review*, 16 June 2014), by the middle of the year in 2014, Australian banks had raised \$51 billion of funding in the offshore markets, more than the combined total capital raising for a similar period in 2013. Australia’s banks borrow money from the wholesale capital markets to fill a “funding gap”, the difference between the new loans and deposits that finance the loans. The funding gap was estimated to be \$600 billion in 2014, while some market analysts expected the gap to grow beyond \$1 trillion.

paper represents an apt exogenous change in information disclosure regimes around the world, while we hold constant an investor set that is subject to uniform securities laws.

The rest of the paper is organized as follows. Section 2 outlines our sampling strategy and provides descriptive statistics on bank bond issuers and our main variables of interest. Section 3 details the econometric approaches we take to test our hypotheses and presents our findings. Section 4 concludes and offers directions for future research.

2. Data

We start by identifying institutions from around the world that raise debt in the U.S. by issuing Yankee bonds. We collect this information from the 2014 version of the Mergent Corporate Bond Securities Database (MCBSD). This database has been widely used in academic research for its coverage of covenants attached to bonds issued by U.S. firms (e.g., Reisel 2010; Chava, Livdan, and Purnanandam 2009) and bonds issued by non-U.S. firms (e.g., Miller and Reisel 2011). To facilitate the examination of security-level contract design by our sample financial institutions, we collect data from the MCBSD on restrictive covenants attached to bonds.

We also collect the release dates of Pillar 3 reports of all financial institutions across the world from the SNL database. In this way, we identify the dates on which Pillar 3 reporting commenced in each country.

Given that our focus is on foreign firms raising debt capital in the U.S., we exclude banks located in the U.S. from our analysis. We also follow the previous literature by excluding (1) bonds that are issued by foreign governments or divisions of U.S. banks; (2) medium-term notes, and issues for which subsequent data from prospectuses are not available; (3) bonds issued before 1989 due to poor quality of covenant data; (4) bonds with special convertible, pass-through, and payment-in-kind (PIK) features.

Out of an initial set of more than 1,800 financial institutions (and their subsidiaries) with information on Pillar 3 reporting dates from 74 different countries we manually match 97 financial institutions that issue Yankee bonds at least once throughout our sample period from 1989 to 2014. Next, we restrict our sample to only financial institutions with firm financial data from the year prior to a bond issuance from the Worldscope database. We then convert all firm financial data across different countries to U.S. dollar equivalents.³ Our final sample consists of 540 bond issues with complete covenant and financial data issued by 60 financial institutions from 25 countries, covering the period 1989 through to the third quarter of 2014. We create a *Covenant* variable that is a binary indicator equals to one if one or more covenants are present in a bond's terms, and zero otherwise.⁴

2.1. Descriptive Statistics

In Table 1, we present descriptive statistics for financial institutions issuing Yankee bonds in the United States and the bond characteristics. The average size of the banks in our sample is around \$690 billion of total assets with leverage ratio and interest coverage ratio of about 19% and 77% respectively. The banks in our sample are highly profitable with a profitability ratio of 1.50%.

In terms of bond characteristics, the average offering amount (i.e. par value) of bond issues is around \$637 million with average yield of 5.15%. Restrictive covenants are less prevalent in our sample with on average of 0.40 restrictive covenants attached to bond issues. Most of the bond issues in our sample comprise 69% senior bonds, and 6.48% is senior

³ The exchange rate data are obtained from Pacific Exchange Rate Service (<http://fx.sauder.ubc.ca/data.html>) which is provided by Professor Antweiler of the University of British Columbia's Sauder School of Business.

⁴ There is a maximum of 7 possible restrictions on financing activities; a maximum of 4 possible restrictions on investment activities; and a maximum of 2 possible restrictions on payouts. Given our relatively small sample, we are unable to categorize covenants into different groups such as restrictions on investment activities, restrictions on payouts, and restrictions on financing activities as commonly found in the literature (e.g. Smith and Warner (1979) and Nash, Netter, and Poulsen (2003)).

subordinated debt. Approximately 46% of the bonds issues are callable with 40% (10%) of bond issues having maturities of less than 5 years (more than 15 years) respectively.

We provide a sense of the representativeness of our sample of Yankee Bond issuers, in Panel B of Table 1. We show that our sample of banks contains holding companies or subsidiaries of 14 out of 30 (or 47%) global systemically important banks (G-SIBS) published in 2013 jointly by the Financial Stability Board of the United Kingdom and the Basel Committee on Banking Supervision (BCBS). There are 49 holding companies or subsidiaries of institutions represented in the World 100 largest financial institutions by assets published by SNL Financial in 2014. On the basis of these statistics, our sample of banks is representative of the largest financial institutions that raise capital in the U.S. (notably, not counting U.S. domiciled banks).

< Insert Table 1 here >

In Table 2 (Panel A), we present the frequencies of bond issues across 24 countries in our sample sorted based on the creditor rights index. Consistent with Miller and Reisel (2011), the highest frequencies of the bond issues are from Canada (37.22%), and the United Kingdom (24.07%). We also show in the rightmost column that there is a wide representation of countries with varying levels of creditor rights protection standards based on the creditor rights index obtained from Djankov, McLiesh, and Shleifer (2007). The index is a proxy for country-level bondholder protection. This attribute of our sample ameliorates the potential concern that the issuers of Yankee bonds in our sample are from a homogenous set of countries.

