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Managerial style and bank loan contracting

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Managerial Style and Bank Loan Contracting

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Managerial Style and Bank Loan Contracting

Abstract

This paper provides direct evidence that managerial style is a key determinant of the firm's cost of capital, in the context of private debt contracting. Applying the novel empirical method by Abowd, Karmarz, and Margolis (1999) to a large sample that tracks job movement of top managers, we find that managerial style is a critical factor that explains a large part of the variation in loan contract terms. The loan-term-related managerial styles correlate with managerial styles of firm performance and corporate decisions, implying that certain managers achieve better firm performance via lower cost of capital and other desirable non-price loan terms. We further find direct evidence that banks "follow" managers' job changes and offer loan contracts with preferential terms to their new firms. Some of the preferred managerial styles reflect managers' personal characteristics, such as managerial ability, authority and conservatism.

1. Introduction

Cost of capital, inevitably, is one of the most important inputs of firm operation. To a great extent, it reflects the information asymmetry between the inside management and outside stakeholders. Cost of private debt is one typical example, as the lenders have more incentive to reduce the information asymmetry and actively monitor borrower's operation and performance.

Loan pricing reflects the borrower's default risk, conditional on the information content of the lenders¹. In the extensive literature investigating information asymmetry between lenders and borrowers (Flannery, 1986; Houston and James, 1996; Diamond, 1991; Schenone, 2010; Dass and Massa, 2011), and among syndicated lenders (Bolton and Scharfstein, 1996; Bris and Welch, 2005; Sufi, 2007), the top managers of borrowers are usually left out of the picture. This is surprising given that top managers, being the key agents of shareholders, hold the most comprehensive information set regarding firms and enjoy strict authority over the decision-making process. Thus, if available, information such as how managers evaluate risks and make decisions will surely enhance the accuracy of loan contract evaluation.

Motivated by a growing body of literature that relates managerial style to corporate decision-making, this paper looks at whether and how the managerial style helps to explain the variation in cost of capital in the context of bank loan contracting.

Managerial style, econometrically proxied by manager's fixed effect, captures the unobservable time-invariant attributes and nature of the individual manager, including but not limited to her confidence, cultural background, risk-preference,

¹ The cost of private debt is conditional on other non-price terms. For example, lenders monitor borrower's operation during the maturity of the debt, and may acquire partial authority to influence the corporate operations when covenants are violated (Jiang, Li and Shao, 2010; Nini, Smith and Sufi, 2009a, 2009b; Roberts and Sufi, 2009). Under the occurrence of default or bankruptcy, the lenders can be protected with certain advantage over shareholders through collateral or seniority of the debt (Bharat, Panchapagesan and Werner, 2010; Li, 2012).

credibility, etc. A manager with certain style displays consistent characteristic ways of decision-making, which makes it extraordinarily important in explaining variations in corporate policies, performance, etc. For example, Bertrand and Schoar (2003) find that the heterogeneity of the manager fixed effect is not only a powerful explanatory variable for the unknown part of firm performance and firm decisions in investment, finance and strategy, but it is also persistent for the same manager across firms. The “style” associated with better firm performance is usually present in firms with better governance and is better compensated (Graham, Li and Qiu, 2012). Dyreng, Hanlon and Maydew (2010), and Bamber, Jiang and Wang (2010) relate managerial style to firms’ tax avoidance and voluntary financial disclosure choices and find it to be significant, in addition to the other well documented economic determinants. Fee, Hadlock and Pierce (2013) join the debate on the existence and significance of managerial style by studying exogenous CEO turnovers and finding that a firm's policy does not display abnormally pronounced variation after an exogenous CEO turnover and that the F-test is inappropriate and inaccurate for testing the joint significance of styles.

Noteworthy, certain managers’ demographic characteristics, personal background or education, may be related or contribute to the managerial style. For example, an MBA degree promotes aggressive strategies, and being an early birth cohort is related to more conservative decision-making (Bertrand and Schoar, 2003). Managers with military or financial background display conservative or precise character, respectively (Bamber, Jiang and Wang, 2010). A number of works further explore the unobserved (at least not explicitly observable to outsiders) attributes that relate to managerial style, including overconfidence (Malmendier and Tate, 2005; Galasso and Simcoe, 2010; Hirshleifer, Low and Teoh, 2012; Malmendier, Tate and Yan, 2011; Kolasinski and Li, 2012; Dezso and Ross, 2012), conservatism (Vasvari, 2006), risk aversion (Graham, Harvey and Puri, 2012; Coles and Li, 2013), media exposure (Malmendier and Tate, 2009), etc. Dezso and Ross (2012), for example, find that banks grant loans at lower prices to firms in which managers display optimism by delaying execution of their vested options.

Given that managerial style is a critical component in corporate decision-making, information-sensitive lenders are very likely to value and incorporate manager-specific “style” into loan contracting, if it has information content beyond the firm’s observable attributes. First, top managers are responsible for the firm’s operational performance and other strategic decisions. If a manager’s decision-making is consistent with her “style”, lenders are better able to assess the contract risk. Second, a firm’s credit choices reflect the managers’ personal credit choices to some degree. For example, using managers’ primary home purchase information, Cronqvist, Makhija and Yonker (2012) find that a firm’s leverage choice is consistent with the manager’s personal choice. Thus, managers credit preferences (or even creditability) through prior lending activities provide lenders with extra information. Third, the literature on social networks shows that networking through business connections is a valuable activity for top management (Hochberg, Ljungqvist and Lu, 2007; Engelberg, Gao and Parsons, 2012). It facilitates the efficiency of information transmission and mitigates agency conflict (Kuhnen, 2009). Therefore, if a manager changes jobs, her prior connections with the bank may facilitate the use of private debt in the new firm, and the prior loan contracts also provide additional information on the contracts to be made in the new firm.

This paper aims to fill the gap by exploring managerial style in bank loan contracting and investigating some related issues. First, we examine whether managerial style is a key determinant of the financial contract, and to what extent it explains the variation in contract terms; secondly, whether managerial style embedded in the loan contract is consistent with the styles related to corporate decision-making and firm performance, and whether it is persistent over time. Thirdly, we look at how lenders perceive and value managerial style.

We use a large dataset that tracks the movement of CEOs and CFOs across the S&P 1500 firms from 1992-2010 and employ the novel empirical approach by Abowd, Karmarz, and Margolis (1999). We find that managerial style is one of the most important factors in explaining the variation of the loan contract, incremental

to the observable firm financial attributes and unobservable firm and year fixed effect. Economically, the loan spread-related managerial style explains 21.7% of the variation in loan spread, i.e. more than the part explained by the firm fixed effect (6.6%). Similarly, covenant-related managerial style explains 29.5% of the variation in number of covenants, which is more than the part explained by the firm fixed effect (12.1%) and by the combination firm control and year fixed effect (24.0%). The managerial styles also vary by an economically large magnitude. The loan spread-related style, for example, has a standard deviation of 77 basis points. The interquartile difference for the managerial style associated with the number of covenants is around 0.98.

In addition, the loan-term-associated managerial styles are also correlated with previously found styles in corporate policies. For example, we find managers related to lower leverage ratios are associated with lower loan spreads. Managers with better performance are offered smaller spreads. Also, managers, whose style is associated with preferential loan terms, such as better prior bank connections, fewer covenants, and less requirement to use performance pricing or secured loans, are granted higher compensation.

We then examine if the managerial fixed effect associated with loan terms is persistent when managers change jobs or, in other words, if lenders value the same managerial style across firms. To separate the managerial fixed effect as between the old firms and new firms, we take two approaches. First, we assume that the firm fixed effect in the old firm is not related with the fixed effect of the new firm, and regress the variables of interest on control variables, year fixed effects and manager fixed effects; excluding the firm fixed effects. Thus the correlation between managerial fixed effects of the old and new firms reflects the consistency of managerial fixed effect across firms. This approach is subject to the concern that the firm fixed effect of the old firm may be correlated with the fixed effect of the new firm. Thus, our second approach is to regress the variables of interest on the control variables and the firm and year fixed effect for both the new and old firms. The

residual from both regressions should contain the unobserved managerial fixed effect, but not the common time-invariant effect between the old and new firms. We then regress the residual of the new firm on that of the old firm. The correlation indicates the persistency of the managerial style. Under both approaches, we find that managerial style is persistent across firms in which the manager is employed.

To directly examine if lenders are aware of the managers' style, and offer debt contract to managers' new firms, we examine the new firms' new lenders that emerge from the manager's prior connections and compare them to a matching sample. The matching sample is constructed by assigning the moving manager to a random firm that does not have a top manager. We find that 41% of moving managers "bring in" their previously connected banks to the new firms, compared with only 2.5% of the matching sample. These "brought in" banks offer loan contracts with more favorable terms, including lower spreads, fewer covenants, less requirement for collateral, etc. This evidence directly supports the argument that managers' specific information is valued by lenders and that previous banking relationships reduce the information asymmetry.

Further, we examine if the top managers' characteristics are associated with loan contract styles. We find that managers with higher general ability (measured by the *General Ability Index* from Custodio, Ferreira and Matos, 2012) and powerful CEOs (Morse, Nanda and Seru, 2011) obtain lower spreads. Managers born in World War II and the great depression period are also associated with lower spreads, less covenants and other preferential loan terms.

