When Retirement Providers Engage in Corporate Loans

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Abstract

I test whether retirement plan providers extend preferential loan terms to firms where they have an existing retirement plan relationship. I find that loans from affiliated retirement plan providers (i.e., relationship loans) have lower spreads than non-relationship loans. Relationship loans are also larger, exhibit longer maturities, and when they involve multiple lending entities (i.e., syndicates), relationship lenders hold a larger fraction of the loan. The favorable terms within this banking relationship are most likely explained by the ability of retirement plan relationships to alleviate information asymmetries in the corporate loan market rather than a quid pro quo arrangement.

1. Introduction

Relationship banking relies on creating and maintaining relationships with clients through repeated lending, cross-selling, and advising. Prior work documents pros and cons associated with these arrangements. On the one hand, relationship banking can reduce information asymmetry between lenders and borrowers because the lending institution has better knowledge of the borrowing client from their auxiliary business dealings and repeated business. On the other hand, relationship banking can create conflicts of interest that lead to quid pro quo arrangements and favorable treatment. In this paper, I exploit one potential area of bank cross-selling – retirement plan provider services on employer-sponsored defined contribution and benefit plans. Although 56% of U.S. workers report having employer-sponsored retirement plans and these plans have approximately $8.5 trillion in total assets[1], there is surprisingly very little research on the interactions between financial institutions and firms within the retirement market. To fill this gap, I study whether firms that receive loans from lenders that also serve as their retirement plan providers receive preferential loan terms, with an emphasis on the cost of debt. I also examine whether reductions in information asymmetry or favorable treatment through a quid pro quo arrangement drive these preferential terms.

Prior research finds that risks associated with adverse selection decrease when a lending bank has a strong past relationship with a borrower because access to prior information about the borrower reduces information asymmetry (e.g., Boot, 2000). Furthermore, borrowers may be more apt to borrow from a lender with whom they had a past relationship with because they have already shared information with the lender (Sharpe, 1990; Rajan, 1992). Bharath et al. (2007) find that a relationship lender's informational advantage over non-relationship lenders generates a higher

[1] Retirement statistics are from the Investment Company Institute 2019 fact book.

probability of providing future loans and selling information-sensitive products to their borrowers. Additionally, these mitigated risks of adverse selection in the form of reduced information asymmetry have a tangible benefit in the form of reduced spreads to firms that borrow from a lender that they borrowed from in the past (Bharath et al., 2011).

Being a repeat borrower is not the only relationship that has effects on future lending. External non-banking relationships can also affect lending. Huang and Zhang (2018) find that a strong relationship between a lead syndicate bank and the borrowing firm's private equity firm enables the lead bank to form a larger, less concentrated syndicate because this relationship can facilitate information production. Also, banks that are on a firm's board of directors are more likely to act as lead arrangers in the future (Ferreira and Matos, 2012).

There is also evidence that relationship banking can lead to quid pro quo activities. Reuter (2006) finds that commissions paid by mutual funds to underwriters are correlated with a mutual fund's holdings of stocks that have recently conducted an IPO managed by that underwriter. Ferreira et al. (2018) find that bank-affiliated mutual funds overweight the stock of the bank's lending clients to the detriment of fund investors and that these banks are more likely to act as lead arrangers on future loans to these companies, suggesting a conflict of interest or quid pro quo arrangement. Prior work also shows questionable arrangements in retirement plan administration. Cohen and Schmidt (2009) find that mutual fund companies that act as plan providers for a firm's 401(k) plan often overweight the firm's stock inside their portfolios and that the overweighting reverses when the firm no longer has the mutual fund company as a plan provider. Furthermore, Cvijanovic et al. (2016) find that mutual fund 401(k) providers often engage in more pro-management voting to maintain their business relationship.

To test whether relationship banking through cross-selling retirement provider services

leads to preferential loan terms, I use retirement plan-level data from the Department of Labor (DOL) Form 5500, which is filed for any retirement plan with fiduciary obligations, and corporate loan data from DealScan. I find that firms that receive loans from lenders that simultaneously serve as their retirement providers (i.e., a lender-provider relationship) pay approximately 5.5% lower spreads than firms that receive loans from non-provider lenders. This result holds in regressions with firm fixed effects, suggesting that within the same borrowing firm, loans from a lender-provider relationship have lower spreads than loans from a non-lender-provider relationship. The results are also robust to controlling for prior lending relationships and lead arranger status.

A potential concern is that larger borrowers are more likely to have relationships with larger retirement providers that have more auxiliary business divisions such as lending. If these larger borrowers are more sophisticated and established, they may receive lower spreads irrespective of whether the loan is from a retirement provider. To help alleviate this concern, I match loans of firms with lender-provider relationships to loans of firms without lender-provider relationships using propensity score matching on loan and firm characteristics. I find that loans from lender-providers continue to have lower spreads, suggesting that differences in the observed characteristics between borrowers and loans are not driving my results.

Taken together, the results suggest that relationship banking through the cross-selling of retirement provider services influences loan spreads. These results could be driven by a reduction in information asymmetry, which would suggest that there is some information that is exchanged between the firm and lender through their retirement plan that would warrant lower spreads. This information could be in the form of deeper insights about firm fundamentals, such as employee turnover and plan liabilities, but it also could be through informal information sharing and familiarity between management and retirement providers. In contrast, if a quid pro quo

arrangement drives the lower spreads, it would suggest that the results are tied to the monetary value of the retirement plan relationship to the lender rather than information. Holding information constant, a quid pro quo arrangement would suggest that lower spreads are attributed only to the existence of a business relationship and that the more valuable the retirement plan is to the lender, the better the terms extended to the borrower.

To tease out which explanation drives my results, I first employ a pseudo difference-in-differences approach similar to the one used in Cohen and Schmidt (2009) that exploits the establishment and termination of a retirement provider relationship. Consistent with both information asymmetry and quid pro quo, loan spreads should increase following the termination of a provider relationship and decrease following the establishment of a provider relationship. However, if loan spreads are unaffected after the termination of a provider relationship, this would be most consistent with an information asymmetry mechanism as information from a prior relationship remains valuable and relevant even after the termination.

For this analysis, I first restrict my sample to borrowers that received multiple loans from the same lender over my sample period. Next, I separate these loans into two samples. The first contains borrowers that had a lender-provider relationship with a lender for their first few loans and then terminated the relationship with that lender but still received loans from them in subsequent years. The second sample contains borrowers that initially received loans from a lender without a retirement provider relationship but later established a relationship with the lender and continued to obtain loans from them afterwards. I find that the termination of the retirement provider relationship has no effect on loan spreads but that the establishment of a retirement provider relationship leads to lower loan spreads. This result is consistent with the information

asymmetry hypothesis, as a prior retirement provider relationship gives the lender useful information about the borrowing firm that persists even after the relationship is terminated.

As another approach to separate the two channels, I examine how the effect of a lender-provider relationship varies with the opaqueness of a borrower's operations. Prior work finds that it is more difficult for market participants to value and assess the quality intangible assets, leading to greater information asymmetry (Barth et al., 2001; Gu and Wang, 2005; Palmon and Yezegel, 2012; Ghaly et al., 2017; Bongaerts et al., 2022). Consistent with an information asymmetry channel, I find that the effects of a lender-provider relationship on loan spreads is strongest for firms with higher levels of knowledge and organizational capital, as captured by capitalized research and development (R&D) and selling, general, and administrative (SG&A) expenses.

If a quid pro quo arrangement exists, then loan terms should be tied to the amount of compensation paid by the firm for provider services. I employ four measures of retirement plan value using only those loans with a lender-provider relationship. Specifically, I use the total amount of compensation paid by the retirement plan following Cvijanovic et al. (2016), the total compensation scaled by the number of providers, the total amount of compensation scaled by the number of active participants in the plan, and the total amount of assets under management (AUM) within the plan. Overall, I find that loan spreads do not vary with the amount of compensation paid to providers, providing further evidence inconsistent with a quid pro quo explanation of my findings.

In sum, my results suggest that lower information asymmetry, not a quid pro quo arrangement, drives the lower spreads enjoyed by firms that borrow from lenders that simultaneously serve as their retirement plan providers. To further examine this result, I test whether non-price loan terms vary across provider and non-provider loans. I find that borrowers

with a lender-provider relationship receive larger loans and loans with longer maturities, consistent with prior work showing that non-price loan terms vary with levels of information asymmetry (Strahan, 1999; Flannery, 1986). In contrast, there is no difference in the number of covenants attached to these loans, suggesting better terms without additional contractual burdens. Further, inconsistent with a quid pro quo channel that would suggest these preferential terms are at the expense of lenders or taking on additional risk, I find no difference in the likelihood of violating financial covenants.

Finally, I examine whether the proportion of the loan held by individual lenders within a syndicated loan varies with whether the lender is a retirement plan provider. Syndicated loans are issued by a group of lenders with one acting as the lead lender and the other lenders acting as members of the syndicate. Because the lead lender often is the one that monitors the borrower (Holmstrom and Tirole, 1997), there exists a moral hazard between the lead lender and the other members of the syndicate because the other syndicate members may assume that the lead lender will not effectively monitor due to a lack of exposure to the entire loan. Theory also suggests that as asymmetric information increases between the lead arranger and the members of the syndicate, the participants in the loan will demand higher interest rates and hold less of the loan while demanding a larger loan ownership by the lead arranger to mitigate this effect. The lead bank may then demand a higher rate due to more exposure to credit risk. If quid pro quo is a driving factor in the reduction of loan spreads, I would not expect there to be significant differences in the percentage of the loan held by the lead lender and syndicate members. However, inconsistent with the quid pro quo hypothesis, I find partial evidence that lenders that lend to borrowers with whom they have a retirement provider relationship tend to hold a larger percentage of the syndicated loan.

This study extends the existing literature in several ways. First, it contributes to work on relationship lending and cross-selling. Prior work finds evidence consistent with both favorable treatment from a reduction in information asymmetry and from sweetheart deals or quid pro quos (Reuter, 2006; Bharath et al., 2007; Ferreira et al., 2018). My evidence is consistent with the provider relationship reducing information asymmetry, resulting in the lender giving more preferential terms to the borrower.

Second, by documenting that retirement plan provider relationships affect loan terms, my study contributes to the growing literature on the spillover effects of retirement plan provider relationships. Prior work finds that having a retirement plan relationship affects other areas of business activity, such as mutual fund ownership and shareholder voting (Cohen and Schmidt, 2009; Cvijanovic et al., 2013). Some studies show questionable behavior when it comes to the management of retirement plans by providers (Pool et al., 2016; Badoer et al., 2019). However, my findings suggest that lender-provider relationships are beneficial to firms by reducing information asymmetry in the corporate loan market. Ultimately, my results suggest that the benefits to firms from offering retirement plans extend beyond attracting and retaining employees.