In Panel B of Table 2, we tabulate the frequencies of bond issues with and without covenants over our 1989 to 2014 sample period. The total number of bond issues is relatively low in the early years and has since increase dramatically from year 2010 onwards. In Panel C of Table 2, we present the number of bonds issued by financial institutions in our sample

during the pre- and post-Pillar 3 periods. We define the post-Pillar 3 period as a binary indicator equals to one if the offering date of the bond issue post-dates the first Pillar 3 report released by the relevant financial institution. The data show that 355 bonds are issued during the pre-Pillar 3 period, with 16.62% of the securities having at least one covenant. There are 185 bonds issued in the post-Pillar 3 period and 25.95% of these have at least one covenant. Tests of differences in means show that the increase in the number of covenants on bonds issued after Pillar 3 reporting commences is statistically significant at the 1% level.

< Insert Table 2 here >

2.2. Country-level Creditor Protections and Covenants

In Table 3, we provide evidence based on difference in means tests showing that covenants are less prevalent in bonds issued by financial institutions located in countries with weak creditors' rights and poor disclosure. This trend is consistent between the pre- and post-Pillar 3 periods. These findings are in contrast to Miller and Reisel (2011) who argue in the contest of their non-bank corporate issuer sample that when country-level protections are weak, security-level contracts will include more investor protections. We, however, find evidence that the enforcement of laws specifying fines and prison terms seems to affect the mean number of covenants. Our findings suggest that financial institutions in our sample do not substitute weak country-level protections with more covenants possibly due to cross-border information transfers. Banking debt markets seem to regard covenants differently than creditors do for non-bank firms. Later on, we subject these preliminary findings to multivariate analyses in which we control for firm and time characteristics.

< Insert Table 3 here >

3. Methods and Results

3.1. Determinants of Raising Capital in the United States

We start our multivariate analysis by investigating foreign financial institutions that issue Yankee bonds in the United States during our sample period in pursuit of hypotheses 1 and 1A about the incidence of capital raising in response to Pillar 3 reporting. We utilise both probit and Poisson regression models. For the probit model, *Raising Capital* is our dependent variable in the form of a binary indicator equals to one if foreign banks issue Yankee bonds in year t and zero otherwise. For the Poisson model, *Yankee Bond* is our dependent variable, given by the number in year t of Yankee bonds issued by each institution. The regression models are specified in equation (1) below.

$$\begin{aligned} \text{Raising Capital/Yankee Bond}_{i,t} &= \alpha_{i,t} + \beta_1 \text{Log}(\text{Total Assets})_{i,t-1} + \beta_2 \text{Leverage}_{i,t-1} \\ &+ \beta_3 \text{Interest Coverage}_{i,t-1} + \beta_4 \text{Profitability}_{i,t-1} + \beta_5 \text{Capex}_{i,t-1} \\ &+ \beta_6 \text{GDP Growth}_{i,t} + \beta_7 \text{Efficiency of Judiciary}_{i,t} + \beta_8 \text{Post Pillar 3}_{i,t} \\ &+ \beta_9 \text{Creditor Protection Proxies}_{i,t} + \beta_{10} \text{Industry Dummies}_{i,t} \\ &+ \beta_{11} \text{Year Dummies}_{i,t} + \varepsilon_{i,t}, \end{aligned} \quad (1)$$

Following the previous literature, we control for firm characteristics such as total assets, leverage, interest coverage, profitability, and capital expenditures to account for the financial distress and structure of investment opportunities of the foreign banks that may influence their decisions to raise capital in U.S. debt markets. We also control for industry and year fixed effects and cluster standard errors at the firm level to correct for possible serial correlation and heteroscedasticity (Petersen, 2009).

In the column labeled “Model (1)” in Table 4, we present our base regression results. Larger banks with low interest coverage ratios are more likely to raise capital through the issuance of Yankee bonds. Next, we introduce our variable of interest, *Post Pillar 3*, to

examine whether mandatory risk disclosure had any influence on foreign banks' decision to raise capital in the U.S. debt markets. In the “Model (2)” column we show that foreign banks are less likely to raise capital in the U.S. following the adoption of Pillar 3 reporting. The result is statistically significant at the 1% level.

In Models (3) to (5) of Table 4, we interact country-level investor protection variables, namely *Creditor Rights*, *Disclosure*, and *Public Enforcement*, with the *Post Pillar 3* dummy variable to examine whether the country-level investor protection and the adoption of Pillar 3 regimes had any influence in foreign banks' decision to borrow in U.S. debt markets. In Model (3), focusing on the interaction variable, we find banks from countries with strong creditor rights protections are more likely to raise capital using Yankee bonds. We do not, however, find strong evidence on the effect of disclosure and debt enforcement laws on foreign banks' decision to raise capital abroad. Our results are qualitatively similar using *Yankee Bond* as a dependent variable in the Poisson regression model and the results are presented in Table 5.

< *Insert Table 4 here* >

< *Insert Table 5 here* >

To sum up our findings so far, the evidence is consistent with hypothesis 1A – the commencement of Pillar 3 reporting seems to slow down banks' propensity to raise debt capital abroad. However, this finding is attenuated when the banks are domiciled in countries with superior creditor rights protections.