To ensure that our results are not driven by our choices of top managers, we perform robustness checks with alternative samples. We find consistent results when the sample is limited to moving CEOs or extended to top management teams. And when we include firms with multiple moving managers in the same year, and isolate the effect of each mover, our results are still robust. We acknowledge that the price and non-price terms of the loan contract are jointly determined. We use 2SLS

to control for the endogeneity of loan price, debt maturity and collateral requirement. Our main story line remains intact.

To further strengthen our findings in a strictly exogenous setting, we follow Fee, Hadlock and Pierce (2013) and compare the changes in loan terms around CEO deaths. Using the difference-in-difference approach, our results are robust and consistent with the main argument. This further supports the view that managerial style is an important determinant of firm operations.

This paper makes several contributions to the literature. To the best of our knowledge, it is the first attempt to directly examine the importance of managerial style in the firm's cost of capital. We show that information content embedded in manager's style is critical in determining the terms of a loan contract. Managerial style significantly mitigates the information asymmetry when the manager's lending activities in the previous firms are known. Second, our work provides new evidence on how private debt is priced. Manager's prior business connections with banks are valuable to the new firm; not only do prior related banks "follow" the manager's move, but they also offer contracts with preferential terms that reflect the information content.

Third, this paper adds to the growing literature on managerial style. By linking managerial style with cost of capital, we provide a mechanism through which managerial style is related to a firm's decision making and performance. Also, this paper fits well into the debate on the existence and significance of managerial style and provides strong and supportive evidence that banks "follow" moving managers and a CEO's exogenous death leads to changes in loan contract terms.

The rest of paper proceeds as follows. In Section 2, we start by describing the method and constructing a sample that enables tracking managerial style across firms. Section 3 tests the main hypothesis on the existence and significance of loan contract-related managerial style. In Section 4, we examine directly if banks value and incorporate managerial style into the contract. Section 5 provides additional

tests that relate loan contract managerial style to manager's characteristics, personal background and compensation. Robustness checks are presented in Section 6, and Section 7 concludes.

2. Method, Sample and Model

2.1 Method

To isolate managerial style, we face the challenge of separating the manager fixed effect from the firm fixed effect in order to identify the managerial styles of managers who have changed jobs (referred to here as movers) during our sample period. This is possible only if the two are not perfectly correlated. The traditional approach² for separating the manager and firm fixed effect is to use a sample that tracks only the movers and the firms that have employed them. This approach faces two shortcomings - limited sample size and thus limited generalizability of the results - because we examine only movers, who may be different from non-movers. And, ensuring that movers are involved in loan contract activities in both the old and new firms further constrains us to a very limited number of observations.

Thus, we adopt the method of Abowd, Karmarz, and Margolis (1999, AKM hereafter). This method is relatively novel in the finance area. Graham, Li and Qiu (2012) apply it in examining the managerial style of compensation. We herein also give a brief description of the methodology³. The AKM method circumvents the small sample problems and selection bias by means of a unique sample construction. The basic idea is to group the movers and related non-movers into clusters. Start with one mover and all the firms that she has worked for, add all the managers that have worked for these firms; then repeatedly add all the firms that these managers have ever worked for until no more related managers or firms can be added. Next, select another mover and form a new cluster of managers and firms. The process continues on to a final sample that includes not only all the movers but

² See, e.g. Bertrand and Schoar (2003).

³ Graham, Li and Qiu (2012) provide a detailed comparison between the mover-dummy-variable approach, spell approach and AKM approach.

also the non-movers connected via related firms. In this way, the manager fixed effect for a non-moving manager can be estimated if the firm she works for has employed a mover, which makes the results more generalizable.

2.2 Data and Sample

We start the sample construction by identifying the top managers in S&P 1500 firms. We get a manager's full name and job title from Execucomp, 1992 to 2010. The moving manager must have worked for at least two different firms in the Execucomp universe. For our main sample, we require that the mover be a CEO or CFO in either the old firm or new firm. This ensures that the managers have significant influence over corporate decision-making. CFO movers are included because the literature argues that they are influential in financial decisions. We further require that the manager work at least for 2 years⁴ (two consecutive Compustat statements) in both the old and new firm, so as to be considered strategically involved in firm operations. We eliminate firms where multiple moving managers are in place⁵, since it is more difficult to separate managerial styles among several managers. In Section 6, we perform robustness checks by including these movers and firms in the sample.

From the sample of moving managers, we compile the AKM clusters of moving managers, their related firms and the firms' related non-movers. The non-movers must also be active CEOs or CFOs, to ensure that the managerial styles of movers and non-movers are comparable. For each firm with a qualified mover, we keep all the firm-year observations, including years in which the firm has no movers⁶. We then merge the sample with Dealscan to incorporate the bank loan information. We

⁴ A number of works, including Bertrand and Schoar (2003) and Bamber, Jiang and Wang (2010), require that managers stay at least three years in each firm. In our test, we find that, on average, the manager's previously related banks offer a loan contract to the new firm 1.6 years after the manager joins the new firm, we thus set the cut off line at two years. However, when we impose the three year requirement to the sample, the results are even more significant in terms of economic magnitude.

⁵ This refers to the situation where in one firm-year there is more than one mover in the firm.

⁶ This ensures more accurate estimation of firm fixed effect, and makes it possible to estimate managerial styles of non-movers in these years.

eliminate movers (and related clusters of firms and non-movers) that are not involved in loan activities in either the old and new firms. Finally, we merge the sample with Compustat for the financial statement information. We obtain the anti-takeover provisions and board structures from RiskMetrics, and institutional ownership from Thomas Reuters 13F.

Our final sample comprises 320 moving managers, 1895 non-movers, 1189 involving firms and 11473 loan facilities, from 1992 to 2010. The summary statistics are presented in Table 1. We also include the firm attributes of the entire Execucomp universe for comparison. The means by which we calculate the variables are described in the Appendix.

In general, our sample does not display much disparity compared with the entire Execucomp universe. As shown in Table 1, the sample firms are of similar size (12.78 billion in total assets) as the entire Execucomp universe (12.76 billion). From the capital structure side, the sample firms are slightly higher leverage (0.309) than the Execucomp universe (0.234) and Z-score (1.731, versus 1.654 for the Execucomp universe), in line with the use of private debt for sample firms.

The average loan contract is for 560 million dollars, priced at 135 basis points (over LIBOR), matures in 45 months, and has 0.992 covenants; and 27.8% of the loans are secured.

2.3 Model

To separate the managerial fixed effect from the firm fixed effect, we use the following model.

$$y_{i,t} = \alpha_t + \gamma_i + \beta X_{i,t-1} + \sum m_j + \varepsilon_{i,t} \quad (1)$$

in which, $y_{i,t}$ is the variable of interest and includes the price and non-price terms of the loan contract. α_t is the year fixed effect, γ_i is the firm fixed effect, $X_{i,t}$ is

the time variant control variables. We use the latest financial information prior to loan origination as controls. m_j is the manager fixed effect and $\varepsilon_{i,t}$ the error term.

We also want to examine the relative importance of managerial style in determining the loan contract. Using the coefficient estimates from the AKM approach (equation (1)), we are able to isolate the importance of the different factors: manager fixed effect, firm fixed effect, time-variant firm control and time fixed effect. The decomposed importance of each factor is calculated by dividing the covariance of the dependent variable and the factor by the variance of the dependent variables⁷.

3. Managerial Style and the Loan Contract

3.1 How important is managerial style for the loan contract?

We first examine if manager style explains the variation in cost of debt and other non-price contract terms. We include firm size, leverage, market-to-book ratio, Z-score, profitability and tangibility as our time variant firm control variables. Additionally, we control for firm governance via the G-Index (number of anti-takeover provisions, compiled by Gompers, Ishii and Metrick, 2003), number of board members, percentage of outside directors and the institutional ownership ratio. To further account for some observable variations among managers, we control for manager's age and tenure. Our main tests examine several loan terms, including loan price (spread over LIBOR), time to maturity, collateral requirement, loan size, number of covenants, number of syndicated lenders, loan concentration, prior lending relationship, and performance pricing. We also control for loan purpose, loan type and loan ratings in the main tests. The results are reported in Table 2, Panel A.

As we recognize that loan terms are jointly determined, robustness is examined via two approaches. First, as in Table 2, Panel B, the variables of interest are limited

⁷ See Graham, Li and Qiu (2012) for more details.

to loan spread, debt maturity and collateral requirement; all the other loan terms are designated as control variables. The results are very similar to those in Table 2, Panel A. The correlations between the two sets of results (Table 2, Panel C) are close to one and highly significant. Hence, in the following tests, we use the manager fixed effects obtained from Panel A. Our second approach, which involves the use of the structural model, in which loan price, maturity and collateral requirement are interdependently related, is detailed in section 6.2.

The results in Table 2 show that managerial style is very important in explaining the terms of the bank loan contract. As shown in Panel A, managerial style accounts for 12%-33% of the variation in loan terms, which, in all the loan terms that we examine, explains a higher portion of variations than the firm fixed effect. And for some terms, such as loan maturity, collateral requirement, number of covenants, prior lending relationship, and performance pricing, managerial styles account for even more of the variation than do firm control and year fixed effect combined. This strongly supports our conjecture that managerial style is a key factor in bank loan contracting. In addition, for most of the loan term related managerial styles (except for loan concentration and maturity), over half of the managers exhibit significant managerial styles, comparable to the results in Bamber, Jiang and Wang (2010).