This paper proceeds as follows. Section 2 discusses institutional background and develops testable hypotheses. Section 3 describes the data and methodology. Section 4 reports empirical results. Section 5 concludes.

2. Background and Hypothesis Development

2.1. Retirement Plans and Providers

Currently in the United States, there are two main types of retirement plans that are offered to employees: defined benefit plans and defined contribution plans. Defined benefit plans are traditional pension plans that pay an employee a fixed, pre-established benefit throughout their

time in retirement. This amount is typically determined by the level of the employee's salary when working and the years of service in the company. Because of complications in defined benefit plans, defined contribution plans have become much more common in the private workplace. These plans are primarily funded by an employee with a pre-tax payroll deduction, and the company may match this contribution up to a certain limit.

The administration of such plans can be complicated, so firms will outsource much of the plan management. These entities that operate a firm's retirement plan are called plan providers. Providers serve in many different roles within a retirement plan. One provider may work with the management of the firm to select which funds to be included in the plan, one provider may work directly with plan participants to answer investment questions and provide educational services, and another provider may work directly with a firm's accounting department to ensure that the plan information is accurately reported to the DOL, SEC, and IRS.

While these provider services can range from recordkeeper to advisory services, almost all providers work closely with the firm to ensure they are acting in the best interests of the plan participants in obligation to their fiduciary responsibility as laid out in the Employee Retirement Income Security Act of 1974 (ERISA). Because these providers work closely with management and employees of the firm, they may gain access to information that they would not have otherwise, and this information could indicate the health of the firm. For example, a provider can observe the number of participants added to and leaving a plan. Turnover is traditionally seen as a negative signal, which may convey information about the firm that non-providers would not directly observe. Additionally, a provider can observe the amount of liability that a firm would have to pay out in the form of benefits within pension plans or contributions within defined contribution plans

such as 401(k)'s. This information, along with close relationships with firm management and employees, could spill over into other business relationships between the firm and the provider.

2.2. Loan Spreads

Akerlof (1970) first presented the theoretical concept of adverse selection between agents, and under adverse selection theory, the quality of goods traded in markets can degrade in the presence of information asymmetry. Information asymmetry holds true in the market for corporate loans because information asymmetry between lenders and borrowers drives financial intermediation. If borrowing firms cannot accurately reveal their financial health or future prospects, then the lender must invest in costly research and due diligence to determine whether to issue a loan to the borrower and at what cost. Further, the lender must expend resources to monitor the borrower, decreasing the favorability of loan terms for borrowers. Ivashina (2009) finds that the information asymmetry effect on loan spreads is economically significant and accounts for approximately 4% of the total cost of credit.

However, a high level of research and monitoring may not be as necessary if the amount of information asymmetry is mitigated. As information asymmetries decrease, the cost to monitor and provide loans also decreases. Thus, if a firm engages with a lender with whom they already have other business relationships, this asymmetry should be lower because the lender already has some level of information about the borrowing firm. Theoretically, Boot and Thakor (2000) show that rates charged for loans decrease as a borrowing firm and a lender's relationship matures. Research also finds that the risks of adverse selection decrease if the lending bank has had a strong relationship with the borrower in the past (Boot, 2000). This suggests that the lender has access to prior information or has some knowledge about the borrower, reducing information asymmetry.

Furthermore, borrowers may be more apt to go to a lender with whom they have had a relationship in the past because of the information they have already shared with the lender (Sharpe, 1990; Rajan, 1992). Bharath et al. (2007) find that a relationship lender's informational advantage over non-relationship lenders generates a higher probability of cross-selling information-sensitive products to its borrower and that there is a greater likelihood that the relationship lender will provide a future loan. Additionally, these mitigated risks of adverse selection in the form of reduced information asymmetry have a tangible benefit in the form of reduced spreads to firms that borrow from a lender that they borrowed from in the past (Bharath et al., 2011). If a lender is serving as a provider on a firm's retirement plan, they already possess some information about the firm and management, which could reduce information acquisition costs. As discussed in the previous section, turnover and retirement plan liabilities, whether positive or negative, would be material information that a lender could take into consideration when determining the cost of the loan. Regardless, through a reduction in information asymmetry, a lender would be more able to assess the risks associated with lending to the firm, which could be represented in lower loan spreads.

Information asymmetry is not the only explanation for preferential loan terms from relationship lenders. Prior research also finds evidence of quid pro quo arrangements in the banking and asset management industries. Ferreira et al. (2018) study the performance of equity mutual funds that are run by the asset management division of commercial banks. They find that these mutual funds underperform, but the underperformance is more pronounced in the funds that overweight the stock of the bank's lending clients and that most of the underperformance is explained by the size of the lending business. This suggests that the asset management division of the bank directly supports the lending division. Furthermore, there is evidence of quid pro quo

arrangements by investment banks in initial public offerings (IPO). Prior work finds that high-revenue investors receive higher allocation rates during IPO's and that commissions paid by mutual funds to an underwriter are correlated with their holdings of that recently listed stock in their portfolios (Reuter, 2006; Jenkinson et al., 2018). There has also been evidence of questionable behavior within the retirement plan provider framework. Prior literature finds that pro-management voting is tied to plan provider compensation and that mutual fund plan providers overweight their client firm's stock in their portfolios and subsequently reduce that weighting when the plan provider relationship ends (Cohen and Schmidt, 2009; Cvijanovic et al., 2013). Therefore, lenders that simultaneously serve as a plan provider for a firm could provide more preferential loan terms to that firm.

Overall, whether it is tied to a quid pro quo arrangement or a reduction in information asymmetry, I hypothesize that compared to firms that borrow from unaffiliated, non-provider lenders, firms that borrow from lenders who are also providers on their retirement plans receive loans with lower spreads.

3. Research Design and Sample Selection

3.1. Empirical Methodology

To examine the relation between spreads and the presence of a plan provider relationship, I estimate the following pooled OLS fixed effects regression model:

$$Ln(AID\ Spread)_{i,k,t} = \beta_1 LP\ Relationship_{i,k,t} + \gamma X_{i,t} + \upsilon_i + \omega_t + \varepsilon_{i,k,t}, \quad (1)$$

where $Ln(AID\ Spread)_{i,k,t}$ is the natural logarithm of the all-in-drawn spread for firm *i* for loan *k* at time *t*. $LP\ Relationship_{i,k,t}$ is the independent variable of interest that represents whether firm *i* received loan *k* at time *t* from a lender who simultaneously was a plan provider for their retirement plan. I include a set of firm-level measured immediately before issue and loan-level controls (*X*)

measured at time *t*. Firm-level controls include: the market-to-book ratio, the natural logarithm of total assets, the natural logarithm of firm age, profitability, fixed assets, book leverage, and a dummy variable indicating whether the firm has a bond rating. Loan-level controls include the natural logarithm of the total facility amount, the natural logarithm of loan maturity, a covenant index following Bharath et al. (2011) and Bradley and Roberts (2015), and a dummy variable indicating whether the loan is a term loan. These controls are consistent with Campello and Gao (2017) who examine how customer concentration affects loan terms. I winsorize continuous firm-level controls and Facility Amount at the 1% and 99% level, and I also control for repeat borrowing from the same lead arranger within the prior five years following Bharath et al. (2011). Additionally, following Sufi (2007), I control for the lead arranger status on the loan.

The model includes firm fixed effects (υ_i) and year fixed effects (ω_t). The firm fixed effects control for any time-invariant firm characteristics that could be correlated with loan terms and the likelihood of having a lender-provider relationship. Including firm fixed effects also implies that any relation between loan spreads and a retirement plan provider relationship is driven by within-firm variation in spreads and the likelihood of a retirement provider relationship. Thus, the coefficient estimate on β_1 is interpreted as how much a firm is charged on a loan from a lender-provider compared to how much the same firm is charged on a loan from a non-lender-provider. The year fixed effects account for transitory macroeconomic-wide factors, such as regulations and economy-wide lending conditions, that could simultaneously affect loan spreads and the retirement plan provider relationship within a given year. Including year fixed effects also removes any time trends that could affect loan spreads. To correct for heteroskedasticity and correlation of standard errors within firms, I cluster standard errors at the firm level.

3.2. Sample Selection

Consistent with prior work dealing with defined benefit and contribution plans, I begin by collecting information on retirement plans from the Department of Labor (DOL) Form 5500. The DOL Form 5500 is a required filing for any firm that administers a benefits plan that is subject to ERISA.[2] ERISA requires firms and most providers that administer the plan to act as fiduciaries for those they represent – the plan participants, in this case. The Form 5500 offers an advantage over other legal forms filed for retirement plans such as the SEC Form 11-K in that it is filed by more firms. The 11-K is required to be filed only by firms that offer stock purchase plans or company stock within their employee savings plans. The advantage of using the Form 5500 is that it gives access to detailed information about the firm and plan such as the number of participants in the plan, the specific assets held within the plan, employer contribution amounts, the amount paid to plan providers, and other detailed plan provider information. Provider services on a defined contribution and defined benefit plan can range from recordkeeper and trustee to advisory services. However, most providers work closely with the firm to ensure they are acting in the best interest of the plan participants in obligation to their fiduciary responsibility.

I obtain the Form 5500 for public firms over the years 2009-2019.[3] This initially leaves 50,668 plans for 5,190 unique firm identifiers.[4] Loan data including spreads, covenants, maturity, and lender information are from DealScan and linked to the form 5500 data using the gvkey-facility ID linking file provided by Chava and Roberts (2008) and Keil (2018).[5] I then fuzzy match

[2] A full Form 5500 is filed for firms with over 100 participants. Firms with less than 100 employees can file a Form 5500-SF. Because the data is limited on the Form 5500-SF, my data is limited to those firms with more than 100 participants.
[3] The sample begins in 2009 because the Form 5500 structure and acknowledgement ID numbers were changed between 2008 and 2009. They have remained constant since then.
[4] This is a sample of plans and firms that I was able to accurately match to Compustat's gvkey firm identifier.
[5] Because these data end in 2018, I fill in later loans with last available gvkey identifier based on *borrowercompanyid* from DealScan.

lender names from DealScan to provider names on the form 5500 and verify by hand. The verification process ensures that bank subsidiary asset management divisions are properly linked. For example, a firm would be classified as having a relationship if they received a loan from Wells Fargo and received provider services from Wells Fargo Advisors, the bank's asset management division. This process is consistent with the idea from Ferreira et al. (2018) that asset management divisions of banks do support the lending operations of the bank. Using this linked data, I create a dummy variable for each firm that had a lender-provider relationship in the same year as their Form 5500 filing year, ensuring that the lender-provider relationship is current.