3.2. Determinants of Covenants

Next, we examine the determinants of covenants attached to Yankee bonds issued by foreign financial institutions involved in U.S. debt capital raising. To examine this research question, we utilise a probit regression model in which *Covenant* is our dependent variable.

To restate, *Covenant* is a binary indicator equals to one if at least one of the restrictions (i.e. restrictions on financing, investment, and payout activities) is present and zero otherwise.

The regression model is as follows:

$$\begin{aligned}
Covenant_{i,t} = & \alpha_{i,t} + \beta_1 \text{Log}(\text{Total Assets})_{i,t-1} + \beta_2 \text{Leverage}_{i,t-1} \\
& + \beta_3 \text{Interest Coverage}_{i,t-1} + \beta_4 \text{Profitability}_{i,t-1} + \beta_5 \text{Capex}_{i,t-1} \\
& + \beta_6 \text{GDP Growth}_{i,t} + \beta_7 \text{Efficiency of Judiciary}_{i,t} + \beta_8 \text{Post Pillar 3}_{i,t} \\
& + \beta_9 \text{Creditor Protection Proxies}_{i,t} + \beta_{10} \text{Industry Dummies}_{i,t} \\
& + \beta_{11} \text{Year Dummies}_{i,t} + \varepsilon_{i,t}, \tag{2}
\end{aligned}$$

We control for firm-level characteristics as well as GDP growth (to capture natural expansion in demand for capital), efficiency of judiciary (to incorporate the legal environment in each country), and include industry and year fixed effects.

In the column labeled “Model (2)” in Table 6, we find our variable of interest (i.e. *Post Pillar 3*) to be positive. This finding is contrary to our expectation in Hypothesis 2 that U.S. investors in bonds issued by banks in Pillar 3 regimes face reduced need to resort to covenants for protection. To explore this result further, in Model (3) and (4) we show that the regression coefficients on interaction variables between our country-level investor protection variables (i.e. *Creditor Rights*, and *Disclosure*) with *Post Pillar 3* are all positive and statistically significant at the 1% level. This finding is in contrast to the findings of Miller and Reisel (2011) and Qi, Roth, and Wald (2011) who document that when country-level protections for creditors are weak, there are more restrictive covenants attached to bonds issued overseas by non-bank firms domiciled in such countries.

In model (5) of Table 6, when we focus on the interaction variable between *Public Enforcement* and *Post Pillar 3*, we find that when country’s debt enforcement law is weaker, there are more restrictive covenants attached to foreign banks’ bonds. Our overall results suggest that the increased use of restrictive covenants in Yankee bonds only acts as

substitutes for creditor protections when issuers are located in countries with weak debt enforcement law following the adoption of Pillar 3 reporting.

< *Insert Table 6 here* >

3.3. Alternative Proxies for Creditor Protection

In addition to laws "on-the-books", recent research argues that other country-level governance mechanisms such as institutions that enforce the laws also contribute to the country-level investor protection environment. As further tests, we use five additional creditor protection indexes from Djankov, McLiesh and Shleifer (2008), namely Time-to-Pay, Time-to-Sale, Cost, Going Concern, and Deviation from Absolute Priority Rule (APR). These indexes assess creditor protection by measuring how efficiently each country's institution process the same type of corporate insolvency Djankov et al. (2008a) argue that these variables capture both laws on-the-books and the efficiency of debt contracts enforcements. In Table 7, we show statistically insignificant results on four out of the five alternative indexes and their interaction with our variable of interest (*Post Pillar 3*). This finding confirms our earlier findings that restrictive covenants in Yankee bonds do not act as substitute for countries with weaker legal protection for creditors during post-Pillar 3 period.

< *Insert Table 7 here* >

3.4. Impact of Shareholder Rights

Finally, we examine whether country-level shareholder rights have any influence on the likelihood of incorporating covenants into debt contracts. Following Miller and Reisel (2011), we use three proxies for shareholder rights protections. First, the anti-self-dealing index adopted from Djankov et al. (2008a) measures the strength of minority shareholders in limiting the transfer of corporate assets to managers. Second, a revised anti-director rights

index from Djankov et al. (2008a) captures the strength of minority shareholders in the corporate decision-making process, including the right to vote. Third, the anti-takeover provisions measure from Nenova (2006) represents the extent of anti-takeover regulations across countries.

In Table 8, controlling for the effects of creditor protection (i.e. *Creditor Rights*, *Disclosure*, and *Public Enforcement*), we find stronger country-level shareholder rights to be associated with higher likelihood of restrictive covenants being attached to bonds during the post-Pillar 3 period. These findings are consistent with our Hypothesis 3 that debt investors resort to covenants for protection when improved risk reporting interacts with shareholder rights.

< *Insert Table 8 here* >

5. Conclusion

This paper examines the impact of mandatory risk disclosure following the introduction of Pillar 3 or market discipline framework on the design of bank debt. Using a sample of 97 large foreign financial institutions issuing 540 Yankee bonds from 1989 to 2014, we investigate two central research questions. First, what are the determinants of foreign banks raising debt capital in the United States following the introduction of the Pillar 3 risk reporting framework? Second, what are the effects of creditor protection and shareholder rights on the likelihood of having covenants in a bond following the introduction of Pillar 3 reporting? Answers to these questions provide direct empirical evidence on the efficacy of market discipline.