We report the distribution and the correlation of the loan-term related managerial styles in Table 3, Panel A and B, respectively. To facilitate the comparison, we de-mean the managerial styles. The managerial styles associated with loan terms display large variation. For example, the spread related managerial style has a standard deviation of 77 basis points and varies by 90 basis points between Q1 and Q3. The standard deviation for style associated with number of covenants is 0.929. The interquartile for loan size is about 1.1 percent. Similar economic significance holds for managerial style in other loan terms.

In addition, these loan-term related managerial styles are correlated, as shown in Table 3, Panel B. For example, managerial style for higher spread is also related to lower loan amounts, higher syndicate concentrations, shorter maturity, more

stringent collateral requirement, etc., implying that lenders value managerial style consistently in when offering contracts.

3.2 Is managerial style embedded in loan contract related to that in corporate policy and firm performance?

Given that managerial style is a key factor in the bank loan contract, we would like to know if the styles associated with lower cost of debt and other preferential non-price terms are related to better corporate decision-making and to better firm performance.

We follow the prior literature and examine the top management involved in decision-making and firm performance, including capital expenditure, R&D expenditure, leverage ratio, cash holding ratio, advertising expenditure, SG&A, number of acquisitions during the fiscal year, and the firm's return-on-assets. The results are shown in Table 4. Each cell represents the coefficient from one regression of a single loan term related managerial style on one corporate decision (or firm performance) related managerial style.

Not surprisingly, the managerial styles associated with the loan contract are consistently related to those for financial policies and firm performance. Take the loan spread for example: managerial style associated with higher loan spread is also related to higher leverage, lower capital expenditure, low spending on SG&A, fewer acquisitions, and poor performance (measured with ROA). And managerial styles related to longer debt maturity or lower requirement for collateral are associated with better firm performance. These results build a connection between the financial contract and desirable managerial styles that contribute to better corporate decisions and firm performance. Lower cost of debt, and preferential non-price loan terms are very likely to be one channel through which the firm's performance is improved.

3.3 Is managerial style persistent across old and new firms?

The previous results are based on the assumption that manager fixed effects exist and are persistent across firms. One may question whether the empirical results from pooled sample could be driven by unobserved firm related factors in either the old or the new firm, but not both. For example, it is possible that the managerial style associated with lower loan spreads, is driven by the high credibility of the old firm, which may not be present in the new firm. In this section, we address this concern by looking at the correlation of movers' managerial style as between old and new firms. We follow Bertrand and Schoar's (2003) two approaches. First, we use the following model for the mover's fixed effect in old and new firms *without* controlling for the firm fixed effect, as in this case the firm fixed effect and managerial fixed effect are perfectly correlated.

$$y_{i,t} = \alpha_t + \beta X_{i,t-1} + \sum m_j + \varepsilon_{i,t} \quad (2)$$

Then we regress the manager fixed effect for the new firm on that for the old firm, to test whether a single manager's style is related across firms.

This approach assumes that the unobserved time invariant firm fixed effects are not systematically related across old and new firms. However, it is likely that managers are not randomly assigned to the new firm, but are matched according to firm attributes and managerial characteristics. In other words, the old and new firms share some unobserved features such that the same manager fits into both positions. Assuming this is the case, it is possible that the correlation between managerial styles of the old and new firms captures the similarity of firm fixed effects rather than the consistency of managerial style. To address this issue, we adopt the second approach: control for the firm fixed effect but not the managerial fixed effect, as in equation (3). In this way, the residual from the regression should contain the managerial fixed effect that is not related to the time invariant firm effect. We thus regress the average residual for the new firm on that for the old firm, to get a clearer picture of the consistency of managerial style across firms.

$$y_{i,t} = \alpha_t + \gamma_i + \beta X_{i,t-1} + \varepsilon_{i,t} \quad (3)$$

It is noteworthy that by separately examining the managerial style in the old and new firms, the statistical significance could be reduced due to the smaller number of observations and contamination from the firm fixed effect.

The results are shown in Table 5. Each cell gives the correlation of underlying managerial style as between the old and the new firms. Column (1) shows the results for the first approach, which drops the control for firm fixed effect. Column (2) shows the results for the second approach. As in column (1), of the nine managerial styles, eight are positive and significantly related across firms. The results in column (2) have lower statistical significance, but still five of nine styles are significantly correlated across old and new firms, including the three main terms: loan spread, debt maturity and collateral requirement. And most importantly, the results for loan spread managerial style are similar in economic importance under both approaches.

These results provide additional evidence that managerial style embedded in the loan contract is persistent and that managers associated with preferential loan contracts in the old firms display similar styles in the new firms.

4. Do Banks Value Managerial Style?

In the previous section, we showed that managerial style is a critical determinant in explaining loan contract variations and that it is related to other corporate decisions. Here, we directly investigate if banks value managerial style, and utilize this information in designing loan contracts for moving managers' new firms.

To test if the banks actively "follow" the movement of managers and offer contracts to the manager's new firms, we construct a unique list of banks for each manager's new firm. These banks have prior relationships with the movers through lending activities in the mover's old firm but not with the new firm, and these banks have also been involved in the loan contracts during the period when the mover

works for the new firm. We find that, on average, over 41% of these managers “bring” their previously connected banks to the new firms.

To set a benchmark for comparison, we would like to know if, given that the manager had not worked for the new firm, would the bank still have offered a financial contract to the new firm. Therefore, for each new firm with a mover, we locate a matching firm that does not have movers in the period $[t - 3, t + 3]$, where t is the year in which the mover changes firms. The firm is required to have loan contracts during both $[t - 3, t]$ and $[t, t + 3]$, in the same two-digit SIC industry, and firm size is between 80% and 120% of the new firm’s size. Among all the candidates (if more than one), we pick the one with market-to-book ratio closest to that of the new firm. We then check within the matching sample, how many firms have new financial contracts in $[t, t + 3]$ offered by banks that were related to the mover in question while she was in her old firm. In doing this, we assume that the manager in question had moved to the matching firm instead. We find that only 2.5% of the matching firms have a new bank relationship that is part of mover’s previous bank network, i.e. much lower than the 41% found above. This demonstrates that banks do “follow” managers when they switch firms. The results are shown in Table 6.

In addition, we examine if these “following” banks offer loan contracts that incorporate information on manager style. Since these banks have previously had lending relationships with the moving managers, we expect that, in cases where they approve of the managerial style, they will offer loan contracts with lower prices and preferential terms.

The results validate our conjecture. We find that these banks are involved in loans with lower spreads and fees, fewer covenants, and fewer syndicated lenders. This supports the information asymmetry theory that previously related banks offer better loan contracts with reduced information opacity. It also provides strong evidence that lenders value information about managers, including information on managerial style.

5. Loan Contract Related Managerial Style and Manager's Attributes

Since good managerial style is associated with better loan terms, we want to know (1) if these desirable styles are compensated, and (2) if the styles are related to the manager's characteristics.

We first test if loan term related managerial styles are compensated. We obtain manager compensation information from Execucomp. We use the cash compensation (annual salary plus bonus) to capture the base setup of the compensation and short-term incentives, and the total annual compensation (item *tdc1*) to capture the overall compensation, including long-term incentives. The results are in Table 7, Panel A. Each cell represents the coefficient from one regression of compensation on the underlying loan term related managerial style, controlling for firm specific characteristics. For example, the first cell indicates that the spread related managerial style is positively related to cash compensation. And one standard deviation of the covenant managerial style (0.98 covenant) is related to 0.12% higher the total compensation (about 8,000 dollars). Moreover, prior bank relationship is also related to higher compensation at more economically significant level. However, the compensation displays limited variation with respect to loan term related managerial styles. One explanation is that, a compensation package is constructed on firm specific characteristics, such as firm size, leverage, market-to-book ratio, firm performance, etc., for which we have already controlled. Thus if favorable managerial style is related to lower cost of debt and thus better firm performance, managers will be compensated based on the evaluation of firm performance, but not of the cost of debt. Therefore, in our test, we are able to find only limited evidence that favorable styles are compensated.

Prior studies have shown that managers' personal background, experience and other characteristics are associated with the generally unobserved managerial style. We follow the literature, and test several key personal characteristics that are associated with manager's experience, risk-aversion, conservatism and authority. More specifically, we use the *General Ability Index* compiled by Custodio, Ferreira

and Matos (2012) as a proxy for lifetime experience⁸ and the birth cohort during World War II and the great depression period to proxy risk-aversion and conservatism. Manager's power index (developed by Morse, Nanda and Seru 2011) serves as a proxy for authority in the firm⁹.

The results are shown in Table 7, Panel B. Each cell represents the coefficient from a regression of one managerial style on one particular manager's characteristics. As regards the spread related managerial style, for example, managers with higher *General Ability Index* are related to lower spreads, indicating that better abilities and network connections contribute to lower debt costs. Managers born during WWII or the great depression period are also related to lower spreads, consistent with the view that these managers are more conservative and risk averse in nature. We also find that managers with higher authority in the firm are associated with lower spreads. The coefficients on number of covenants and collateral requirement tell a consistent story.