I collect accounting data from Compustat for firm-level controls and I obtain loan-level controls from DealScan. I adjust all dollar values for inflation using the 2019 Consumer Price Index. Keeping only those firms from the initial form 5500 dataset that received a corporate loan from 2009-2019 and removing those that were missing data as well as financial firms (SIC codes between 6000 and 6999), the final sample consists of 8,538 different loans for 1,547 unique firms. 2,091 of these loans had a lender-provider relationship in the final sample.

Table 1, Panel A presents the summary statistics for all loans. Roughly 25% of the loans have a lender-provider relationship, and the total loan amount varies widely, as the 25th percentile of loans is \$135 million and the 75th percentile is \$800 million. Additionally, maturity for most loans in the sample is 4-5 years.

Panel B compares the mean firm and loan characteristics between those that had a lender-provider relationship and those that did not have a lender-provider relationship. Overall, I find that loans from lender-providers have lower spreads and greater loan amounts. In addition, firms with lender-provider relationships tend to be older, larger, have lower market-to-book ratios, and a higher likelihood of having a bond rating. These differences between the lender-provider group

and the non-lender-provider group further motivate me to control for these factors in my regressions. Additionally, I attempt to address these differences through a propensity score matching analysis in Section 4.2.

4. Results

4.1. Cost of Debt Analysis

Next, I empirically test my main hypothesis that loans with a lender-provider relationship are expected to have lower spreads. Table 2 presents both univariate and multivariate estimates of Eq. (1), in which the dependent variable is the natural logarithm of the all-in-drawn spread.

The results show that obtaining a loan from a lender-provider is associated with lower spreads. These results are statistically significant and robust to including firm and year fixed effects. The univariate results in columns 1 and 2 show that firms with a lender-provider relationship tend to have significantly lower loan spreads. When extending the test to a multivariate framework, the negative relation remains statistically significant. In terms of economic significance, results are interpreted by taking the exponential function of the coefficient. For example, the coefficient estimates in column 4, which are from regressions that includes both firm and year fixed effects, imply that loan spreads from retirement providers are about 5.5% ($= e^{-.057} - 1$) lower. With the average loan in my sample of approximately $690 million and the average all-in-drawn spread of 230 bps, a firm would pay approximately $15.87 million per year in interest over and above LIBOR. A 5.5% decrease in the spread would make the new all-in-drawn spread roughly 217 bps, reducing the yearly debt payment by approximately $897,000.

In columns 5 and 6, I control for whether the lender-provider relationship was the lead arranger on the loan. Most syndicated loans in the U.S. are under a best-efforts deal where the lead arranger makes their best efforts to fulfill the terms of the loan negotiated with the borrower. Based

upon syndicate member demand, loan terms may have to adjust. Therefore, the role the lender-provider plays in the syndication process may affect spreads. I find that the presence of a lender-provider relationship on a loan remains statistically significant even when controlling for their lead arranger status.

4.2. Propensity Score Matching

One potential concern about the evidence presented is that there are significant differences between the firms that have a lender-provider relationship on their loans and those that do not. It could be the case that larger, more mature firms have access to larger providers that have multiple business segments. Conversely, it could be the case that smaller, less mature firms select a lender-provider due to simplicity and streamlining business segments.

The results in Table 1, Panel B suggest that some of the key firm characteristics that influence loan terms are systematically different across the relationship and non-relationship groups. In order to test whether these differences are driving the results presented earlier, I employ propensity score matching with replacement to match a firm with a lender-provider relationship to a similar firm without a lender-provider relationship. This technique has been commonly employed to estimate the predicted probability of group membership based on some observed characteristics (Heckman et al., 1997, 1998; Drucker and Puri, 2005; Bharath et al., 2011). The controls used in previous tests are the observed characteristics used to match loans with a lender-provider relationship to those that do not have a lender-provider relationship. More specifically, using a probit model to estimate the probability of being in the treatment group verses control group, for every lender-provider loan, I match up to two non-lender-provider loans as controls with a propensity score within +/-1% of the lender-provider loan propensity score and within the same year and industry.

Using the matched sample, I again evaluate the differences in the mean between the lender-provider and the non-lender-provider groups. Table 3 shows the results of this test and suggests that the propensity score matching technique has eliminated the significant differences between the two groups. I then re-estimate my main regressions from Table 2 in order to see the impact that having a lender-provider relationship has on loan spreads using the matched sample and present the results in Table 4. The results are consistent with those in Table 2 in that loan spreads are lower for lender-provider loans. This indicates that the results of my main test are robust and not driven by significant differences between lender-provider loans and non-lender-provider loans.

4.3. Information Asymmetry vs. Quid Pro Quo

Information asymmetry and quid pro quo both support my main results. On one hand, a plan provider relationship can reduce information asymmetry, leading to lower spreads. On the other hand, these lower spreads can be driven by a quid pro quo arrangement as the sponsor firm pays the plan provider fees for their services. Retirement plans also have persistent flows of capital into the plans from employee payroll deductions, making these plans extremely valuable to those who manage these plans. Thus, lower loan spreads could be a sweetheart deal to borrowers in order to incentivize them to continue the provider relationship.

In this section, I seek to identify the mechanism that drives these results by examining changes in the retirement provider relationship and cross-sectional proxies of informational asymmetry. I also test if the total compensation paid by the sponsor firm to the plan provider drives the lower spreads.

4.3.1. Lender-Provider Relationship Switchers

To further examine the effect of having a lender-provider relationship on loan spreads, I focus on firms that received multiple loans from the same lender over time, but that lender was at

one point a provider on their retirement plan and at another point, they were not a provider. To illustrate this strategy, assume that a firm received four loans, one in 2009, 2012, 2014, and 2017; and Wells Fargo was a lender for every one of these loans. Additionally, Wells Fargo was not provider on the firm's 401(k) plan during the years 2009-2012 when the firm received the first two loans. Later, in 2013, Wells Fargo became a provider on the firm's 401(k) plan, and the firm took out two additional loans from them in 2014 and 2017. I seek to examine the within-firm variation in these loans from Wells Fargo before and after they became a provider. Using retirement provider changes is not an uncommon technique. Cohen and Schmidt (2009) use changes in a mutual fund's trustee relationship on a sponsor firm's 401(k) to examine how the trustee relationship affects the weighting of the firm's stock in their funds.

This test seeks to tease out whether this effect is driven by information asymmetry or quid pro quo arrangements. The establishment of a plan provider relationship should lower spreads, consistent with both mechanisms. However, the termination of a plan provider relationship has two predictions. First, loan spreads could significantly increase after the termination of a plan provider relationship, consistent with either a quid pro quo arrangement or an increase in information asymmetry. Second, if the loan spreads do not significantly change after the termination of the plan provider relationship, the lower spreads would be supported by the reduced information asymmetry argument as information from a prior relationship remains valuable and relevant even after the termination.

I restrict the lender-provider relationship loans to only those loans with a single lender-provider relationship. I break up my sample into three groups: firms that received multiple loans from the same lender and never had a lender-provider relationship (*Never)*, firms that received multiple loans and always had a lender-provider relationship with the same lender (*Always*), and

firms that I call *Switchers*. *Switchers* are firms that fall into the situation explained in the above paragraph. They are firms that received multiple corporate loans from the same lender that at one point held a provider relationship and at another point, did not hold a provider relationship. I further categorize the *Switchers* group into those that had a lender-provider relationship earlier in the sample and then did not and those that did not have a lender-provider relationship earlier in the sample but later established one.

I run two separate tests. The first test combines the *Always* group with the *Switchers* that had a lender-provider relationship earlier but then did not have a lender-provider relationship later. Figure 1, Panel A depicts this test. Conceptually, the goal of this test is to compare two firms that both received loans from the same lender. For example, say that Firm A is in the *Always* group. This means that Firm A received multiple loans from Wells Fargo and Wells Fargo was always a provider on their retirement plan. Firm B also received multiple loans from Wells Fargo, but Wells Fargo was only a provider on its retirement plan when the first few loans were issued, but they were not a provider during the last few loans. This test tries to capture the effect that going from having a relationship to not having a relationship has on loan spreads.

Table 5, Panel A tests the termination of a provider relationship with the restricted sample that includes *Always* and *Switchers*. The results are insignificant, suggesting that the provider relationship that was on the earlier loans may have an information spillover effect to the later loans when that lender was not a provider. This finding is consistent with the information asymmetry story, as a lender that had a previously established relationship has information on the borrowing firm even though the lender is no longer a provider on its retirement plan.

The second test combines the *Never* group and the *Switchers* that did not have a lender-provider relationship earlier in the sample but later established a lender-provider relationship.

Depicted in Figure 1, Panel B, I keep only those in the *Never* group that received loans from the same subset of lenders that the *Switchers* did. Staying consistent to my earlier example, say that Firm A is in the *Never* group. Firm A received multiple loans from Wells Fargo, but Wells Fargo was never a provider on their retirement plan. Conversely, Firm B also received multiple loans from Wells Fargo, but Wells Fargo was only a provider later in the sample. This test tries to capture the effect that going from no relationship to having a relationship has on loan spreads. Table 5, Panel B shows the results for this test. When controlling for lead arranger status, the results show that spreads are lower for loans with a lender-provider relationship.

Taking the two tests together, the establishment of a lender-provider relationship lowers loan spreads, but the termination of a lender-provider relationship does not seem to have a significant effect, most likely because the lender has information about the lender from when they were a provider earlier in the sample. These results also suggest that the underlying mechanism driving the lower spreads is a reduction in information asymmetry. If, for example, the results in Panel A were significantly positive, then it could be argued that some quid pro quo arrangement could be driving the results. However, since the results in Panel A are insignificant, it can be argued that the information that lenders received while they were providers remained persistent even after their termination as retirement plan providers. Additionally, by controlling for prior lending, the results are interpreted as the additional value that information from a retirement plan provider relationship has on loan spreads, not just a prior lender effect.

4.3.2. Effect of Intangible Assets

If the negative relation between spreads and lender-provider relationships is driven by these relationships reducing information asymmetry, lender-provider loans to firms where asymmetric information is most severe should benefit the most. One such asset class, intangibles, have

traditionally been hard to value and has often led to accounting mismeasurement (Srivastava, 2014; Lev and Gu, 2016). As such, firms with high levels of intangible assets have been associated with greater levels of information asymmetries and more uncertainty in projected future cash flows (Barth et al., 2001; Gu and Wang, 2005; Palmon and Yezegel, 2012; Ghaly et al., 2017; Bongaerts et al., 2022).