We summarise our results of the effects of Pillar 3 reporting on issuers of Yankee bonds as follows. First we show that the commencement of Pillar 3 reporting in a country reduces the propensity of banks located in that jurisdiction to raise debt capital abroad. However, this finding is attenuated when the banks are domiciled in countries with superior

creditor rights protections. Second, the change in market discipline represented by Pillar 3 reporting increases the use of covenants in Yankee bonds, and this result seems to be driven by banks domiciled in countries with weak debt law enforcement standards. Third, the improved risk disclosure post Pillar 3 reporting increases the usage of covenants particularly in countries with greater safeguards of shareholder rights.

To the best of our knowledge, this is the first study to investigate whether market discipline “crosses borders” in the sense that provide quasi-experimental evidence of U.S. debt investors influencing the behaviour of overseas issuers. However, we acknowledge that there are important themes in the interaction of information disclosure environments with debt security design that remain to be explored that we offer as avenues for potential future research.

First, while we have controlled for creditor rights protections, an open empirical question remains about the role of government interventions in this regard such as the introduction of bank depositor guarantee schemes. Such mechanisms are a relatively recent phenomenon around the world, particularly relative to Pillar 3 reporting, that could be the focus of additional research with the passage of time.

Second, the cross-border setting of our study offers an opportunity to explore the roles of different bank ownership structures. For example, while Bushman (2014) conjectures that the diversity of ownership structures affects bank risk taking decisions, our study stops short of exploring relationship between bank ownership, including by foreign investors, and Yankee bond investors’ demands on security design.

Finally, our unique setting presents further opportunities for contributions to the nascent literature on the effects of financial accounting practices such as accounting discretion (Bushman and Landsman, 2010) and forward looking provisions for bad debt (Bushman and Williams, 2012) on market discipline.

Appendix 1

Variables	Descriptions
Offering Amount (\$mil)	The par value of debt initially issued
Offering Yield (%)	Yield to maturity at the time of issuance, based on coupon and any discount or premium to par value at the time of sale.
No of Covenants	Total number of covenants in a bond
Senior	A binary indicator equals to one if the issuance is a senior bond and zero otherwise
Subordinated	A binary indicator equals to one if the issuance is a senior subordinated bond and zero otherwise
Callable	A binary indicator equals to one if the bond issue is callable and zero otherwise
Low Maturity	A binary indicator equals to one if the bond issue has a maturity of less than 5 years and zero otherwise
High Maturity	A binary indicator equals to one if the bond issue has a maturity of more than 15 years and zero otherwise
<i>Covenant Dummy</i>	A binary indicator equals to one if at least one of the restrictions (i.e. restrictions on financing, investment, and payout activities) is present and zero otherwise
Creditor Rights	Creditor rights index is obtained from Djankov, McLiesh, and Shleifer (2007) as proxy for country-level bondholder protection
Disclosure	Financial disclosure index is obtained from Bushman, Piotroski, and Smith (2004) as proxy for investor protection in the form of the availability of financial information
Public Enforcement	Public enforcement index is obtained from Djankov et al. (2008a) as proxy for the strength of laws that deal with investor expropriation
<u>Other Proxies for Creditor Rights</u>	
Time to Pay	Estimated duration, in years, of the time from the default stage to the point at which the secured creditor receives payment. Source: Djankov et al. (2008a).
Time to Sale	Estimated duration, in years, of the time to resolve the insolvency case. Source: Djankov et al. (2008a).
Cost	Estimated cost of the debt enforcement proceeding. Source: Djankov et al. (2008a).
Going Concern	A binary indicator equals to one if firm continues operating as a going concern both throughout and upon completion of the insolvency process. Source: Djankov et al. (2008a).
Deviation from APR	Violation of absolute priority which results from bankruptcy judges disregarding debt contracts. Source: Djankov et al. (2008a).
<u>Proxies for Shareholder Protection</u>	
Anti-self-dealing index	An index of anti-self-dealing is formed by taking the average of ex ante and ex post private control of self-dealing indices. The index of ex ante control of self-dealing transactions is an average of approval by disinterested shareholders and ex ante disclosure. The index of ex post control of self-dealing transactions is an average of disclosures in periodic filings and ease of proving wrongdoing. Source: Djankov et al. (2008b).

Shareholder rights index

Revised anti-director rights index. This index of anti-director rights is formed by adding 1 when: (1) the country allows shareholders to mail their proxy vote; (2) shareholders are not required to deposit their shares prior to the general shareholders' meeting; (3) cumulative voting or proportional representation of minorities on the board of directors is allowed; (4) an oppressed minorities mechanism is in place; (5) shareholders have preemptive rights that can only be waived by a shareholders meeting; and (6) the minimum percentage of share capital that entitles a shareholder to call for an extraordinary shareholders' meeting is less than or equal to 10% (the sample median); This index ranges from 0 to 6. Source: Djankov et al. (2008b).