6. Robustness Checks

We perform several robustness checks to ensure that our results are not driven by sample selection issues or spurious correlations.

6.1 Alternative samples

Our main sample covers movers who are CEOs or CFOs in either old or new firms. And we require that there be no more than one mover in one firm-year. This may lead to a sample selection problem. To address this concern, we compile three additional samples: one that further restricts the movers to CEOs, and one that expands the focus from CEOs and CFOs to the top management team, defined as all

⁸ CEOs with greater general ability index (generalists, in contrast to "specialists" with lower general ability index) have longer and more diversified executive working experience. The index is compiled with the personal working and network information from BoardEX. Though the index is time variant, the changes are relatively small for one manager after she becomes CEO or CFO.

⁹ The power index is likely to vary when managers change firms; we thus use the average of manager's power index during our sample period as the time invariant proxy for authority.

the executives in Execucomp. The third sample includes CEOs and CFOs, and allows one firm to have more than one moving managers in the same year.

When we restrict the movers to CEOs or expand the sample to top manager teams, we obtain results similar to the main sample, mainly because the moving CEOs constitute the majority of the moving managers. When we expand the sample by including firms with multiple movers in the same year, and disaggregate the effect of each manager, our results exhibit lower significance. This is intuitive, as the overall manager effect on the loan contract is decomposed among two or more managers. The results are shown in Table 8.

The results conclusively demonstrate that our main story is robust to sample selection. They also strengthen the idea that CEOs and CFOs have styles that are the most influential in determining the loan contract.

6.2 Simultaneous equations

It is intuitively clear that the price and the non-price terms are jointly determined in the loan contract. To eliminate the bias of the managerial fixed effect results from the endogenous non-price term on the right hand side, we adopt the two-stage least square method (2SLS).

$$Spread = \alpha_{At} + \gamma_{Ai} + \gamma_{AC}Collateral + \gamma_{AM}Maturity + \sum m_j + \gamma_{AX}X_A + \varepsilon_{iA,t} \quad (4)$$

$$Collateral = \alpha_{Ct} + \gamma_{Ci} + \gamma_{CM}Maturity + \sum m_j + \gamma_{CX}X_C + \varepsilon_{iC,t} \quad (5)$$

$$Maturity = \alpha_{Mt} + \gamma_{Mi} + \gamma_{MC}Collateral + \sum m_j + \gamma_{MX}X_M + \varepsilon_{iM,t} \quad (6)$$

The model draws on the discussion of Bharath, Dahiya, Saunders and Srinivasan (2011), which indicates that loan price is affected by loan maturity and collateral requirement, while loan maturity and collateral requirement affect each other. Our choice of instrument variables also follows Bharath, Dahiya, Saunders and Srinivasan (2011). We use the default spread and the average spread of the loan completed over the previous six months as instruments for spread, the loan

concentration and dummy indicator for regulated industries as instruments for collateral requirement, and asset maturity as the instrument for debt maturity.

Empirically, the model is implemented via the 2SLS approach. In the first stage, we obtain the estimated terms given the choices of instrument variables and all the other control variables; in the second stage, we substitute estimated variables and apply the AKM method to obtain the managerial fixed effect. As shown in Table 9, the results remain unchanged compared with the main ones.

6.3 Manager's death as exogenous shock

To further strengthen the argument that managerial style matters in bank loan contracting, we provide additional checks using CEO deaths as exogenous shocks and apply the diff-in-diff approach.

As argued by Fee, Hadlock and Pierce (2013), CEO turnover can comprise endogenous decisions made by the board in compliance with the planned changes in the direction of future firm policies and decision making. Therefore, any difference in bank loan terms before and after the turnover is not necessarily the result of the change in styles of CEOs. It may be that the board intends to hire a new CEO and change the operational policies simultaneously. Also, if bank loan terms remain unchanged over a turnover, this does not imply that managerial style does not exist, because for the same firm, it is very likely that similar types of CEOs are preferred in order to minimize the operational disturbance. Thus, to separate out the endogeneity between board decision and new CEO style, we use CEO's death as an exogenous event, and compare the change in loan terms before and after the turnover.

We follow Fee, Hadlock and Pierce (2013) and use turnover based on the rationale of Execucomp, executive's date of death from BoardEX, firm's financial filings and Factiva searches to identify the reasons for executive turnovers. For

Factiva search, we use the sample set of key words as in Fee, Hadlock and Pierce (2013).

Among all the turnovers in the Execucomp universe, we find 363 health/death related turnovers for CEOs and CFOs. The number is larger than in Fee, Hadlock and Pierce (2013), since we include CFOs in the sample. We match the sample with the loan data from Dealscan, and require the firm to have bank loan information within three years both before and after the turnover. The final sample includes 235 firms¹⁰.

We first conduct univariate tests for the key contract terms before and after the turnover. If the firm has multiple loan contracts before or after the turnover, we use the loan amount weighted average. The results are in Table 10 (A). We find that loan spread, facility amount and the loan maturity change significantly around the manager's exogenous turnover, supporting the our argument that managerial style is a key determinant of loan contracting.

To further ensure that the changes are indeed driven by manager related factors, employ the diff-in-diff approach. For each treated firm, in the year of manager turnover, we find matching firms within the same 2-digit SIC industry, with total assets between 80% and 120% of those of the firm in question, but no manager turnover. Among all the candidates, we choose up to 5 firms that have book-to-market ratio closest to the firm in question.

We then use the diff-in-diff approach by creating the interaction term for manager turnover and treated group. Thus we are able to compare the change of loan terms before and after the turnover between treated and matching samples. The results are in Table 10 (B). We lose some statistical and economic significance for loan amount and loan maturity with the control of firm and contract level variables. But we are still able to find that the loan spreads are significantly higher after a managerial turnover, consistent with the managerial style argument.

¹⁰ Due to the missing variables for loan information, the tests are based on fewer observations.

7. Conclusion

With a large sample that tracks the movement of managers, and the novel empirical approach by Abowd, Karmarz, and Margolis (1999), this paper provides direct evidence that managerial style is a key factor that explains a large portion of the private debt contract. In addition, we find that managerial styles in loan contracting are correlated with the styles of firm performance and corporate policies, implying that certain managers achieve better firm performance through lower cost of capital and other desirable private loan contracts. For example, a manager with a lower spread style is associated with better performance, lower capital expenditure, lower SG&A and fewer acquisitions. When we separately measure managerial style in old and new firms, we find the style to be persistent.

We further show directly that banks value managerial style, “follow” managers’ moves, and offer loan contracts to their new firms with preferential terms, such as lower spreads and fees and fewer covenants, implying a reduction in information asymmetry. Some of the preferred managerial styles are compensated and reflect the personal background of the managers. For example, managers with better general abilities or higher authority are associated with lower spreads, while managers born during WWII or the great depression are also offered preferential terms, mirroring the nature of their conservatism.

Our results are robust to sample selection issues and the simultaneous nature of the price and non-price terms of the loan contract.

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Appendix: Variable Calculation

| Variable Name | Description | Calculation / Source |
|-----------------------------|--|-----------------------------------|
| Firm Size (Total Assets) | Log of total assets | $\log(\#6)$ |
| Leverage | Leverage of the firm | $(\#9 + \#34) / \#6$ |
| Market-to-Book Ratio | Market-to-book ratio of a firm | $(\#199 * \#25) / \#60$ |
| Z Score | Modified Altman's (1968) Z-score which equals $(1.2 * \text{Working capital} + 1.4 * \text{Retained earnings} + 3.3 * \text{EBIT} + 0.999 * \text{Sales}) / \text{Total assets}$. | |
| Profitability | EBITDA divided by total assets | |
| Tangibility | Net property, plant and equipment divided by total assets | $\#8 / \#6$ |
| ROA | Return on assets | $\#172 / \#6$ |
| CAPX | Capital expenditure, scaled by total assets | $\#128 / \#6$ |
| R&D | Research and development expense, scaled by total assets | $\#46 / \#6$ |
| Cash Holding | Sum of earnings before extraordinary items and depreciation, scaled by net property, plant, and equipment at the beginning of the fiscal year | $(\#18 + \#14) / \#8$ |
| AD | Advertisement expense, scaled by total assets | $\#45 / \#6$ |
| SG&A | Selling, general and administrative Expense, scaled by sales | $\#132 / \#12$ |
| No. Acquisitions | Number of completed acquisitions in the previous year | Thomson Reuters SDC |
| G-Index | Sum of the numbers of anti-takeover provisions | Gompers, Ishii and Metrick (2003) |
| Board Size | Number of board members | |
| Outside Director Percentage | Portion of outside directors | RiskMetrics |
| Institutional Ownership | Shares owned by institutions, scaled by total share outstanding | Thomas 13F |
| Manager's age | Manager's age | |
| Manager's tenure | Manager's tenure as CEO or CFO | |
| War Baby | Binary indicator, one for managers born in the WWII, zero otherwise | Execucomp |
| Depression Baby | Shares owned by CEO, scaled by total share outstanding | |
| Spread | Loan spread over LIBOR (bps) | |
| No. Covenant | Number of debt covenant | |
| Share HHI | Herfindahl index of the shares owned by syndicated lenders | |
| Loan Size (millions) | Logarithm of the loan size | |
| Maturity | Loan maturity in months | |
| Collateral | Binary indicator, one for the requirement of using collateral, zero otherwise | Dealscan |
| Number of Lenders | Number of syndicated lenders | |
| Prior Relationship | Binary indicator, one for previously related lenders, zero otherwise | |
| Performance Rating | Binary indicator, one for the use of performance pricing in the loan contract, zero otherwise | |

Table 1: Summary Statistics

This table reports summary statistics for the main variables used in the paper. Panel A reports the statistics for loan attributes. Panel B reports the firm attributes, including firms' financial information, corporate decisions, and other manager related variables. We also include the firms' financial information for the entire Execucomp universe for comparison. The calculation of variables is detailed in the appendix.