To examine the effects of a lender-provider relationship on loan spreads for high intangible firms, I use the Peters and Taylor (2017) measures of organizational and knowledge capital normalized by the firm's total assets. Organizational capital represents accumulated investments in human capital, brands, customer relationships, and distribution systems, and I proxy for the value of it with capitalized SG&A expenses. I proxy for accumulated knowledge capital with capitalized R&D, which includes any expense relating to the development of products, processes, and services. For both proxies, I rank each variable into terciles each year and interact the tercile dummy variables with the existence of a lender-provider relationship.

Table 6 presents the results. Columns 1 and 2 show that the negative relation between spreads and lender-provider relationships is more pronounced in firms with high knowledge capital. Similarly, columns 3 and 4 show that firms with the higher levels of organization capital receive loans with significantly lower spreads from their retirement providers. In most specifications, the magnitude and significance of a retirement provider relationship monotonically increases as firms have more intangible assets. Overall, the results suggest that a lender-provider relationship is more valuable for firms with higher levels of intangible assets, suggesting that information asymmetries may be reduced through the retirement provider relationship.[6]

[6] SG&A includes a wide array of expenses which may also account for retirement plan expenses. However, this is most likely not a large proportion of SG&A expense, and I test proxies for retirement plan compensation in section 4.3.3. Furthermore, levels of knowledge capital are unlikely to be affected by retirement plan administrative expenses.

4.3.3. Compensation and Assets Under Management

One could continue to argue that the loan spreads received are indirectly related to the amount paid by the firm for retirement services. If a quid pro quo relationship exists, loan spreads would decrease as the total amount of compensation paid to the provider increases because the provider relationship would be more valuable to the lender. The Form 5500 reports the amount of money that is paid by firms to their retirement providers for their services. Direct compensation is compensation paid to the provider out of the plan or plan account. For example, a fee per participant would fall under this type of compensation. Indirect compensation is compensation that is paid out of the plan or plan assets for services rendered and would not have been paid had the service not taken place. This can include brokerage commissions, asset management fees, and reporting fees, among others. Eligible indirect compensation is a type of indirect compensation that is reflected in the value of the investments and not paid directly by the plan or plan sponsor. Eligible indirect compensation would include soft dollar arrangement paid by participants through the underlying fees in their respective investments.

For this test, I focus on the subsample of loans in which the firm has a lender-provider relationship. Following Cvijanovic et al. (2016), I construct a total compensation measure of payment to retirement providers that takes the natural log of the summation of direct compensation, indirect compensation, and 50 basis points of the total assets under management (a proxy for eligible indirect compensation). I also use an adjusted total compensation measure by scaling the eligible indirect compensation component by the total number of providers on the plan. Finally, I use the natural log of total compensation scaled by the number of active participants in the plan and the natural log of total assets under management. Larger assets under management and more

compensation may incentivize lenders to give more preferential loan spreads because their retirement relationship is more valuable.

Conditional on loans having a lender-provider relationship, the results in Table 7 show mostly no significant effect of retirement plan value on the loan spreads. The size of the retirement plan has weak significance with low magnitudes in column 7. However, this result becomes insignificant when controlling for within-firm effects. One may argue that a quid pro quo arrangement would be more sensitive to dollar amounts rather than spreads. In untabulated results, I use the natural log of interest received from the loan as my independent variable and find that the results remain qualitatively and quantitatively similar. Overall, these results call into question any argument for the existence of quid pro quo arrangements related to retirement plan value.

4.4. Additional Analyses

In this section, I conduct additional analyses of the effect that retirement provider relationships have on other loan terms and characteristics. I first examine the effects of having a lender-provider relationship on non-price loan terms. I then test the proportion of the syndicated loan held by lenders that have lender-provider relationships

4.4.1. Non-Price Loan Terms

Information asymmetry and quid pro quo can affect other non-price loan contract terms. Prior literature shows a link between risk and non-price loan terms. Strahan (1999) shows that riskier firms obtain smaller loans and have relatively shorter maturity. Prior studies document a positive association between relationship length and the availability of credit to a borrower (Hoshi et al., 1990; Petersen and Rajan, 1994; Degryse and Van Cayseele, 2000). The size of a loan facility is used as a proxy for access to financing. Risk in lending arises due to information asymmetry, but if this is mitigated through some sharing of information from a prior relationship, lenders will

give borrowers larger loans. Therefore, firms that borrow from lenders who are also providers on their retirement plans should receive larger loans as compared to those that borrow from non-provider lenders, all else equal.

Table 8 presents both univariate and multivariate estimates of Eq. (1) using the natural logarithm of total loan facility amount as the dependent variable. The results show that obtaining a loan from a lender-provider is associated with larger loan facility amounts, consistent with my main hypothesis and a reduction in information asymmetry. As in Table 2, these results are statistically significant and robust to including firm and year fixed effects. Focusing on column 6, firms that receive loans from their retirement providers is about 28% larger than loans that do not include their provider.

In the model described by Flannery (1986), a relationship with a lender would lower information asymmetry and as quality signaling through debt maturity decreases through better information sharing between the lender-provider and the firm, debt maturities should increase. Table 8 presents both univariate and multivariate estimates for Eq. (1) using the natural logarithm of loan maturity as the dependent variable. Examining the estimates in Table 9, the lender-provider relationship is associated with longer maturity, consistent with my previous findings and the information asymmetry argument. The results are statistically significant only when incorporating firm fixed effects, suggesting that the presence of a lender-provider relationship affects the within variation of maturity for firms but not when examining only within-year effects. In terms of economic magnitudes, the results in column 6 imply that having a lender-provider relationship leads to a 13% increase in loan maturity.

One possible concern is that the firms who receive loans from their retirement providers are riskier and therefore, are using their relationships to secure loans that have preferential terms

than they would otherwise receive. To explore this channel, I examine the number of covenants included on loan packages with and without a lender-provider relationship. For lenders, covenants are used to help align incentives with borrowers and mitigate the risk of default. Accordingly, loans to riskier firms tend to have more covenants (Bradley and Roberts, 2015). Following Graham et al. (2008), I compute covenant intensity by calculating the total number of general and financial covenants on a loan package. Because covenants are at the package level, I assign *Package Relationship* a value of one if at least one of the facilities in the package had a lender-provider relationship and zero if there was no relationship. Furthermore, I take the natural logarithm of the total package deal size and the average spread across facilities in the package.

Table 10, columns 1 and 2 show the covenant intensity results. Within a given year, packages with a lender-provider relationship tend to have fewer covenants. However, after controlling for firm and loan characteristics, this effect becomes insignificantly different from zero.[7] Insofar as the number of covenants proxies for the riskiness of the loans, the finding suggests that firms with lender-provider relationships are no riskier than the firms without lender-provider relationships.

Next, I examine the performance of the loan, and although I cannot observe whether the firm defaulted on a loan, I use covenant violations to proxy for the riskiness of the loan (Chava and Roberts, 2008; Griffin et al., 2021). If firms with a lender-provider relationship receive lower spreads and are also more likely to violate their covenants, then quid pro quo would be a likely explanation.

I identify those loans with "Min. Current Ratio", "Net Worth", and "Tangible Net Worth" covenants in their packages. I focus on these covenants because the accounting measures used to

[7] Following Graham et al. (2008), I separately test the number of general covenants and number of financial covenants. The results remain statistically insignificant within the multivariate framework.

calculate them are standardized and unambiguous across firms (Chava and Roberts, 2008). I assign a value of one if the loan package has at least one of these covenants and zero otherwise. I find that 301 of the 5,895 packages received one of these financial covenants. I compare Compustat quarterly fundamentals with the terms of the financial covenant. If the firm financial ratios fall below the threshold set by the covenant at any point during the life of the loan, I designate that as a violation. Following Chava and Roberts (2008), I also include the tightness of the covenant defined as the absolute value of the distance between the firm financial ratio before loan issuance and the covenant threshold at the time of issuance.

Table 10, columns 3 and 4 show the results.[8] Although statistically insignificant, conditional on having financial covenants, loans that have a lender-provider relationship are less likely to violate a covenant. Unsurprisingly, those loans with a larger distance between firm ratios and covenant threshold are less likely to default.

Overall, these results suggest that lender-provider loans are not significantly more or less risky than loans that do not have such a relationship. While my earlier results suggest some preferential loan terms, it does not seem that lenders are taking undo risk in lending to firms in which they have a lender-provider relationship. The results suggest that the lender-provider relationship provides some informational or relational advantages rather than a quid pro quo arrangement.

4.4.2. Percent of Syndicated Loan Held

Leland and Pyle (1977) suggest that an increase in an informed party's share of ownership would signal a higher quality of the underlying project, thereby reducing the cost of asymmetric

[8] In Table 10, I only include year fixed effects because I am more interested in the cross-sectional probability of covenant presence and violation. Furthermore, firm fixed effects eliminates about one-third of the sample in Panel B, creating issues of inference with an even smaller sample than one that is already small.

information. In the case of syndicated loans, the lead bank possesses some level of information that loan participants do not possess. This asymmetric information can be mitigated by the lead bank holding more of the loan. In fact, Ivashina (2009) finds that asymmetric information accounts for about 4% of the total cost of debt in syndicated loans. In the case of my framework, a lender-provider has some information about the borrowing firm that arises from their relationship. Theory suggests that as asymmetric information increases between the lead arranger and the members of the syndicate, the participants on the loan will demand higher interest rates and hold less of the loan while demanding a larger loan ownership by the lead arranger to mitigate this effect. However, if information asymmetry is mitigated through the retirement plan relationship, the lender-provider would then hold more of the loan, which could support lower spreads. I hypothesize that lenders that lend to a firm with whom they have a provider relationship will hold a higher percentage of the loan as compared to those loans that do not have a relationship because they may deem the loan less risky. Lender-providers may be confident in the borrowing firm's ability to pay as they would have additional information about the firm and a relationship with management.

I test the effect of the lender-provider relationship on the amount of the loan held by lenders. This estimation requires the data to be adjusted to the lender level. Each loan in my sample has multiple observations, each representing a different lender in the syndicate. Table 10 presents the results of from the following equation:

$$PercentAllocation_{i,k,t} = \beta_1 LP\ Relationship_{i,k,t} + \gamma X_{i,t} + \upsilon_i + \omega_t + \varepsilon_{i,k,t}, \quad (2)$$

where $PercentAllocation_{i,k,t}$ is the percentage of the syndicated loan held by a lender. All other variables are the same as in Eq. (1).

The results in Table 11 show that the lender-provider relationship dummy is positive across all specifications, suggesting that those lenders who have a relationship with the borrower hold more of the loan. More specifically, in column 4, lenders tend to hold 0.94 percentage points more if they have a provider relationship with the borrower, representing a 13% increase relative to the mean holding percentage of 7.4%.