Anti-takeover tactics

The average of: (1) 1 if it is forbidden by law to issue shares during a tender offer or if shareholder approval is needed, 0 otherwise; (2) 1 if it is forbidden by law to sell major assets during a tender offer or if shareholder approval is needed, 0 otherwise; (3) 1 if it is forbidden by law to use voting caps, 0 otherwise; (4) 1 if it is forbidden by law to restrict share transferability, 0 otherwise; (5) 1 if it is forbidden by law to use golden shares, 0 otherwise; (6) 1 if shareholder agreements are not frequently used, 0 otherwise; (7) 1 if at least two of the following three mechanisms are not frequently used among listed companies: multiple classes of shares, pyramid ownership structures, cross-shareholding ownership structures, 0 otherwise. Source: Nenova (2006)

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Table 1: Descriptive Statistics – Sample Bank and Bond Characteristics

Panel A of this table provides descriptive statistics for our sample of 97 bank issuers of Yankee bonds and their issuances in the period 1989 to 2014. Financial data on banks come from Worldscope and the bond data are obtained from the 2014 version of MCBSD. All the variables are as described in the Appendix. In Panel B, the G-SIB is the 2013 list of 30 Global Systemically Important Banks published by the Financial Stability Board of the United Kingdom and the Basel Committee on Banking Supervision (BCBS). The SNL World 100 is the list of the largest financial institutions by assets from around the world.

Panel A: Issuer and bond characteristics					
Variable	Mean	Median	Std. Dev	Min	Max
<u>Issuer Characteristics</u>					
Total Assets (\$million)	690,739	574,227	709,966	389	3,746,724
Leverage (%)	19.52	14.88	11.94	0.78	61.75
Interest Coverage (%)	76.84	88.09	124.85	-1,786.71	215.74
Profitability (%)	1.50	1.32	1.14	-5.58	9.20
Capital Expenditures (%)	0.19	0.09	0.36	0.00	6.88
<u>Bond Characteristics</u>					
Offering Amount (\$million)	636.71	500.00	680.89	0.10	4,500.00
Offering Yield (%)	5.15	5.05	2.52	0.75	16.00
No of Covenants	0.40	0.00	0.81	0.00	3.00
Senior (%)	68.70	100.00	46.41	0.00	100.00
Subordinated (%)	6.48	0.00	24.64	0.00	100.00
Callable (%)	45.91	0.00	49.91	0.00	100.00
Low Maturity (< 5 years) (%)	39.50	0.00	48.94	0.00	100.00
High Maturity (> 15 years) (%)	10.40	0.00	30.55	0.00	100.00
Panel B: Sample representativeness					
	Number		Percent		
Sample issuers in 30 G-SIB	14		47%		
Sample issuers in SNL World 100	49		49%		

Table 2: Descriptive Statistics for Bond Covenants

This table provides summary statistics of Yankee bonds issued from 1989 through 2014 by country. The bond data comes from the 2014 version of MCBSD. Covenant dummy is a binary indicator equals to one if at least one of the restrictions is present and zero otherwise. *Post Pillar 3* is a binary indicator equals to one if the offering date of bond issues post-date the first Pillar 3 reports that are being released by the financial institutions and zero otherwise. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Frequencies of bond issues by country							
Country	No	Percentage	Total Number of Covenants				Creditor Rights
			Mean	Median	Min	Max	
Hong Kong	2	0.37%	0.00	0.00	0.00	0.00	4
United Kingdom	130	24.07%	0.65	0.00	0.00	2.00	4
Australia	44	8.15%	1.27	2.00	0.00	2.00	3
Denmark	3	0.56%	0.00	0.00	0.00	0.00	3
Germany	6	1.11%	0.00	0.00	0.00	0.00	3
Malaysia	3	0.56%	0.00	0.00	0.00	0.00	3
Netherlands	20	3.70%	0.30	0.00	0.00	2.00	3
Singapore	13	2.41%	0.46	0.00	0.00	2.00	3
South Korea	7	1.30%	0.00	0.00	0.00	0.00	3
Chile	2	0.37%	1.00	1.00	0.00	2.00	2
China	3	0.56%	0.33	0.00	0.00	1.00	2
India	8	1.48%	0.00	0.00	0.00	0.00	2
Japan	10	1.85%	0.20	0.00	0.00	2.00	2
Norway	1	0.19%	0.00	0.00	0.00	0.00	2
Spain	22	4.07%	0.27	0.00	0.00	3.00	2
Thailand	5	0.93%	0.40	0.00	0.00	2.00	2
Argentina	2	0.37%	0.00	0.00	0.00	0.00	1
Brazil	21	3.89%	0.29	0.00	0.00	3.00	1
Canada	201	37.22%	0.17	0.00	0.00	2.00	1
Greece	1	0.19%	0.00	0.00	0.00	0.00	1
Ireland	2	0.37%	0.00	0.00	0.00	0.00	1
Sweden	8	1.48%	0.00	0.00	0.00	0.00	1
Switzerland	16	2.96%	0.44	0.00	0.00	2.00	1
France	10	1.85%	0.10	0.00	0.00	1.00	0

Panel B: Frequencies of bond issues with and without covenant by year				
Year	Covenant = 1	Covenant = 0	Total	Percentage
1989	3	0	3	0.56%
1990	0	0	0	0.00%
1991	0	0	0	0.00%
1992	3	0	3	0.56%
1993	6	0	6	1.11%
1994	3	3	6	1.11%
1995	10	1	11	2.04%
1996	5	5	10	1.85%
1997	5	2	7	1.30%
1998	4	2	6	1.11%
1999	9	6	15	2.78%
2000	8	7	15	2.78%
2001	16	1	17	3.15%
2002	16	3	19	3.52%
2003	10	3	13	2.41%
2004	12	3	15	2.78%
2005	18	6	24	4.44%
2006	23	1	24	4.44%
2007	20	3	23	4.26%
2008	6	1	7	1.30%
2009	15	3	18	3.33%
2010	53	5	58	10.74%
2011	25	7	32	5.93%
2012	40	9	49	9.07%
2013	62	20	82	15.19%
2014	61	16	77	14.26%
Total	433	107	540	100.00%