Panel A: Loan attributes

| Variable Name | N | Mean | Std | P5 | P25 | P50 | P75 | P95 |
|----------------------|-------|---------|--------|--------|--------|-------|-------|-------|
| <i>Loan Traits</i> | | | | | | | | |
| Spread | 9470 | 135.0 | 123.3 | 20 | 42 | 87.50 | 200 | 365.5 |
| No. Covenant | 11473 | 0.992 | 1.226 | 0 | 0 | 0 | 2 | 3 |
| Share HHI | 3638 | 0.204 | 0.245 | 0.0364 | 0.0661 | 0.106 | 0.211 | 1 |
| Loan Size | 11472 | 19.29 | 1.409 | 16.93 | 18.42 | 19.34 | 20.18 | 21.42 |
| Maturity | 11473 | 0.278 | 0.448 | 0 | 0 | 0 | 1 | 1 |
| No. Lender | 10477 | 45.08 | 30.27 | 12 | 12 | 48 | 60 | 84 |
| Collateral | 7964 | 117.3 | 160.4 | 8 | 20 | 50 | 150 | 448.5 |
| Prior Relationship | 11445 | 0.693 | 0.461 | 0 | 0 | 1 | 1 | 1 |
| Performance Rating | 11473 | 0.415 | 0.493 | 0 | 0 | 0 | 1 | 1 |
| <i>Loan Type</i> | | | | | | | | |
| 1: 364-day facility | 11473 | 0.183 | 0.387 | 0 | 0 | 0 | 0 | 1 |
| 2: Revolver < 1 year | 11473 | 0.0587 | 0.235 | 0 | 0 | 0 | 0 | 1 |
| 3: Revolver >=1 year | 11473 | 0.451 | 0.498 | 0 | 0 | 0 | 1 | 1 |
| 4: Term loan | 11473 | 0.196 | 0.397 | 0 | 0 | 0 | 0 | 1 |
| 5: Others | 11473 | 0.111 | 0.314 | 0 | 0 | 0 | 0 | 1 |
| <i>Loan Purpose</i> | | | | | | | | |
| 1: Acquisition lines | 11473 | 0.0340 | 0.181 | 0 | 0 | 0 | 0 | 0 |
| 2: CP backup | 11473 | 0.133 | 0.340 | 0 | 0 | 0 | 0 | 1 |
| 3: Corporate purpose | 11473 | 0.365 | 0.482 | 0 | 0 | 0 | 1 | 1 |
| 4: Debt repay | 11473 | 0.148 | 0.355 | 0 | 0 | 0 | 0 | 1 |
| 5: LBO/MBO | 11473 | 0.0201 | 0.140 | 0 | 0 | 0 | 0 | 0 |
| 6: Recapitalization | 11473 | 0.00462 | 0.0678 | 0 | 0 | 0 | 0 | 0 |
| 7: Spinoff | 11473 | 0.0128 | 0.112 | 0 | 0 | 0 | 0 | 0 |
| 8: Stock buyback | 11473 | 0.00994 | 0.0992 | 0 | 0 | 0 | 0 | 0 |
| 9: Takeover | 11473 | 0.102 | 0.302 | 0 | 0 | 0 | 0 | 1 |
| 10: Working capital | 11473 | 0.129 | 0.335 | 0 | 0 | 0 | 0 | 1 |
| 11: Others | 11473 | 0.0411 | 0.198 | 0 | 0 | 0 | 0 | 0 |
| <i>Loan Rating</i> | | | | | | | | |
| 1: AAA | 10489 | 0.00334 | 0.0577 | 0 | 0 | 0 | 0 | 0 |
| 2: AA | 10489 | 0.0185 | 0.135 | 0 | 0 | 0 | 0 | 0 |
| 3: A | 10489 | 0.128 | 0.334 | 0 | 0 | 0 | 0 | 1 |
| 4: BBB | 10489 | 0.248 | 0.432 | 0 | 0 | 0 | 0 | 1 |
| 5: BB | 10489 | 0.116 | 0.321 | 0 | 0 | 0 | 0 | 1 |
| 6: B | 10489 | 0.107 | 0.309 | 0 | 0 | 0 | 0 | 1 |
| 7: Below B/no rating | 10489 | 0.0451 | 0.208 | 0 | 0 | 0 | 0 | 0 |

Panel B: Firm information

| Variable Name | N | Mean | Std | P5 | P25 | P50 | P75 | P95 |
|------------------------------------|-------|--------|--------|---------|---------|--------|---------|--------|
| <i>Firm Attributes</i> | | | | | | | | |
| Firm Size | 11427 | 12776 | 32708 | 5.668 | 7.103 | 8.143 | 9.383 | 10.69 |
| Leverage | 11421 | 0.309 | 0.180 | 0.0257 | 0.192 | 0.299 | 0.405 | 0.609 |
| Market-to-Book Ratio | 11334 | 3.111 | 5.287 | 0.108 | 1.482 | 2.248 | 3.653 | 9.694 |
| Z Score | 10821 | 1.731 | 1.162 | 0.275 | 0.947 | 1.636 | 2.403 | 3.761 |
| Profitability | 11406 | 0.134 | 0.0841 | 0.0309 | 0.0890 | 0.126 | 0.172 | 0.272 |
| Tangibility | 11395 | 0.347 | 0.221 | 0.0599 | 0.163 | 0.300 | 0.513 | 0.757 |
| ROA | 11427 | 0.0306 | 0.103 | -0.100 | 0.0109 | 0.0385 | 0.0705 | 0.136 |
| <i>Firm Attributes (Execucomp)</i> | | | | | | | | |
| Firm Size | 30799 | 7.471 | 1.710 | 4.883 | 6.227 | 7.356 | 8.634 | 10.59 |
| Leverage | 30673 | 0.234 | 0.206 | 0 | 0.0655 | 0.213 | 0.347 | 0.570 |
| Market-to-Book Ratio | 30633 | 2.971 | 4.445 | 0.593 | 1.420 | 2.140 | 3.438 | 8.381 |
| Z Score | 26014 | 1.654 | 4.411 | -0.161 | 1.122 | 1.920 | 2.709 | 4.093 |
| Profitability | 30114 | 0.121 | 0.230 | -0.0143 | 0.0731 | 0.125 | 0.181 | 0.292 |
| Tangibility | 30011 | 0.280 | 0.237 | 0.0102 | 0.0857 | 0.213 | 0.425 | 0.763 |
| ROA | 30787 | 0.0253 | 0.191 | -0.142 | 0.0112 | 0.0410 | 0.0798 | 0.159 |
| <i>Corporate Policies</i> | | | | | | | | |
| CAPX | 11309 | 0.0600 | 0.0517 | 0.0115 | 0.0282 | 0.0462 | 0.0740 | 0.160 |
| R&D | 6500 | 0.0354 | 0.0497 | 0 | 0.00283 | 0.0178 | 0.0440 | 0.139 |
| Cash Holding | 11385 | 0.593 | 1.986 | 0.00661 | 0.0390 | 0.121 | 0.445 | 2.466 |
| AD | 11431 | 0.0129 | 0.0310 | 0 | 0 | 0 | 0.00867 | 0.0775 |
| SG&A | 9346 | 0.212 | 0.144 | 0.0366 | 0.104 | 0.188 | 0.290 | 0.468 |
| No. Acquisitions | 11473 | 0.277 | 0.622 | 0 | 0 | 0 | 0 | 2 |
| <i>Others</i> | | | | | | | | |
| G-Index | 8932 | 9.449 | 2.545 | 5 | 8 | 9 | 11 | 14 |
| Board Size | 7211 | 10.16 | 2.515 | 6 | 8 | 10 | 12 | 15 |
| Outside Director Ratio | 7211 | 0.697 | 0.170 | 0.364 | 0.600 | 0.733 | 0.818 | 0.909 |
| Institutional Ownership | 9363 | 0.654 | 0.211 | 0.259 | 0.536 | 0.678 | 0.800 | 0.960 |
| CEO Age | 10695 | 4.029 | 0.122 | 3.807 | 3.951 | 4.043 | 4.111 | 4.205 |
| CEO Tenure | 10903 | 1.697 | 0.759 | 0.515 | 1.127 | 1.711 | 2.225 | 2.980 |
| General Ability Index | 7283 | 0.442 | 1.123 | -1.065 | -0.393 | 0.317 | 1.048 | 2.469 |
| War Baby | 11473 | 0.269 | 0.444 | 0 | 0 | 0 | 1 | 1 |
| Depression Baby | 11473 | 0.0799 | 0.271 | 0 | 0 | 0 | 0 | 1 |

Table 2: The managerial style in loan contract terms

This table reports the main results on the role of managerial style in bank loan contracting. The tests are conducted using the novel empirical method by Abowd, Karmarz, and Margolis (1999). In Panel A, We examine ten common terms of the loan contract, namely the loan price (spread over LIBOR), time to maturity, requirement for collateral, loan size, number of covenants, number of syndicated lenders, loan concentration of syndicated lenders, total fee, prior related lending, and performance pricing. In Panel B, we limit the variables of interest to loan price, time to maturity and collateral requirement, with all the other terms controlled. Panel C reports the correlation of managerial styles obtained from Panel A and Panel B.