Consistent with moral hazard story argued by Holmstrom and Tirole (1997) and Sufi (2007), there exists a moral hazard between lenders of a syndicated loan in which the lead lender may not monitor the borrower as well because there is shared exposure with the other loan syndicate members. Because of this, the lead arranger tends to hold more of the loan and those participants in the syndicate that have a lender-provider relationship will hold more because the amount of information asymmetry is less. Interestingly, in column 5, the interaction term between the lead arranger and lender-provider dummy is negative, indicating that although lead arrangers tend to hold more of the loan, being a lead arranger and having a provider relationship lowers the percentage of the loan that they hold. This may seem surprising, but a leader with a provider relationship with the borrowing firm could signal to the other syndicate members a commitment to monitor the borrower because the leader has multiple business relationships with them, leading syndicate members to hold more of the loan and the lender-provider leader to hold less through a reduction in moral hazard. Overall, this result is consistent with my previous findings and supports the information asymmetry argument as it is unclear how a quid pro quo arrangement would encourage a lender to hold a greater percentage of the syndicated loan.

5. Conclusion

In this paper, I empirically test whether firms that borrow from lenders who are also providers on their retirement plans receive preferential loan terms, namely all-in-drawn spreads.

Additionally, I test whether lower spreads are driven by a reduction in information asymmetry or a quid pro quo arrangement. I find that firms with lender-provider relationships receive loans that have about 5.5% lower spreads than firms that borrow from non-provider lenders. These results do not vary when evaluating total compensation paid to providers in the retirement plan, challenging the notion of a quid pro quo arrangement. I also find that lender-provider loans tend to be larger, have longer maturities, and have similar levels of risk as non-lender provider loans. Lenders that are retirement providers also tend to hold a larger percentage of the loans to their sponsor firms. Furthermore, holding the lender constant, I find that information gained in the establishment of a new provider relationship leads to lower loan spreads while information gains from a retirement provider relationship remain persistent even after a provider relationship is terminated. Overall, the results suggest that relationship banking through the cross-selling of retirement provider services by lenders can lead to some preferential loan terms due to a reduction in information asymmetry.

References

Akerlof, G., 1970, The market for "lemons": quality uncertainty and the market mechanism, *Quarterly Journal of Economics* 84, 488-500.

Badoer, D., C. Costello, and C. James, 2019, I can see clearly now: The impact of disclosure requirements on 401(k) fees, *Journal of Financial Economics* (forthcoming).

Barth, M., R. Kasznik, and M. McNichols, 2001, Analyst coverage and intangible assets, *Journal of Accounting Research* 39, 1-34.

Bharath, S., S. Dahiya, A. Saunders, and A. Srinivasan, 2007, So what do I get? The bank's view of lending relationships, *Journal of Financial Economics* 85, 368-419.

Bharath, S., S. Dahiya, A. Saunders, and A. Srinivasan, 2011, Lending relationships and loan contract terms, *Review of Financial Studies* 24, 1141–1203.

Bongaerts, D., X. Kang, and M. Van Dijk, 2022, The intangibles premium: Risk or mispricing? Working paper.

Boot, A., 2000, Relationship banking: What do we know? *Journal of Financial Intermediation* 9, 7–25.

Boot, A., and A. Thakor, 2000, Can relationship banking survive competition? *Journal of Finance* 55, 679–713.

Bradley, M. and M. Roberts, 2015, The structure and pricing of corporate debt covenants, *Quarterly Journal of Finance* 5, 1550001 1-37.

Campello, M. and J. Gao, 2017, Customer concentration and loan contract terms, *Journal of Financial Economics* 123, 108-136.

Chava, S., and M. Roberts, 2008, How does financing impact investment? The role of debt covenants, *Journal of Finance* 63, 2085-2121.

Cohen, L., and B. Schmidt, 2009, Attracting flows by attracting big clients, *Journal of Finance* 64, 2125–2151.

Cornaggia, J., K. Cornaggia, and R. Israelsen, 2018, Credit rating agency fees: Pay to play or pay for work?, Working Paper.

Cvijanovic, D., A. Dasgupta, and K. Zachariadis, 2016, Ties that bind: How business connections affect mutual fund activism, *Journal of Finance* 71, 2933-2966.

Degryse, H. and P. Van Cayseele, 2000, Relationship lending within a bank-based system: Evidence from European small business data, *Journal of Financial Intermediation* 9(1), 90-109.

Demiroglu, C. and C. James, 2010, The information content of bank loan covenants, *Review of Financial Studies* 23, 3700–3737.

Drucker, S., and M. Puri, 2005, On the benefits of concurrent lending and underwriting, *Journal of Finance* 60, 2763–2799.

Ferreira, M., and P. Matos, 2012, Universal banks and corporate control: Evidence from the global syndicated loan market, *Review of Financial Studies* 25, 2703–2744.

Ferreira, M., P. Matos, and P. Pires, 2018, Asset management within commercial banking groups: International evidence, *Journal of Finance* 73, 2181-2227.

Ghaly, M., V. Dang, and K. Stathopoulos, 2017, Cash holdings and labor heterogeneity: The role of skilled labor, *Review of Financial Studies* 30, 3636-3668.

Graham, J., S. Li, and J. Qiu, 2008, Corporate misreporting and bank loan contracting, *Journal of Financial Economics* 89, 44-61.

Griffin, T., G. Nini, and D. Smith, 2021, Losing control? The 20-year decline in loan covenant violations, Working Paper.

Gu, F., and W. Wang, 2005, Intangible assets, information complexity, and analysts' earnings forecasts, *Journal of Business Finance & Accounting* 32, 1673-1702.

Heckman, J., H. Ichimura, and P. Todd, 1997, Matching as an econometric evaluation estimator: Evidence from evaluating a job training programme, *Review of Economic Studies* 64, 605-654.

Heckman, J., H. Ichimura, and P. Todd, 1998, Matching as an econometric evaluation estimator, *Review of Economic Studies* 65, 261-294.

Holmstrom, B., and J. Tirole, 1997, Financial intermediation, loanable funds, and the real sector, *Quarterly Journal of Economics* 112, 663–91.

Hoshi, T., A. Kashyap, and D. Scharfstein, 1990, The role of banks in reducing the costs of financial distress in Japan, *Journal of Financial Economics* 27, 67-88.

Huang, R., D. Zhang, and Y. Zhao, 2018, Relationship banking and loan syndicate structure: The role of private equity sponsors, *Financial Review* 53, 461-498.

Ivashina, V., 2009, Asymmetric information effects on loan spreads, *Journal of Financial Economics* 92, 300-319.

Jenkinson, T., H. Jones, and F. Suntheim, 2018, Quid pro quo? What factors influence IPO allocations to investors, *Journal of Financial Economics* 73, 2303-2341.

Keil, J., 2018, The value of lending relationships when creditors are in control. Working Paper.

Lev, B., and F. Gu, 2016, *The end of accounting and the path forward for investors and managers*, Hoboken, NJ, John Wiley & Sons.

Lemmon, M., M. Roberts, and J. Zender, 2008, Back to the beginning: Persistence and the cross-section of corporate capital structure, *Journal of Finance* 63, 1575-1608.

Palmon, D., and A. Yezegel, 2012, R&D intensity and the value of analysts' recommendations, *Contemporary Accounting Research* 29, 621-654

Peters, R., and L. Taylor, 2017, Intangible capital and the investment-q relation, *Journal of Financial Economics* 123, 251-272.

Petersen, M., and R. Rajan, 1994, The benefits of lending relationships: Evidence from small business data, *Journal of Finance* 49, 3-37.

Pyle, D., and H. Leland, 1997, Information asymmetries, financial structure, and financial intermediation, *Journal of Finance* 32, 371-387.

Rajan, R., 1992, Insiders and outsiders: The relationship between relationship and arm's length debt, *Journal of Finance* 47, 1367–400.

Reuter, J., 2006, Are IPO allocations for sale? Evidence from mutual funds, *Journal of Financial Economics* 61, 2289-2324.

Sharpe, S., 1990, Asymmetric information, bank lending and implicit contracts: A stylized model of customer relationships, *Journal of Finance* 45, 1069–87.

Srivastava, A., 2014, Why have measures of earnings quality changed over time? *Journal of Accounting and Economics* 57, 196-217.

Strahan, P., 1999, Borrower risk and the price and nonprice terms of bank loans, FRB of New York Staff Report No. 90.

Sufi, A., 2007, Information asymmetry and financing arrangements: Evidence from syndicated loans, *Journal of Finance* 62, 629-668.

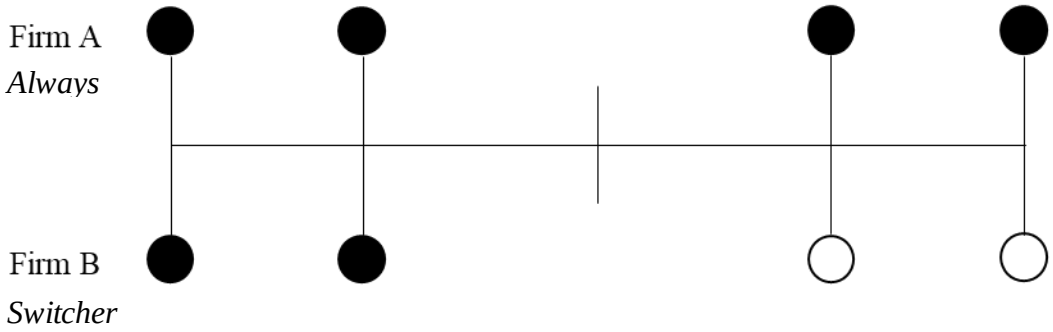
Appendix A
Variable Definitions

AID Spread	All-in-drawn loan spread over LIBOR
LP Relationship	A dummy that equals one if a firm is borrowing at the facility level from a lender that is also a plan provider on their retirement plan, zero otherwise.
Total Covenants	Total number of restrictive covenants on the loan package. Following Bharath et al. (2011).
Maturity	Loan maturity in months
Facility Amount	Size of the facility loan in 2019 dollars
Total Assets	Total book assets (at) in 2019 dollars
Market-to-Book	Following Lemmon et al. (2008): (market equity + total debt + preferred stock liquidating value (pstlk) – deferred taxes and investment tax credits (txditc))/total assets (at)
Firm Age	Years after a firm's first appearance in CRSP database
Profitability	Operating income before depreciation (oibdp)/total assets (at)
Fixed Assets	Net property, plant, and equipment (ppent)/total assets (at)
Book Leverage	Total debt (long-term debt (dltt) + current debt (dlc))/total assets (at)
Loan Type Dummy	A dummy variable that equals one if the loan is a term loan, zero otherwise.
Bond Rating Dummy	A dummy variable that equals one if the firm has a bond rating, zero otherwise.
Prior Lender	A dummy variable that equals one if the firm had the same lead arranger on another loan within the last 5 years.