Panel C: Differences in Mean Test (Pre- and Post-Pillar 3 Period)					
	(1)	(2)	(3)		
	Pre-Pillar 3	Post-Pillar 3	Difference [(1)-(2)]	T-Stat	P-value
Number of Bonds	355	185			
Bonds with Covenant (%)	16.62%	25.95%	-9.33%	-2.592	0.010

Table 3: Covenants across proxies for country-level creditor protection

This table provides summary statistics of restrictive covenants across proxies of country-level creditor protection. The bond data comes from the 2014 version of MCBSD. Creditor rights index is from Djankov, McLiesh, and Shleifer (2007); disclosure index is from Bushman, Piotroski, and Smith (2003); public enforcement index is from Djankov et al. (2008a). *Post Pillar 3* is a binary indicator equals to one if the offering date of bond issues post-date the first Pillar 3 reports that are being released by the financial institutions and zero otherwise ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

	Total number of covenants: Mean Comparison						
	All Years		Pre-Pillar 3		Post-Pillar 3		
	N	Mean	N	Mean	N	Mean	
<u>Creditor Rights</u>							
Above/equal median	228	0.67	148	0.51	80	0.95	
Below median	312	0.20	207	0.20	105	0.19	
Difference		0.47	***	0.31	***	0.76	***
<u>Disclosure</u>							
Above/equal median	228	0.68	145	0.50	83	1.01	
Below median	309	0.18	207	0.22	102	0.12	
Difference		0.50	***	0.28	***	0.89	***
<u>Fines and prison terms</u>							
Above/equal median	275	0.20	177	0.20	98	0.20	
Below median	265	0.60	178	0.46	87	0.87	
Difference		-0.39	***	-0.26	***	-0.67	***

Table 4: Determinants of Issuing Yankee Bonds

This table provides probit regression estimates on the determinants of foreign financial institutions raising capital via Yankee bonds in the United States from 1989 to 2014. The bond data comes from the 2014 version of MCBSD and the financial data is from Worldscope. The dependent variable is *Raising Capital* which is a binary indicator equals to one if foreign banks issue Yankee bonds in year t and zero otherwise. The independent variables include the following: Log(Total assets) is the natural logarithm of total assets in millions of U.S. dollars; Leverage is total debt to total assets (%); Interest Coverage is EBIT to interest expenses; Profitability is EBITDA to total assets (%); Capex is capital expenditures to total assets (%); Efficiency of Judiciary is measured as log(Time to collect on a bounced check); Creditor Rights index is from Djankov, McLiesh, and Shleifer (2007); Disclosure index is from Bushman, Piotroski, and Smith (2003); Public Enforcement index is from Djankov et al. (2008a). Industry and year fixed effects are included in each regression and standard errors are clustered at the firm level and reported in parentheses. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)
Log(Total Assets)	0.104*** (0.038)	0.035 (0.099)	0.176* (0.105)	0.036 (0.100)	0.102 (0.090)
Leverage	-0.003 (0.006)	-0.001 (0.008)	-0.007 (0.009)	0.001 (0.008)	-0.002 (0.008)
Interest Coverage	-0.001*** (0.000)	-0.002* (0.001)	-0.002** (0.001)	-0.002 (0.001)	-0.003* (0.001)
Profitability	0.088* (0.046)	0.088 (0.075)	0.187** (0.076)	0.037 (0.080)	0.132* (0.070)
Capex	0.078 (0.054)	0.028 (0.087)	-0.212 (0.152)	-0.264* (0.156)	0.087 (0.074)
GDP Growth	0.030 (0.020)	-0.009 (0.041)	-0.010 (0.035)	0.001 (0.043)	-0.027 (0.037)
Efficiency of Judiciary	1.829 (1.574)	4.239 (3.756)	-0.723 (3.311)	5.628* (3.394)	3.462 (3.581)
Post Pillar 3		-2.469*** (0.430)	-6.368*** (1.000)	-8.103** (3.522)	-1.858*** (0.694)
Creditor Rights			-1.395*** (0.348)		
Creditor Rights * Post Pillar 3			1.550*** (0.354)		
Disclosure				-0.092* (0.048)	
Disclosure * Post Pillar 3				0.074 (0.048)	
Public Enforcement					1.068 (0.724)
Public Enforcement * Post Pillar 3					-1.022 (0.816)
No of observations	875	875	875	864	875
Pseudo R ²	0.084	0.502	0.599	0.523	0.517
Log Pseudo Likelihood	-323.60	-175.90	-141.80	-165.90	-170.50