In each test of Panel A and Panel B, we report the number of observations used, total number of moving managers, percentage of manager fixed effects that are significant at 10% level. We also decompose the relative importance of different factors of independent variables, including the manager fixed effect, firm fixed effect, the combination of firm attributes control and year fixed effect, and the unexplained part. The decomposition is done by dividing the covariance of dependent variable and the factor of interest by the variance of the dependent variable. We also conduct an F-test to examine the null hypothesis that all the manager fixed effects are equal to zero.

The calculation of variables is detailed in the appendix.

Panel A: Test on terms of loan contracts

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|--------------------|------|---------------|--|---|--|---|--|--|
| | N | No. of movers | Percentage of Significant Fixed Effect | Percentage of Variation Explained by Manager Fixed Effect | Percentage of Variation Explained by Firm Fixed Effect | Percentage of Variation Explained by Firm Control and Year Fixed Effect | Unexplained Percentage of Variation (Residual) | F-test that person effects are equal to zero |
| Contract Terms | | | | | | | | |
| Spread | 8192 | 290 | 53.13% | 21.65% | 6.55% | 52.05% | 19.73% | 3.36 |
| No. Covenant | 9814 | 320 | 58.12% | 29.52% | 12.14% | 24.63% | 33.70% | 2.61 |
| Share HHI | 3132 | 100 | 21.60% | 32.89% | 4.17% | 37.62% | 25.31% | 2.15 |
| Loan Size | 9814 | 320 | 58.13% | 11.71% | 5.17% | 52.05% | 31.06% | 1.86 |
| Maturity | 6397 | 246 | 47.22% | 33.70% | 4.25% | 21.16% | 40.87% | 1.69 |
| No. Lender | 9788 | 318 | 57.49% | 21.14% | 3.77% | 28.92% | 46.16% | 1.77 |
| Collateral | 9814 | 320 | 58.48% | 31.24% | 9.22% | 25.46% | 34.07% | 2.85 |
| Prior Relationship | 9793 | 318 | 57.71% | 32.51% | 6.84% | 21.46% | 39.18% | 3.19 |
| Performance Rating | 9814 | 320 | 57.99% | 28.72% | 7.85% | 20.39% | 43.04% | 2.22 |

Panel B: Test on loan spread, debt maturity and collateral requirement, with other terms controlled

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|----------------|------|---------------|--|---|--|---|--|--|
| | N | No. of movers | Percentage of Significant Fixed Effect | Percentage of Variation Explained by Manager Fixed Effect | Percentage of Variation Explained by Firm Fixed Effect | Percentage of Variation Explained by Firm Control and Year Fixed Effect | Unexplained Percentage of Variation (Residual) | F-test that person effects are equal to zero |
| Contract Terms | | | | | | | | |
| Spread | 8189 | 290 | 53.34% | 20.68% | 5.60% | 55.43% | 18.29% | 3.01 |
| Maturity | 6384 | 246 | 46.94% | 33.03% | 4.55% | 22.68% | 39.73% | 1.66 |
| Collateral | 9788 | 318 | 57.64% | 26.98% | 6.40% | 37.08% | 29.54% | 2.85 |

Panel C: Correlation between the managerial fixed effect from Panel A and Panel B

| VARIABLES | (1) Spread | (2) Maturity | (3) Collateral |
|----------------|-----------------------|----------------------|---------------------|
| Spread | 1.036*** (0.017) | | |
| Maturity | | 0.984*** (0.010) | |
| Collateral | | | 0.982*** (0.018) |
| Constant | 317.598*** (1.218) | -0.338*** (0.003) | 0.934*** (0.007) |
| Observations | 290 | 246 | 318 |
| R-squared | 0.928 | 0.978 | 0.903 |
| Adj. R-squared | 0.928 | 0.978 | 0.903 |

Table 3: Summary statistics and correlation of managerial styles of loan terms

Panel A and Panel B reports summary statistics and correlations for managerial style of loan terms, respectively, with the results from Table 3, Panel A. The managerial styles are de-measured for easy comparison. *, **, and *** denote significance at 5%, 1%, and 0.1% level, respectively. The calculation of variables is detailed in the appendix.

Panel A: Summary statistics for the managerial styles of loan terms

| Variable Name | N | Mean | Std | P5 | P25 | P50 | P75 | P95 |
|--------------------|-----|------|-------|--------|--------|-----------|--------|-------|
| Spread | 290 | 0.00 | 77.06 | -105.2 | -54.27 | -6.697 | 39.51 | 146.6 |
| No. Covenant | 320 | 0.00 | 0.929 | -1.149 | -0.574 | -0.0986 | 0.405 | 1.694 |
| Share HHI | 100 | 0.00 | 0.191 | -0.237 | -0.121 | -0.015 | 0.0611 | 0.316 |
| Loan Size (ln) | 320 | 0.00 | 0.987 | -1.568 | -0.601 | 0.0891 | 0.484 | 1.448 |
| Maturity | 246 | 0.00 | 0.331 | -0.541 | -0.206 | 0.0628 | 0.186 | 0.444 |
| No. Lender | 318 | 0.00 | 7.991 | -12.61 | -4.747 | -0.185 | 4.721 | 13.2 |
| Collateral | 320 | 0.00 | 0.382 | -0.44 | -0.26 | -0.0662 | 0.168 | 0.757 |
| Prior Relationship | 318 | 0.00 | 0.447 | -0.711 | -0.293 | -0.00574 | 0.31 | 0.692 |
| Performance Rating | 320 | 0.00 | 0.436 | -0.654 | -0.297 | -0.000315 | 0.286 | 0.63 |

| | (1) Spread | (2) No. Covenant | (3) Share HHI | (4) Loan Size | (5) Maturity | (6) No. Lender | (7) Collateral | (8) Prior Relationship |
|--------------------|----------------------|----------------------|---------------------|---------------------|---------------------|---------------------|----------------------|------------------------------|
| No. Covenant | -0.106 (0.071) | | | | | | | |
| Share HHI | 0.395*** (0.000) | -0.115 (0.253) | | | | | | |
| Loan Size | -0.337*** (0.000) | 0.139* (0.013) | -0.304** (0.002) | | | | | |
| Maturity | -0.140* (0.031) | -0.214*** (0.001) | 0.0229 (0.833) | -0.0108 (0.866) | | | | |
| No. Lender | -0.100 (0.089) | 0.244*** (0.000) | -0.288** (0.004) | 0.477*** (0.000) | -0.0510 (0.425) | | | |
| Collateral | 0.329*** (0.000) | 0.196*** (0.000) | 0.162 (0.107) | -0.0703 (0.210) | -0.197** (0.002) | 0.0175 (0.755) | | |
| Prior Relationship | -0.257*** (0.000) | 0.0124 (0.825) | -0.284** (0.004) | 0.247*** (0.000) | 0.0913 (0.153) | 0.252*** (0.000) | -0.204*** (0.000) | |
| Performance Rating | -0.187** (0.001) | 0.585*** (0.000) | -0.0917 (0.364) | 0.295*** (0.000) | -0.106 (0.097) | 0.350*** (0.000) | 0.185*** (0.001) | 0.0954 (0.089) |

Table 4: Relationship between managerial styles of loan terms and other financial policies

This table reports the correlations between each loan term related managerial style and each managerial style embedded in the financial policies and firm performance. All of the managerial styles are obtained from the tests conducted via the empirical approach by Abowd, Karmarz, and Margolis (1999). Each cell represents the coefficient of regressing one of the loan term related managerial styles on one of the financial policy (or firm performance, measured by ROA) related managerial styles. Standard deviations are reported in parentheses. *, **, and *** denote the significance at the 5%, 1%, and 0.1% level, respectively. The calculation of variables is detailed in the appendix.