Figure 1
Lender-Provider Relationship Switchers

This figure shows the two switcher tests that are used for identification. In each case, a circle reflects a loan that was received by a firm. A solid circle represents a loan received from a lender with whom they have a retirement provider relationship. A hollow circle represents a loan received from the same lender without a retirement provider relationship. Panel A depicts the termination of a retirement provider relationship. Firm A is the *Always* control group that received multiple loans from the same lender and that lender was always a provider for their retirement plan. Firm B is in the *Switcher* treatment group that received multiple loans from the same lender, but that lender was a provider on their retirement plan only during the earlier loans and not the later loans. Panel B depicts the establishment of a retirement provider relationship. Firm A is the *Never* control group that received multiple loans from the same lender and that lender was never a provider on their retirement plan. Firm B is in the *Switcher* treatment group that received multiple loans from the same lender, but that lender was only a provider on their retirement plan during the later loans. Treatment occurs when the relationship is terminated or established.

Panel A: Termination
Provider Relationship to No Provider Relationship



Panel B: Establishment
No Provider Relationship to Provider Relationship

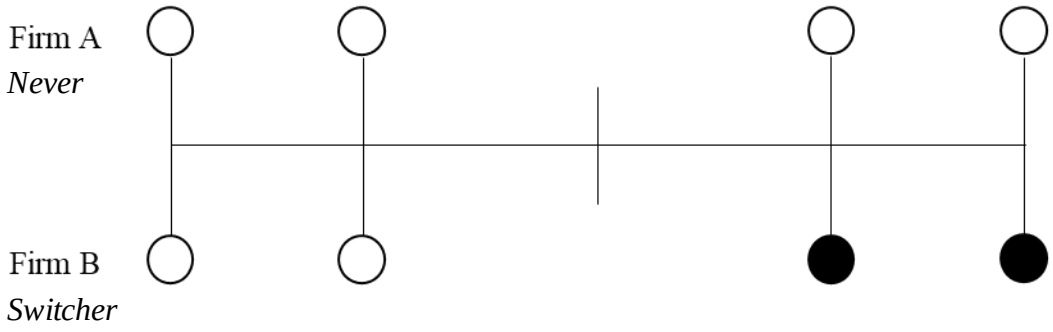


Table 1
Summary Statistics

This table shows the summary statistics for my sample of firms in the Form 5500 that received loans from 2009-2019. Panel A shows the characteristics for all 8,538 loans. Panel B, column 1 shows the variables that will be used in regressions for the 2,091 loans where a lender-provider relationship was present. Panel B, column 2 shows the variables that will be used in regressions for the 6,447 loans where a lender-provider relationship was not present. Panel B, column 3 shows the difference in means between columns 1 and 2. *, **, *** denote significance at the 10%, 5%, and 1% levels, respectively.

Panel A: Summary Statistics of All Loans
Obs.=8,538

	Mean	Std. Dev.	P25	P50	P75
LP Relationship	0.245	0.430	0.000	0.000	0.000
AID Spread (BPS)	232.0	149.9	125.0	175.0	275.0
Ln (AID Spread)	5.280	0.580	4.828	5.165	5.617
Facility Amount ($M)	756.7	1,061	152.4	379.9	891.0
Ln (Facility Amount)	19.77	1.352	18.84	19.76	20.61
Maturity (Months)	53.71	18.06	48.00	60.00	60.00
Ln (Maturity)	3.887	0.524	3.871	4.094	4.094
Total Assets ($B)	137.8	344.1	11.06	33.65	99.58
Ln (Total Assets)	8.174	1.647	7.009	8.121	9.206
Firm Age (Years)	31.48	19.14	16.00	25.00	48.00
Ln (Firm Age)	3.276	0.683	2.833	3.258	3.892
Market-to-Book	1.387	0.931	0.794	1.107	1.661
Profitability	0.129	0.074	0.086	0.121	0.163
Fixed Assets	0.294	0.245	0.097	0.204	0.444
Book Leverage	0.316	0.206	0.174	0.298	0.426
Total Covenants	1.215	1.460	0.000	1.000	2.000
Bond Rate Dummy	0.662	0.473	0.000	1.000	1.000
Loan Type Dummy	0.065	0.247	0.000	0.000	0.000

Panel B: Comparison of Mean Characteristics

	Mean of LP Loans Obs.=2,091	*Mean of Non-LP Loans Obs. =6,447*	*Differences*
Ln (AID Spread)	5.129	5.328	-0.199***
Ln (Facility Amount)	20.05	19.55	0.503***
Ln (Maturity)	3.884	3.888	-0.004
Ln (Total Assets)	8.647	8.020	0.627***
Ln (Firm Age)	3.480	3.209	0.271***
Market-to-Book	1.302	1.414	-0.113**
Profitability	0.137	0.127	0.009***
Fixed Assets	0.327	0.283	0.044***
Book Leverage	0.329	0.312	0.017
Total Covenants	1.099	1.253	-0.154**
Bond Rate Dummy	0.766	0.628	0.137***
Loan Type Dummy	0.038	0.074	-0.036***

Table 2
Lender-Provider Relationships and Loan Spreads

This table shows results from OLS regressions of the natural logarithm of loan spreads on the presence of a lender-provider relationship for the Compustat/Dealscan merged form 5500 sample firms from 2009 to 2019. *LP Relationship* is a binary variable that represents whether a firm received a loan from a lender who simultaneously was a plan provider for their retirement plan. LP *Relationship Leader* is a dummy variable that denotes whether the lender-provider was also the lead arranger on the loan that the borrowing firm received. *Prior Lender* is a dummy variable that denotes whether the lender was a lead arranger on the borrowing firm's loans within the last 5 years. The appendix provides definitions of control variables. *t*-statistics in parentheses are calculated from heteroskedasticity-robust standard errors clustered by firm. *, **, *** denote significance at the 10%, 5%, and 1% levels, respectively.

	Dependent Variable = *Ln (AID Spread)*					
	(1)	(2)	(3)	(4)	(5)	(6)
LP Relationship	-0.202***	-0.103***	-0.083***	-0.057**	-0.097***	-0.045**
	(-7.79)	(-4.16)	(-4.10)	(-2.62)	(-4.24)	(-2.05)
LP Relationship Leader					0.039	-0.042
					(1.10)	(-0.92)
Prior Lender			-0.180***	-0.136***	-0.180***	-0.135***
			(-10.42)	(-7.60)	(-10.45)	(-7.60)
Ln (Facility Amount)			-0.077***	-0.063***	-0.077***	-0.063***
			(-5.74)	(-4.71)	(-5.70)	(-4.72)
Ln (Maturity)			0.144***	0.064***	0.144***	0.064***
			(6.94)	(3.42)	(6.95)	(3.42)
Market-to-Book			-0.090***	-0.052**	-0.089***	-0.052**
			(-4.60)	(-2.91)	(-4.59)	(-2.91)
Ln (Total Assets)			-0.069***	-0.098***	-0.069***	-0.098***
			(-6.79)	(-4.36)	(-6.79)	(-4.35)
Ln (Firm Age)			-0.105***	0.200**	-0.105***	0.198**
			(-6.73)	(2.77)	(-6.75)	(2.76)
Profitability			-0.698***	-0.553***	-0.704***	-0.553***
			(-4.42)	(-3.51)	(-4.47)	(-3.51)
Fixed Assets			-0.085**	0.180	-0.085**	0.180
			(-2.00)	(1.52)	(-1.99)	(1.52)
Book Leverage			0.625***	0.618***	0.626***	0.617***
			(11.14)	(8.94)	(11.18)	(8.94)
Total Covenants			0.008	-0.014**	0.008	-0.014**
			(1.44)	(-2.50)	(1.45)	(-2.51)
Loan Type Dummy			0.198***	0.180***	0.198***	0.181***
			(6.45)	(7.03)	(6.45)	(7.07)
Bond Rating Dummy			0.090**	-0.029	0.090**	-0.029
			(3.08)	(-0.79)	(3.07)	(-0.80)
Year FEs	Yes	Yes	Yes	Yes	Yes	Yes
Firm FEs	No	Yes	No	Yes	No	Yes
Observations	8,538	8,289	8,538	8,289	8,538	8,289
Adjusted R^2	0.111	0.610	0.378	0.653	0.378	0.653

Table 3
T-test of Means of Matched Sample

This table reports univariate results comparing difference between the mean values of variables within the lender-provider relationship group and the non-relationship group after the propensity score matching procedure. Standard errors are clustered by firm. *, **, *** denote significance at the 10%, 5%, and 1% levels, respectively.

	Mean of LP Loans (Obs.= 1,165)	*Mean of Non-LP Loans (Obs. = 1,847)*	*Differences*
Ln (Facility Amount)	19.95	19.90	0.054
Ln (Maturity)	3.906	3.895	0.011
Ln (Total Assets)	8.572	8.584	-0.012
Ln (Firm Age)	3.453	3.462	-0.009
Market-to-Book	1.292	1.306	-0.014
Profitability	0.130	0.130	0.000
Fixed Assets	0.319	0.328	-0.009
Book Leverage	0.336	0.329	0.007
Total Covenants	1.183	1.075	0.108
Loan Type Dummy	0.042	0.045	-0.003
Bond Rating Dummy	0.750	0.764	-0.014

Table 4
Matched Sample Analysis

This table shows results from OLS regressions of the natural logarithm of loan spreads on the presence of a lender-provider relationship for the propensity score matched sample. *LP Relationship* is a binary variable that represents whether a firm received a loan from a lender who simultaneously was a plan provider for their retirement plan. *LP Relationship Leader* is a dummy variable that denotes whether the lender-provider was also the lead arranger on the loan that the borrowing firm received. *Prior Lender* is a dummy variable that denotes whether the lender was a lead arranger on the borrowing firm's loans within the last 5 years. The appendix provides definitions of control variables. *t*-statistics in parentheses are calculated from heteroskedasticity-robust standard errors clustered by firm. *, **, *** denote significance at the 10%, 5%, and 1% levels, respectively.