Table 5: Determinants of Number of Yankee Bonds Issued

This table provides Poisson regression estimates on the determinants of number of Yankee bonds issued by foreign financial institutions in the United States from 1989 to 2014. The bond data comes from the 2014 version of MCBS and the financial data is from Worldscope. The dependent variable is *Yankee Bond* which is the number of Yankee bonds issued by foreign banks in year *t*. The independent variables include the following: Log(Total assets) is the natural logarithm of total assets in millions of U.S. dollars; Leverage is total debt to total assets (%); Interest Coverage is EBIT to interest expenses; Profitability is EBITDA to total assets (%); Capex is capital expenditures to total assets (%); Efficiency of Judiciary is measured as log(Time to collect on a bounced check); Creditor Rights index is from Djankov, McLiesh, and Shleifer (2007); Disclosure index is from Bushman, Piotroski, and Smith (2003); Public Enforcement index is from Djankov et al. (2008a). Industry and year fixed effects are included in each regression and standard errors are clustered at the firm level and reported in parentheses. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)
Log(Total Assets)	0.132 (0.107)	0.037 (0.120)	0.057 (0.119)	0.037 (0.115)	0.096 (0.115)
Leverage	-0.003 (0.012)	0.001 (0.010)	0.002 (0.011)	0.001 (0.010)	0.003 (0.009)
Interest Coverage	-0.001*** (0.000)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001** (0.001)
Profitability	0.117 (0.086)	0.035 (0.105)	0.036 (0.101)	0.016 (0.120)	0.081 (0.093)
Capex	0.063 (0.071)	-0.012 (0.059)	-0.010 (0.064)	-0.033 (0.065)	0.045 (0.063)
GDP Growth	0.023 (0.034)	-0.047 (0.059)	-0.040 (0.063)	-0.043 (0.071)	-0.050 (0.061)
Efficiency of Judiciary	5.180 (3.266)	4.741 (3.649)	4.276 (4.771)	4.965 (3.392)	3.475 (3.560)
Post Pillar 3		-2.634*** (0.529)	-4.523*** (0.741)	-5.618 (3.511)	-1.646* (0.889)
Creditor Rights			-0.255 (0.243)		
Creditor Rights * Post Pillar 3			0.932** (0.435)		
Disclosure				-0.014 (0.025)	
Disclosure * Post Pillar 3				0.041 (0.052)	
Public Enforcement					0.939 (0.598)
Public Enforcement * Post Pillar 3					-1.492* (0.839)
No of observations	891	891	891	880	891
Pseudo R ²	0.108	0.348	0.373	0.349	0.358
Log Pseudo Likelihood	-505.40	-369.60	-355.10	-365.20	-363.40

Table 6: Determinants of Covenants

This table provides probit regression estimates on the determinants of covenants attached to Yankee bonds issued by foreign financial institutions raising in the United States from 1989 to 2014. The bond data comes from the 2014 version of MCBSD and the financial data is from Worldscope. The dependent variable is *Covenant* which is a binary indicator equals to one if there is at least one covenant attached to Yankee bonds and zero otherwise. The independent variables include the following: Log(Total assets) is the natural logarithm of total assets in millions of U.S. dollars; Leverage is total debt to total assets (%); Interest Coverage is EBIT to interest expenses; Profitability is EBITDA to total assets (%); Capex is capital expenditures to total assets (%); Efficiency of Judiciary is measured as log(Time to collect on a bounced check); Creditor Rights index is from Djankov, McLiesh, and Shleifer (2007); Disclosure index is from Bushman, Piotroski, and Smith (2003); Public Enforcement index is from Djankov et al. (2008a). Industry and year fixed effects are included in each regression and standard errors are clustered at the firm level and reported in parentheses. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)
Log(Total Assets)	0.132 (0.193)	0.122 (0.183)	0.054 (0.198)	-0.183 (0.231)	-0.071 (0.164)
Leverage	0.015 (0.024)	0.006 (0.021)	-0.028 (0.026)	-0.045 (0.035)	-0.002 (0.018)
Interest Coverage	-0.001 (0.001)	-0.000 (0.001)	0.001 (0.001)	0.001 (0.001)	-0.000 (0.001)
Profitability	0.423** (0.196)	0.403** (0.173)	0.184 (0.142)	0.107 (0.082)	0.327** (0.157)
Capex	-1.279 (1.431)	-1.078 (1.375)	0.542 (1.284)	1.307 (2.130)	-1.594 (1.262)
GDP Growth	-0.125 (0.086)	-0.107 (0.086)	-0.119 (0.096)	-0.215 (0.156)	-0.250** (0.102)
Efficiency of Judiciary	-1.287 (3.079)	-1.121 (2.893)	3.072 (2.836)	-4.369* (2.453)	-1.194 (3.408)
Post Pillar 3		0.781* (0.451)	-1.473** (0.597)	-395.932 (0.000)	5.181*** (1.305)
Creditor Rights			0.517** (0.243)		
Creditor Rights * Post Pillar 3			1.246*** (0.408)		
Disclosure				0.098 (0.060)	
Disclosure * Post Pillar 3				5.278*** (0.003)	
Public Enforcement					0.846 (0.812)
Public Enforcement * Post Pillar 3					-5.276*** (1.315)
No of observations	303	303	303	302	303
Pseudo R ²	0.146	0.176	0.359	0.444	0.297
Log Pseudo Likelihood	-122.6	-118.3	-91.98	-79.71	-100.9