| | (1) Spread | (2) No. Covenant | (3) Share HHI | (4) Loan Size | (5) Maturity | (6) No. Lender | (7) Collateral | (8) Prior Relationship | (9) Performance Rating |
|------------------|-------------------------|------------------------|---------------------|----------------------|---------------------|-----------------------|----------------------|------------------------------|------------------------------|
| CAPX | -128.958*** (40.316) | -0.457 (0.500) | 0.075 (0.133) | 0.358 (0.492) | -0.094 (0.171) | -4.234 (3.808) | -0.132 (0.201) | -0.129 (0.229) | 0.228 (0.208) |
| R&D | 7.449 (48.251) | -1.270** (0.585) | 0.255* (0.146) | -2.364*** (0.573) | -0.143 (0.213) | -14.588*** (4.476) | -0.325 (0.241) | -0.942*** (0.264) | -1.266*** (0.244) |
| Leverage | 23.093** (11.680) | -0.231 (0.145) | 0.039 (0.039) | 0.131 (0.143) | 0.127** (0.050) | 1.719 (1.102) | 0.005 (0.059) | 0.172*** (0.066) | -0.085 (0.060) |
| ROA | -37.444** (18.299) | -0.024 (0.215) | -0.160** (0.065) | -0.265 (0.211) | 0.368*** (0.078) | -2.466 (1.630) | -0.407*** (0.086) | 0.007 (0.098) | -0.124 (0.089) |
| Cash Holding | -0.620 (1.309) | -0.007 (0.015) | -0.006 (0.005) | -0.071*** (0.015) | -0.008 (0.006) | -0.260** (0.116) | -0.006 (0.006) | -0.020*** (0.007) | -0.019*** (0.006) |
| AD | 12.901 (63.954) | -0.049 (0.794) | 0.036 (0.198) | 2.778*** (0.774) | -0.502* (0.275) | 0.749 (6.011) | 0.841*** (0.319) | 0.567 (0.362) | 0.742** (0.328) |
| SG&A | -30.219** (14.480) | -0.166 (0.180) | -0.035 (0.046) | -0.514*** (0.171) | 0.012 (0.062) | -2.492* (1.329) | -0.139* (0.072) | -0.052 (0.082) | -0.155** (0.073) |
| No. Acquisitions | -6.373* (3.582) | 0.062 (0.044) | -0.012 (0.012) | 0.079* (0.043) | 0.029* (0.015) | 0.214 (0.332) | -0.017 (0.018) | 0.019 (0.020) | 0.027 (0.018) |

Table 5: Persistency of loan contract related managerial style

This table reports the persistency of the loan term related managerial styles across manager's old and new firms. Column (1) uses the fixed effect approach of equation (2), in which we drop the control of firm fixed effect, and regress the manager fixed effect of the new firm on that of the old firm. Column (2) uses the residual approach, in which we keep the firm fixed effect control and drop the manager fixed effect control. And we use the average of the residual as the factor that contains the manager fixed effect. Then we regress the average residual of the new firm on that of the old firm. Each cell represents the coefficient from one regression. Standard deviations are reported in parentheses. *, **, and *** denote significance at 5%, 1%, and 0.1% level, respectively. The calculation of variables is detailed in the appendix.

| | (1) | (2) |
|--------------------|--------------------------|----------------------|
| | Fixed effect approach | Residual approach |
| Spread | 0.339*** (0.060) | 0.282*** (0.057) |
| No. Covenant | 0.237*** (0.056) | -0.046 (0.047) |
| Share HHI | -0.183 (0.159) | -0.037 (0.046) |
| Loan Size | 0.150** (0.066) | -0.007 (0.060) |
| Maturity | 0.245*** (0.066) | 0.120* (0.066) |
| No. Lender | 0.304*** (0.054) | 0.260*** (0.051) |
| Collateral | 0.339*** (0.063) | 0.187*** (0.063) |
| Prior Relationship | 0.374*** (0.059) | 0.135** (0.053) |
| Performance Rating | 0.204*** (0.060) | 0.054 (0.055) |

Table 6: Do banks "follow" moving managers?

This table reports the results for direct testing of whether lenders "follow" the moving managers and grant their new firms preferential loan contracts. Panel A reports the percentage of cases where the moving managers' previously connect banks (through the working period in the old firms) are involved in the loan contract of these moving managers' new firms. The sample here uses real data. Matching sample indicates the situation where we locate a matching firm that does not have moving managers during $[t-3, t+3]$ period, where t is the year when the treated manager changes firms. The firm is required to have a loan contract during both the $[t-3, t]$ and $[t, t+3]$ periods in the same two-digit SIC industry and to be of firm size between 80% and 120% of the new firm. Among all the candidates (if more than one), we pick the one with market-to-book ratio closest to the new firm. We then check within the matching sample, how many firms have new financial contracts in $[t, t+3]$ offered by banks that are previously related to the treated moving manager from her old firm.

Panel B reports the results for univariate comparison. We compared the loan terms between the contract from the banks that "follow" managers and the contracts of other banks. We conduct a t-test for the significance of the difference.

The calculation of variables is detailed in the appendix.

| Panel A: Percentage of cases where the moving managers' previously connected banks are involved in the loan contract in their new firms | | | | | |
|---|----------------|-----------------|--|--|--|
| | Treated Sample | Matching Sample | | | |
| Percentage of cases where the moving managers' previously connected banks are involved in the loan contract in their new firms | 41.02% | 2.48% | | | |

| Panel B: Loan traits between the "following" banks and other banks | | | | | |
|--|---|-------------------------------------|--------------|--------|---------|
| | Loan traits made by "following" banks (1) | Loan traits made by other banks (2) | Diff (1)-(2) | t-stat | P-value |
| Spread | 146.8 | 168.7 | -21.9 | -4.38 | 0.00 |
| No. Covenant | 1.071 | 1.306 | -0.235 | -5.346 | 0.00 |
| Share HHI | 0.199 | 0.190 | 0.009 | 0.551 | 0.58 |
| Loan Size (millions) | 543.8 | 699.2 | -155.4 | -3.75 | 0.00 |
| Maturity | 42.79 | 44.44 | -1.65 | -1.718 | 0.09 |
| No. Lender | 9.565 | 11.25 | -1.685 | -5.156 | 0.00 |
| Collateral | 0.304 | 0.390 | -0.086 | -5.224 | 0.00 |
| Prior Relationship | 0.453 | 0.499 | -0.046 | -2.671 | 0.01 |
| Performance Rating | 0.644 | 0.721 | -0.077 | -4.832 | 0.00 |

Table 7: Loan contract related managerial style and manager's attributes

This table reports the correlations between loan term related managerial styles and manager's attributes. Panel A examines if the managerial styles are compensated. We regress the cash/total compensation on the managerial fixed effect and the firm controls. Panel B examines if the managerial styles are related to manager's General Ability Index, birth cohort and Power Index. We regress the managerial fixed effect on the measure of each manager attribute. Each cell represents the coefficient from one regression. Standard deviations are reported in parentheses. *, **, and *** denote significance at 5%, 1%, and 0.1% level, respectively. The calculation of variables is detailed in the appendix.

| <u>Panel A: Examination of whether loan contract related managerial style is compensated</u> | | |
|--|---------------------|---------------------|
| | Cash compensation | Total compensation |
| Spread | 0.000 (0.001) | -0.001 (0.001) |
| No. Covenant | -0.040 (0.040) | -0.126** (0.052) |
| Share HHI | 0.304 (0.350) | -0.249 (0.439) |
| Loan Size | 0.135*** (0.044) | 0.060 (0.058) |
| Maturity | -0.066 (0.133) | 0.042 (0.174) |
| No. Lender | 0.004 (0.004) | 0.010* (0.006) |
| Collateral | 0.044 (0.105) | -0.237* (0.140) |
| Prior Relationship | 0.129 (0.095) | 0.395*** (0.124) |
| Performance Rating | -0.070 (0.085) | -0.276** (0.111) |

Panel B: Examination of whether loan contract related managerial styles are related to manager's General Ability Index, birth cohort and Power Index

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|-----------------------|-----------------------|----------------------|-------------------|-------------------|-------------------|--------------------|----------------------|-----------------------|------------------------|
| | Spread | No. Covenant | Share HHI | Loan Size | Maturity | No. Lender | Collateral | Prior Relationship | Performanc e Rating |
| General Ability Index | -8.541*** (2.993) | -0.130*** (0.038) | 0.003 (0.009) | -0.037 (0.037) | 0.016 (0.011) | -0.038 (0.239) | -0.039*** (0.014) | 0.006 (0.013) | -0.044*** (0.015) |
| War baby | -17.415** (7.125) | -0.220*** (0.074) | -0.023 (0.015) | -0.048 (0.061) | 0.015 (0.026) | 1.176** (0.520) | -0.039 (0.028) | 0.019 (0.028) | -0.032 (0.030) |
| Depression baby | -26.700** (12.934) | -0.401*** (0.131) | -0.030 (0.031) | 0.165 (0.122) | -0.056 (0.041) | -1.002 (0.926) | -0.133*** (0.041) | -0.021 (0.055) | -0.148** (0.059) |
| Power Index | -9.345** (3.863) | -0.050 (0.041) | -0.008 (0.009) | 0.020 (0.032) | -0.010 (0.014) | 0.180 (0.274) | -0.013 (0.015) | -0.001 (0.015) | 0.013 (0.017) |

Table 8: Alternative Samples

This table reports the results for alternative samples. Panel A restrains the moving managers to CEOs. Panel B expands the focus from CEO and CFO to the top management team, defined as all the executives in Execucomp. Panel C includes CEOs and CFOs and allows one firm to have more than one moving manager in the same year. The tests are conducted with the novel empirical method by Abowd, Karmarz, and Margolis (1999). We report the number of observation used and total number of moving managers. We also decompose the relative importance of different factors of independent variables, including the manager fixed effect, firm fixed effect, the combination of firm attributes control and year fixed effect, and the unexplained part. The decomposition is done by dividing the covariance of dependent variable and the factor of interest by the variance of the dependent variable. We also conduct an F-test to examine the null hypothesis that all the manager fixed effects are equal to zero. The calculation of variables is detailed in the appendix.