	Dependent Variable = *Ln (AID Spread)*					
	(1)	(2)	(3)	(4)	(5)	(6)
LP Relationship	-0.067**	-0.083**	-0.074**	-0.083**	-0.087**	-0.086**
	(-2.01)	(-2.21)	(-2.98)	(-2.47)	(-3.14)	(-2.70)
LP Relationship Leader					0.036	0.011
					(0.97)	(0.20)
Prior Lender			-0.183***	-0.122***	-0.184***	-0.123***
			(-5.56)	(-3.49)	(-5.58)	(-3.47)
Ln (Facility Amount)			-0.083***	-0.033*	-0.082***	-0.033*
			(-4.26)	(-1.80)	(-4.19)	(-1.80)
Ln (Maturity)			0.161***	0.052	0.161***	0.052
			(4.04)	(1.64)	(4.03)	(1.63)
Market-to-Book			-0.130***	-0.102**	-0.129***	-0.102**
			(-4.23)	(-2.90)	(-4.20)	(-2.90)
Ln (Total Assets)			-0.060***	-0.131**	-0.060***	-0.131**
			(-3.94)	(-2.84)	(-3.93)	(-2.87)
Ln (Firm Age)			-0.128***	0.247	-0.128***	0.249
			(-5.43)	(1.18)	(-5.44)	(1.19)
Profitability			-0.775**	-0.929**	-0.787**	-0.931**
			(-2.70)	(-2.29)	(-2.73)	(-2.30)
Fixed Assets			-0.180**	0.160	-0.179**	0.159
			(-2.70)	(0.80)	(-2.69)	(0.79)
Book Leverage			0.751***	0.567***	0.753***	0.567***
			(8.87)	(4.62)	(8.91)	(4.63)
Total Covenants			0.011	-0.016	0.011	-0.015
			(1.24)	(-1.25)	(1.23)	(-1.23)
Loan Type Dummy			0.166**	0.096**	0.165**	0.095**
			(3.21)	(2.13)	(3.22)	(2.12)
Bond Rating Dummy			0.035	0.034	0.034	0.034
			(0.83)	(0.41)	(0.81)	(0.41)
Year FEs	Yes	Yes	Yes	Yes	Yes	Yes
Firm FEs	No	Yes	No	Yes	No	Yes
Observations	3,012	2,746	3,012	2,746	3,012	2,746
Adjusted R^2	0.108	0.712	0.396	0.735	0.396	0.735

Table 5
Loan Spreads and Retirement Provider Changers

This table shows univariate and multivariate regressions of the natural logarithm of loan spreads on the presence of a lender-provider relationship when examining switcher firms. Panel A includes the control group of firms that received multiple loans from the same lender and always had a lender-provider relationship with that lender, and it includes the treatment group of firms that received multiple loans from the same lender, but that lender was a provider on the earlier loans but not a provider on the later loans. Panel B includes the control group of firms that received multiple loans from the same lender and never had a lender-provider relationship with that lender, and it includes the treatment group of firms that received multiple loans from the same lender, but that lender was not a provider on the earlier loans but was a provider on the later loans. *LP Relationship Leader* is a binary variable that denotes whether the lender-provider was also the lead arranger on the loan that the borrowing firm received. *Prior Lender* is a binary variable that denotes whether the lender was a lead arranger on the borrowing firm's loans within the last 5 years. Control variables include *Ln(Facility Amount), Ln(Maturity), Market-to-Book, Ln(Total Assets), Ln(Firm Age), Profitability, Fixed Assets, Book Leverage, Total Covenants,* and *Loan Type*. The appendix provides definitions of these variables. Year fixed effects are included in all specifications. *t*-statistics in parentheses are calculated from heteroskedasticity-robust standard errors clustered by firm. *, **, *** denote significance at the 10%, 5%, and 1% levels, respectively.

	Dependent Variable = *Ln (AID Spread)*			
	Panel A: *Provider to No Provider*		*Panel B:* *No Provider to Provider*	
	(1)	(2)	(3)	(4)
LP Relationship	0.037	0.030	-0.018	-0.099**
	(0.98)	(0.78)	(-0.45)	(-2.13)
LP Relationship Leader		-0.053		0.237*
		(-0.94)		(1.67)
Prior Lender		-0.095**		-0.075**
		(-2.20)		(-3.13)
Controls	No	Yes	No	Yes
Year FEs	Yes	Yes	Yes	Yes
Firm FEs	Yes	Yes	Yes	Yes
Observations	978	978	3,671	3,671
Adjusted R^2	0.694	0.724	0.681	0.707

Table 6
Lender-Provider Relationships and Intangible Capital

This table shows results from cross-sectional regressions of the natural logarithm of loan spreads on the interaction of intangible capital measures from Peters and Taylor (2017) and the presence of a lender-provider relationship. *LP Relationship* is a binary variable that represents whether a firm received a loan from a lender who simultaneously was a plan provider for their retirement plan. Columns 1 and 2 interacts the *LP Relationship* dummy with the yearly tercile rankings of capitalized R&D scaled by total assets (*Knowledge Capital)*. Columns 3 and 4 interacts the *LP Relationship* dummy with the yearly tercile rankings of capitalized SG&A scaled by total assets (*Organizational Capital). LP Relationship Leader* is a dummy variable that denotes whether the lender-provider was also the lead arranger on the loan that the borrowing firm received. *Prior Lender* is a dummy variable that denotes whether the lender was a lead arranger on the borrowing firm's loans within the last 5 years. Control variables include *Ln(Facility Amount), Ln(Maturity), Market-to-Book, Ln(Total Assets), Ln(Firm Age), Profitability, Fixed Assets, Book Leverage, Total Covenants,* and *Loan Type*. The appendix provides definitions of control variables. *t*-statistics in parentheses are calculated from heteroskedasticity-robust standard errors clustered by firm. *, **, *** denote significance at the 10%, 5%, and 1% levels, respectively.

	Dependent Variable = *Ln (AID Spread)*			
	Knowledge Capital		*Organizational Capital*	
	(1)	(2)	(3)	(4)
LP Relationship	-0.070**	-0.001	-0.026	0.018
	(-2.34)	(-0.04)	(-0.76)	(0.54)
LP Relationship x Mid	-0.021	-0.039	-0.104*	-0.084*
	(-0.32)	(-0.71)	(-1.84)	(-1.67)
LP Relationship x High	-0.099*	-0.114**	-0.159**	-0.131**
	(-1.90)	(-2.38)	(-2.60)	(-2.37)
Mid	-0.023	-0.036	0.097***	0.035
	(-0.18)	(-0.37)	(3.31)	(1.19)
High	0.004	-0.026	0.141***	0.059
	(0.03)	(-0.25)	(3.35)	(1.32)
LP Relationship Leader		-0.045		-0.037
		(-0.97)		(-0.82)
Prior Lender		-0.135***		-0.133***
		(-7.63)		(-7.54)
Controls	No	Yes	No	Yes
Year FEs	Yes	Yes	Yes	Yes
Firm FEs	Yes	Yes	Yes	Yes
Observations	8,289	8,289	8,289	8,289
Adjusted R^2	0.610	0.653	0.611	0.654

Table 7
Effect of Compensation and Assets Under Management

This table shows the multivariate regressions of the natural logarithm of loan spreads on the amount of compensation paid by the plan to the retirement provider. The sample includes only those firms that had lender-provider relationships. Columns 1 and 2 show results for the Cvijanovic et al. (2016) total compensation measure. Columns 3 and 4 show the results for the Total Compensation measure where the eligible indirect compensation is scaled by the number of providers in the plan. Columns 5 and 6 show the results for total compensation scaled by the number of active participants in the retirement plan. Columns 7 and 8 show the results of the total assets under management. *LP Relationship Leader* is a binary variable that denotes whether the lender-provider was also the lead arranger on the loan that the borrowing firm received. *Prior Lender* is a binary variable that denotes whether the lender was a lead arranger on the borrowing firm's loans within the last 5 years. Control variables include *Ln(Facility Amount), Ln(Maturity), Market-to-Book, Ln(Total Assets), Ln(Firm Age), Profitability, Fixed Assets, Book Leverage, Total Covenants*, and *Loan Type*. The appendix provides definitions of these variables. Year fixed effects are included in all specifications. *t*-statistics in parentheses are calculated from heteroskedasticity-robust standard errors clustered by firm. *, **, *** denote significance at the 10%, 5%, and 1% levels, respectively.

	Dependent Variable = *Ln (AID Spreads)*							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Ln (Total Compensation)	-0.011	-0.018						
	(-1.27)	(-0.98)						
Ln (Adj. Total Compensation)			-0.018	-0.017				
			(-1.44)	(-1.07)				
Ln (Total Comp./Participants)					-0.011	-0.008		
					(-1.00)	(-0.67)		
Ln (AUM)							-0.013*	-0.021
							(-1.72)	(-1.55)
LP Relationship Leader	0.041	-0.031	0.039	-0.035	0.039	-0.032	0.042	-0.030
	(1.27)	(-0.51)	(1.19)	(-0.57)	(1.19)	(-0.52)	(1.28)	(-0.49)
Prior Lender	-0.104**	-0.106**	-0.104**	-0.105**	-0.104**	-0.105**	-0.105**	-0.107**
	(-2.70)	(-2.81)	(-2.70)	(-2.80)	(-2.69)	(-2.80)	(-2.73)	(-2.83)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FEs	No	Yes	No	Yes	No	Yes	No	Yes
Observations	2,091	1,972	2,091	1,972	2,091	1,972	2,091	1,972
Adjusted R^2	0.414	0.670	0.415	0.670	0.414	0.670	0.415	0.671

Table 8
Lender-Provider Relationships and Loan Facility Amount

This table shows univariate and multivariate regressions of the natural logarithm of loan facility amount on the presence of a lender-provider relationship. *LP Relationship* is a binary variable that represents whether a firm received a loan from a lender who simultaneously was a plan provider for their retirement plan. *LP Relationship Leader* is a dummy variable that denotes whether the lender-provider was also the lead arranger on the loan that the borrowing firm received. *Prior Lender* is a dummy variable that denotes whether the lender was a lead arranger on the borrowing firm's loans within the last 5 years. The appendix provides definitions of control variables. *t*-statistics in parentheses are calculated from heteroskedasticity-robust standard errors clustered by firm. *, **, *** denote significance at the 10%, 5%, and 1% levels, respectively.