Table 7: Alternative Proxies for Creditor Protection

This table provides probit regression estimates on the determinants of covenants attached to Yankee bonds issued by foreign financial institutions raising in the United States from 1989 to 2014. The bond data comes from the 2014 version of MCBSD and the financial data is from Worldscope. The dependent variable is *Covenant* which is a binary indicator equals to one if there is at least one covenant attached to Yankee bonds and zero otherwise. The independent variables include the following: Log(Total assets) is the natural logarithm of total assets in millions of U.S. dollars; Leverage is total debt to total assets (%); Interest Coverage is EBIT to interest expenses; Profitability is EBITDA to total assets (%); Capex is capital expenditures to total assets (%); Efficiency of Judiciary is measured as log(Time to collect on a bounced check); Alternative proxies for creditor protection are from Djankov et al. (2008a). Industry and year fixed effects are included in each regression and standard errors are clustered at the firm level and reported in parentheses. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)
Log(Total Assets)	0.280 (0.234)	0.226 (0.222)	0.192 (0.195)	0.189 (0.209)	-0.041 (0.166)
Leverage	0.008 (0.024)	0.008 (0.024)	0.004 (0.019)	0.013 (0.025)	0.005 (0.020)
Interest Coverage	-0.001 (0.001)	-0.001 (0.001)	-0.000 (0.001)	-0.000 (0.001)	-0.001 (0.001)
Profitability	0.760** (0.351)	0.706** (0.315)	0.409** (0.168)	0.395** (0.155)	0.578** (0.249)
Capex	-0.028 (1.188)	0.171 (1.293)	-0.956 (1.288)	-0.860 (1.268)	0.440 (1.668)
GDP Growth	-0.101 (0.107)	-0.087 (0.108)	-0.060 (0.099)	-0.065 (0.094)	-0.064 (0.098)
Efficiency of Judiciary	-2.440 (2.290)	-2.780 (2.117)	-1.979 (2.918)	-1.304 (2.453)	-1.580 (2.281)
Post Pillar 3	-0.054 (0.528)	0.325 (0.550)	0.596 (0.574)	1.419 (1.125)	0.573 (0.806)
Time-to-Pay	-0.757 (0.546)				
Time-to-Pay * Post Pillar 3	0.767 (0.562)				
Time-to-Sale		-0.708 (0.507)			
Time-to-Sale * Post Pillar 3		0.404 (0.522)			
Cost			2.574 (2.825)		
Cost * Post Pillar 3			2.605 (6.300)		
Going Concern				0.771 (0.857)	
Going Concern * Post Pillar 3				-0.622 (1.061)	
Deviation from APR					-0.917

					(0.675)
Deviation from APR * Post Pillar 3					0.255
					(0.536)
No of observations	295	295	295	295	295
Pseudo R ²	0.219	0.220	0.187	0.186	0.200
Log Pseudo Likelihood	-110.80	-110.70	-115.30	-115.60	-113.50

Table 8: Impact of Shareholder Rights on Covenants

This table provides probit regression estimates on the determinants of covenants attached to Yankee bonds issued by foreign financial institutions raising in the United States from 1989 to 2014. The bond data comes from the 2014 version of MCBSD and the financial data is from Worldscope. The dependent variable is *Covenant* which is a binary indicator equals to one if there is at least one covenant attached to Yankee bonds and zero otherwise. The independent variables include the following: Log(Total assets) is the natural logarithm of total assets in millions of U.S. dollars; Leverage is total debt to total assets (%); Interest Coverage is EBIT to interest expenses; Profitability is EBITDA to total assets (%); Capex is capital expenditures to total assets (%); Efficiency of Judiciary is measured as log(Time to collect on a bounced check); Anti-Self-Dealing and Anti-Director (or Shareholder Rights) indexes are from Djankov et al. (2008b); the Anti-Takeover Provision index is from Nenova (2006). Industry and year fixed effects are included in each regression and standard errors are clustered at the firm level and reported in parentheses. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)
Log(Total Assets)	-0.456 (0.298)	0.175 (0.272)	-0.389 (0.261)
Leverage	-0.145 (0.094)	-0.028 (0.032)	-0.110** (0.054)
Interest Coverage	-0.000 (0.001)	-0.001 (0.001)	-0.000 (0.001)
Profitability	0.479*** (0.159)	0.766*** (0.159)	0.454** (0.184)
Capex	1.867 (1.998)	3.148* (1.790)	0.546 (1.682)
GDP Growth	-0.348*** (0.134)	-0.495*** (0.157)	-0.282** (0.129)
Efficiency of Judiciary	-11.053* (5.837)	1.496 (4.206)	21.272* (12.421)
Creditor Rights	0.930* (0.542)	0.288 (0.283)	1.402** (0.602)
Disclosure	0.302** (0.140)	0.306*** (0.082)	0.290*** (0.080)
Public Enforcement	0.653 (0.870)	-1.450 (0.923)	-0.070 (0.884)
Post Pillar 3	-21.293*** (6.601)	7.457* (4.078)	-5.923*** (2.026)
Anti-Self-Dealing	-7.668 (5.147)		
Anti-Self-Dealing * Post Pillar 3	33.240*** (10.233)		
Anti-Director-Index		1.760*** (0.670)	
Anti-Director-Index * Post Pillar 3		-1.850* (0.996)	
Anti-Takeover Provision			-7.477** (3.367)

Anti-Takeover Provision * Post Pillar 3

6.224***

(2.008)

No of observations	302	302	298
Pseudo R ²	0.445	0.411	0.420
Log Pseudo Likelihood	-79.60	-84.42	-82.62