Panel A: Limiting movers to CEOs only

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|--------------------|------|---------------|---|---|---|---|--|
| | N | No. of movers | Percentage of Variation Explained by Manager Fixed Effect | Percentage of Variation Explained by Firm Fixed Effect | Percentage of Variation Explained by Firm Control and Year Fixed Effect | Unexplained Percentage of Variation (Residual) | F-test that person effects are equal to zero |
| Contract Terms | | | | | | | |
| Spread | 7007 | 264 | 21.19% | 7.55% | 51.30% | 19.96% | 3.43 |
| No. Covenant | 8396 | 291 | 30.85% | 14.43% | 21.01% | 33.71% | 2.62 |
| Share HHI | 2602 | 94 | 34.57% | 3.63% | 36.82% | 24.98% | 2.16 |
| Loan Size | 8396 | 291 | 7.74% | 6.63% | 53.10% | 32.54% | 1.82 |
| Maturity | 5372 | 224 | 33.26% | 4.06% | 21.20% | 41.48% | 1.77 |
| No. Lender | 8370 | 289 | 21.87% | 3.26% | 28.73% | 46.14% | 1.89 |
| Collateral | 8396 | 291 | 30.05% | 11.26% | 24.40% | 34.29% | 2.83 |
| Prior Relationship | 8375 | 289 | 29.84% | 8.69% | 20.45% | 41.02% | 3.11 |
| Performance Rating | 8396 | 291 | 28.56% | 8.81% | 18.90% | 43.73% | 2.22 |

Panel B: Expand the moves to top management team

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|--------------------|-------|---------------|---|---|---|---|--|
| | N | No. of movers | Percentage of Variation Explained by Manager Fixed Effect | Percentage of Variation Explained by Firm Fixed Effect | Percentage of Variation Explained by Firm Control and Year Fixed Effect | Unexplained Percentage of Variation (Residual) | F-test that person effects are equal to zero |
| Contract Terms | | | | | | | |
| Spread | 9877 | 287 | 25.34% | 4.98% | 49.64% | 20.04% | 3.21 |
| No. Covenant | 11845 | 316 | 32.73% | 9.72% | 24.68% | 32.88% | 2.68 |
| Share HHI | 3779 | 98 | 37.77% | 2.01% | 36.64% | 23.59% | 2.16 |
| Loan Size | 11845 | 316 | 13.85% | 3.13% | 53.21% | 29.81% | 1.86 |
| Maturity | 7783 | 249 | 35.27% | 4.06% | 20.96% | 39.72% | 1.67 |
| No. Lender | 11817 | 314 | 22.80% | 3.07% | 30.18% | 43.95% | 1.81 |
| Collateral | 11845 | 316 | 32.36% | 8.22% | 25.79% | 33.63% | 2.78 |
| Prior Relationship | 11823 | 314 | 39.10% | 5.03% | 17.75% | 38.11% | 3.14 |
| Performance Rating | 11845 | 316 | 30.44% | 7.77% | 20.07% | 41.72% | 2.20 |

Panel C: Include firm-years with multiple moving CEOs & CFOs

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|--------------------|-------|---------------|---|---|---|---|--|
| | N | No. of movers | Percentage of Variation Explained by Manager Fixed Effect | Percentage of Variation Explained by Firm Fixed Effect | Percentage of Variation Explained by Firm Control and Year Fixed Effect | Unexplained Percentage of Variation (Residual) | F-test that person effects are equal to zero |
| Contract Terms | | | | | | | |
| Spread | 9022 | 560 | 11.66% | 15.87% | 52.72% | 19.76% | 2.77 |
| No. Covenant | 10782 | 617 | 26.17% | 16.94% | 23.35% | 33.55% | 2.18 |
| Share HHI | 3448 | 211 | 32.28% | 6.77% | 35.65% | 25.30% | 1.86 |
| Loan Size | 10782 | 617 | -2.28% | 19.76% | 52.53% | 29.98% | 1.67 |
| Maturity | 7017 | 483 | 28.71% | 9.96% | 21.90% | 39.43% | 1.53 |
| No. Lender | 10756 | 616 | 12.58% | 11.97% | 29.85% | 45.60% | 1.49 |
| Collateral | 10782 | 617 | 25.70% | 16.31% | 24.10% | 33.89% | 2.38 |
| Prior Relationship | 10761 | 616 | 21.46% | 18.11% | 21.20% | 39.23% | 2.53 |
| Performance Rating | 10782 | 617 | 26.69% | 11.95% | 19.64% | 41.73% | 1.88 |

Table 9: Simultaneous Equation

This table reports the results controlling for the simultaneity among loan terms. We follow Bharath, Dahiya, Saunders and Srinivasan (2011) and set up the following structure model, in which loan price is affected by loan maturity and collateral requirement, while loan maturity and collateral requirement affect each other.

$$Spread = \alpha_{At} + \gamma_{Ai} + \gamma_{AC}Collateral + \gamma_{AM}Maturity + \sum m_j + \gamma_{AX}X_A + \varepsilon_{iA,t} \quad (4)$$

$$Collateral = \alpha_{Ct} + \gamma_{Ci} + \gamma_{CM}Maturity + \sum m_j + \gamma_{CX}X_C + \varepsilon_{iC,t} \quad (5)$$

$$Maturity = \alpha_{Mt} + \gamma_{Mi} + \gamma_{MC}Collateral + \sum m_j + \gamma_{MX}X_M + \varepsilon_{iM,t} \quad (6)$$

We use the default spread, and the average spread of the loan completed in the previous six months as the instruments for spread, the loan concentration and regulated industry dummy as instruments for collateral requirement, and the asset maturity as the instrument for debt maturity. The model is implemented by 2SLS. In first stage, we obtain the estimated terms with the choice of instrument variables and all the other control variables, while in the second stage, we substitute estimated value and apply the AKM method to obtain the managerial fixed effect. We report the number of observations used, total number of moving managers, and percentage of manager fixed effects that are significant at the 10% level. We also decompose the relative importance of different factors of independent variables, including the manager fixed effect, firm fixed effect, the combination of firm attributes control and year fixed effect, and the unexplained part. The decomposition is done by dividing the covariance of the dependent variable and the factor of interest by the variance of the dependent variable. We also conduct an F-test to examine the null hypothesis that all the manager fixed effects are equal to zero. The calculation of variables is detailed in the appendix.

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|----------------|------|---------------|--|---|--|---|--|--|
| Contract Terms | N | No. of movers | Percentage of Significant Fixed Effect | Percentage of Variation Explained by Manager Fixed Effect | Percentage of Variation Explained by Firm Fixed Effect | Percentage of Variation Explained by Firm Control and Year Fixed Effect | Unexplained Percentage of Variation (Residual) | F-test that person effects are equal to zero |
| Spread | 7424 | 235 | 39.37% | 20.12% | 6.34% | 54.93% | 18.59% | 3.01 |
| Maturity | 5733 | 198 | 35.67% | 34.50% | 4.03% | 20.39% | 41.08% | 1.65 |
| Collateral | 8846 | 256 | 53.26% | 26.61% | 6.03% | 37.40% | 29.96% | 2.88 |

Table 10: Managers' Death as Exogenous Control

This table reports the results with managers' (CEOs and CFOs) deaths as exogenous shocks. We follow Fee, Hadlock and Pierce (2013) and use the turnover reason from Execucomp and the executive's date of death from BoardEX, firm's financial filings and Factiva searches to identify the reasons for executive turnovers. For Factiva search, we use the sample set of key words as in Fee, Hadlock and Pierce (2013).

Panel A reports the results of the univariate test for key contract terms before and after the turnover. If the firm has multiple loan contracts before or after the turnover, we use the loan amount weighted average. Panel B reports the results for the diff-in-diff approach. For each firm, in the year of manager turnover, we find matching firms within the same 2-digit SIC industry, with total asset of 70% to 130% of those of the firm in question, but no manager turnover. Among all the candidates, we chose up to 5 firms that have book-to-market ratio closest to the firm in question.

Panel A: Univariate Test

| | (1) Before Turnover | (2) After Turnover | Diff (2)-(1) | P-value (Diff>0) |
|-----------------------|---------------------|--------------------|--------------|------------------|
| Spread | 134.3 | 166.3 | 32.0 | 0.067 |
| Facility Amount (\$M) | 467.5 | 732.9 | 265.4 | 0.0061 |
| Maturity | 39.77 | 46.06 | 6.29 | 0.0174 |

Panel B: Multivariate Test with Diff-in-Diff approach

| VARIABLES | (1) Spread | (2) Facility Amount (\$M) | (3) Maturity |
|-------------------------|----------------------|------------------------------|--------------------|
| Manager Death * Treated | 27.09* (14.298) | -0.04** (0.017) | -0.00 (0.015) |
| Manager Death | -5.48 (9.974) | 0.02*** (0.005) | 0.02** (0.011) |
| Treated | -14.39** (7.195) | 0.01*** (0.004) | 0.01 (0.008) |
| Firm Control | Yes | Yes | Yes |
| Loan Attributes Control | Yes | Yes | Yes |
| Constant | 150.65*** (5.341) | 3.00*** (0.003) | 1.51*** (0.006) |
| Observations | 1,616 | 1,774 | 1,712 |
| Adj. R-squared | 0.50 | 0.78 | 0.26 |

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