	Dependent Variable = *Ln (Facility Amount)*					
	(1)	(2)	(3)	(4)	(5)	(6)
LP Relationship	0.508***	0.328***	0.128***	0.208**	0.187***	0.244***
	(8.59)	(4.47)	(3.35)	(3.11)	(4.00)	(3.88)
LP Relationship Leader					-0.151**	-0.122
					(-2.29)	(-1.23)
Prior Lender			0.137***	0.067**	0.139***	0.070**
			(3.99)	(2.01)	(4.05)	(2.07)
Ln (AID Spread)			-0.362***	-0.404***	-0.360***	-0.405***
			(-5.88)	(-5.55)	(-5.86)	(-5.57)
Ln (Maturity)			0.194***	0.169***	0.193***	0.168***
			(3.66)	(3.89)	(3.67)	(3.86)
Market-to-Book			0.048	0.082**	0.046	0.082**
			(1.44)	(2.84)	(1.42)	(2.88)
Ln (Total Assets)			0.463***	0.392***	0.462***	0.394***
			(16.75)	(7.93)	(16.72)	(7.95)
Ln (Firm Age)			-0.109***	0.215	-0.108***	0.208
			(-3.65)	(1.26)	(-3.64)	(1.22)
Profitability			1.058***	0.827**	1.079***	0.828**
			(3.65)	(2.95)	(3.72)	(2.95)
Fixed Assets			-0.109	-0.160	-0.111	-0.159
			(-1.00)	(-0.56)	(-1.03)	(-0.56)
Book Leverage			0.046	0.026	0.041	0.027
			(0.33)	(0.19)	(0.30)	(0.20)
Total Covenants			0.079***	0.068***	0.078***	0.067***
			(6.89)	(4.94)	(6.87)	(4.94)
Loan Type Dummy			-0.387***	-0.281***	-0.385***	-0.278***
			(-7.78)	(-5.44)	(-7.75)	(-5.39)
Bond Rating Dummy			0.194**	-0.016	0.195**	-0.017
			(3.15)	(-0.23)	(3.17)	(-0.24)
Year FEs	Yes	Yes	Yes	Yes	Yes	Yes
Firm FEs	No	Yes	No	Yes	No	Yes
Observations	8,538	8,289	8,538	8,289	8,538	8,289
Adjusted R^2	0.094	0.552	0.471	0.585	0.472	0.586

Table 9
Lender-Provider Relationships and Loan Maturity

This table shows univariate and multivariate regressions of the natural logarithm of maturity on the presence of a lender-provider relationship. This table shows univariate and multivariate regressions of the natural logarithm of loan facility amount on the presence of a lender-provider relationship. *LP Relationship* a binary variable that represents whether a firm received a loan from a lender who simultaneously was a plan provider for their retirement plan. *LP Relationship Leader* is a dummy variable that denotes whether the lender-provider was also the lead arranger on the loan that the borrowing firm received. *Prior Lender* is a dummy variable that denotes whether the lender was a lead arranger on the borrowing firm's loans within the last 5 years. The appendix provides definitions of control variables. *t*-statistics in parentheses are calculated from heteroskedasticity-robust standard errors clustered by firm. *, **, *** denote significance at the 10%, 5%, and 1% levels, respectively.

	Dependent Variable = *Ln (Maturity)*					
	(1)	(2)	(3)	(4)	(5)	(6)
LP Relationship	-0.009	0.126***	0.026	0.113***	0.034*	0.119***
	(-0.50)	(4.94)	(1.50)	(4.61)	(1.67)	(4.44)
LP Relationship Leader					-0.020	-0.020
					(-0.77)	(-0.49)
Prior Lender			0.076***	0.077***	0.076***	0.077***
			(4.09)	(3.72)	(4.11)	(3.74)
Ln (AID Spreads)			0.168***	0.114***	0.168***	0.114***
			(8.09)	(3.89)	(8.10)	(3.88)
Ln (Facility Amount)			0.049***	0.047***	0.048***	0.047***
			(4.08)	(4.20)	(4.08)	(4.17)
Market-to-Book			-0.028**	-0.038**	-0.028**	-0.038**
			(-2.56)	(-2.10)	(-2.57)	(-2.09)
Ln (Total Assets)			-0.058***	0.015	-0.058***	0.016
			(-5.34)	(0.66)	(-5.36)	(0.67)
Ln (Firm Age)			-0.018	-0.129	-0.018	-0.130
			(-1.38)	(-1.52)	(-1.38)	(-1.54)
Profitability			0.493***	0.674***	0.496***	0.674***
			(3.61)	(3.81)	(3.64)	(3.82)
Fixed Assets			-0.063*	-0.351**	-0.063*	-0.351**
			(-1.68)	(-2.41)	(-1.69)	(-2.41)
Book Leverage			-0.035	-0.194**	-0.036	-0.194**
			(-0.71)	(-2.33)	(-0.72)	(-2.33)
Total Covenants			0.002	-0.005	0.002	-0.005
			(0.31)	(-0.87)	(0.31)	(-0.88)
Loan Type Dummy			-0.049	-0.038	-0.049	-0.037
			(-1.39)	(-1.05)	(-1.39)	(-1.05)
Bond Rating Dummy			0.014	-0.057	0.014	-0.057
			(0.64)	(-1.58)	(0.65)	(-1.58)
Year FEs	Yes	Yes	Yes	Yes	Yes	Yes
Firm FEs	No	Yes	No	Yes	No	Yes
Observations	8,538	8,289	8,538	8,289	8,538	8,289
Adjusted R^2	0.047	0.222	0.107	0.238	0.107	0.238

Table 10
Lender-Provider Relationships and Loan Covenants

This table shows multivariate linear probability models of the existence of covenants and subsequent covenant violations. Columns 1 and 2 show the total number of covenants included in the loan package. Conditional on the inclusion of financial covenants, Columns 3 and 4 shows the probability of violating those covenants. Financial covenants are based upon current ratios, total net worth, or tangible net worth, and violation is defined as in Chava and Roberts (2008). All analyses are at the package level and not facility level. *Package Relationship* is a binary variable that denotes whether a facility inside the package had a lender-provider relationship. *Ln (Avg. Spread)* is the natural logarithm of the average spread across facilities within a package. *Ln (Deal Size)* is the natural logarithm of the total package deal size. *Default Distance* is the absolute value of the difference between the firm's current ratio or net worth and their respective covenant threshold. In cases where the firm has both covenants, the minimum distance is taken. The appendix provides definitions of the control variables. *t*-statistics in parentheses are calculated from heteroskedasticity-robust standard errors clustered by firm. *, **, *** denote significance at the 10%, 5%, and 1% levels, respectively.

Dependent Variable =	*Total Covenant Intensity*		*Financial Covenant Violation*	
	(1)	(2)	(3)	(4)
Package Relationship	-0.349**	-0.088	-0.028	-0.039
	(-3.06)	(-0.81)	(-0.30)	(-0.49)
Default Distance				-0.001**
				(-3.07)
Ln (Avg. Spread)		0.134		-0.074
		(1.45)		(-0.98)
Ln (Deal Size)		0.420***		0.084*
		(8.09)		(1.89)
Market-to-Book		-0.159**		-0.065
		(-2.38)		(-1.43)
Ln (Total Assets)		-0.617***		-0.045
		(-11.97)		(-1.00)
Ln (Firm Age)		-0.157*		-0.060
		(-1.77)		(-1.40)
Profitability		0.096		-0.590**
		(0.12)		(-2.16)
Fixed Assets		-0.220		0.542***
		(-1.00)		(4.02)
Book Leverage		0.474		0.148
		(1.37)		(0.62)
Bond Rating Dummy		0.080		0.242**
		(0.53)		(2.20)
Loan Type Dummy		0.085		0.184
		(0.43)		(0.89)
Year FEs	Yes	Yes	Yes	Yes
Observations	5,895	5,895	301	301
Adjusted R^2	0.041	0.111	0.043	0.429

Table 11
Lender-Provider Relationships and Percentage of Loan Held by Lenders

This table shows univariate and multivariate regressions of the percentage of loan held by each syndicate member on the presence of a lender-provider relationship (*PercentageAllocation*). *LP Relationship* a binary variable that represents whether a lender was simultaneously a plan provider for the borrowing firm's retirement plan. *Leader* is a binary variable that denotes which lender is the lead arranger on the loan. *LP Relationship x Leader* is a binary variable that denotes whether the lender-provider was also the lead arranger on the loan that the borrowing firm received. *Prior Lender* denotes lead arranger on the borrowing firm's loans within the last 5 years. The appendix provides definitions of the control variables. *t*-statistics in parentheses are calculated from heteroskedasticity-robust standard errors clustered by firm. *, **, *** denote significance at the 10%, 5%, and 1% levels, respectively.

	Dependent Variable = *PercentageAllocation*					
	(1)	(2)	(3)	(4)	(5)	(6)
LP Relationship	2.322***	1.771***	1.625***	0.936**	1.905***	1.164***
	(4.26)	(5.79)	(3.58)	(3.27)	(5.91)	(4.71)
Leader					19.966***	12.303***
					(10.38)	(12.34)
LP Relationship × Leader					-3.927**	-2.795**
					(-2.73)	(-3.05)
Prior Lender			9.014***	7.642***	-9.925***	-4.172***
			(18.57)	(19.17)	(-5.11)	(-3.86)
Ln (AID Spreads)			-0.777*	-0.850	-0.985**	-0.851
			(-1.77)	(-0.99)	(-2.37)	(-1.05)
Ln (Facility Amount)			-1.923***	-0.857***	-1.604***	-0.768***
			(-8.27)	(-5.71)	(-8.00)	(-5.37)
Ln (Maturity)			-2.067***	-1.890***	-1.765***	-1.694***
			(-5.33)	(-4.18)	(-5.21)	(-4.14)
Market-to-Book			0.162	-0.338	-0.031	-0.169
			(0.63)	(-0.73)	(-0.14)	(-0.42)
Ln (Total Assets)			-1.423***	-1.411**	-1.397***	-1.116**
			(-6.82)	(-2.46)	(-7.43)	(-2.09)
Ln (Firm Age)			0.176	-2.276	0.182	-2.140
			(0.61)	(-1.06)	(0.68)	(-1.11)
Profitability			-8.216**	-0.890	-6.657**	-0.683
			(-2.64)	(-0.30)	(-2.47)	(-0.25)
Fixed Assets			0.780	6.268*	0.459	5.232
			(0.92)	(1.73)	(0.62)	(1.49)
Book Leverage			-0.699	4.247**	-0.418	4.339**
			(-0.68)	(2.01)	(-0.45)	(2.20)
Total Covenants			-0.441***	-0.143	-0.343**	-0.087
			(-3.51)	(-1.20)	(-2.91)	(-0.73)
Loan Type Dummy			2.306**	2.132**	1.179*	1.782**
			(2.87)	(3.22)	(1.67)	(2.93)
Bond Rating Dummy			-0.996*	0.350	-1.061**	0.230
			(-1.70)	(0.58)	(-2.02)	(0.39)
Year FEs	Yes	Yes	Yes	Yes	Yes	Yes
Firm FEs	No	Yes	No	Yes	No	Yes
Observations	23,923	23,893	23,923	23,893	23,923	23,893
Adjusted R^2	0.017	0.485	0.260	0.543	0.364	0.579