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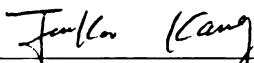
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EVIDENCE FROM FIRMS EXPERIENCING LARGE
PERFORMANCE SHOCKS

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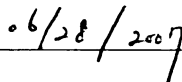
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CORPORATE RESTRUCTURING AND LENDING RELATIONSHIPS:
EVIDENCE FROM FIRMS EXPERIENCING LARGE PERFORMANCE SHOCKS

By

Hyun-Seung Na

A DISSERTATION

Submitted to
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ABSTRACT

CORPORATE RESTRUCTURING AND LENDING RELATIONSHIPS: EVIDENCE FROM FIRMS EXPERIENCING LARGE PERFORMANCE SHOCKS

By

Hyun-Seung Na

This dissertation explores the monitoring roles of private lenders as a corporate control mechanism. Using firms that experience large performance declines between 1997 and 2001, we investigate how close lending relationships influence restructuring actions of borrowing firms in response to their performance shocks. We find that firms with more loans from their durable lending relationships are more likely to engage in downsizing actions, whether they generate immediate cash flows or not. The existence of long-term relationship lenders decreases the likelihood of expansionary actions. The announcement returns of downsizing are also positively related to lending relationship measures such as duration of lending relation and borrowing from lead credit facilities. While firms with more borrowings reduce their loans following downsizing actions, those with long-run lending relationships maintain their loan amount. In addition, firms with close ties to their lenders have better post-restructuring performance and lower probability of being acquired. These findings are consistent with the view that close lending relations create value by facilitating firms to engage in value-increasing restructuring during performance declines.

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To my wife and parents

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1. Introduction

The monitoring role of private lenders such as banks and institutional lenders has been widely investigated. Few studies, however, provide evidence on the role of private lenders in firms' investment decisions. In particular, there is little evidence that private lenders have the ability or power to exert control over firm's investment decisions based on their information advantage especially when firms experience severe financial difficulties. This study explores the monitoring roles of private lenders as a corporate control mechanism in corporate restructuring during performance declines of their borrowing firms.

In the banking literature, lending relationships with private lenders increase firm value, reduce information asymmetries, and decrease costs of financial distress. For example, studies such as James (1987), Lummer and McConnell (1989), Billet, Flannery, and Garfinkel (1995) show that banks' decisions to lend enhance the value of borrowing firms and abnormal borrower returns are larger when lenders have higher credit ratings or previous relationships with their borrowers. Also, firms with close ties to their private lenders have increased availability of financing, lower interest rates, and less collateral requirements (Petersen and Rajan, 1994; Berger and Udell, 1995). In addition, Gilson, John, and Lang (1990) find that financial distress is more likely to be resolved through private renegotiation rather than formal bankruptcy when relatively more debt is owed to banks. These studies generally attribute the benefits of lending relationships to the monitoring roles of private lenders, especially those that maintain close ties with firms, while evidence on private lenders controlling firms' investment decisions is limited.

The lack of evidence on the monitoring role of lenders influencing firms' investment decisions may be due to several facts. First, the bankruptcy doctrines of equitable

subordination and lender liability in the U.S. may discourage private lenders from being involved in the firm's decision making. If senior creditors overreach their roles as creditors by actively intervening in management and acting inequitably prior to a bankruptcy of the firm, they can lose seniority in their debt claims and face liability from other claimants¹. Thus, especially when firms are at risk of financial distress, major lenders may be reluctant to play an active role due to concerns about legal repercussions. Second, although private lenders do control management, their actions might be implicit by the nature of their relationships. Typically private lenders do not reveal their inside information captured from their lending process and thus their monitoring activities may be conducted within their relationships as well. Therefore, different from explicit governance activities of shareholders such as hostile takeovers, board dismissals, and shareholder activism, the monitoring actions of private lenders are more likely to be undetectable from outside, even if they do exist.

To examine the monitoring roles of private lenders in firms' investment decisions, we investigate the effect of lending relationships on corporate restructuring actions during performance declines. It has been well documented by previous studies that firms likely respond to their performance declines by operational restructuring actions such as asset contractions and layoffs and show improved post-restructuring performance (John, Lang, and Netter, 1992; Ofek, 1993; Kang and Shivdasani, 1997; Denis and Kruse, 2000). Particularly these studies find a strong link between corporate governance mechanisms and corporate restructuring actions during performance declines². When firms experience a

¹ See Kroszner and Strahan (2001) for further discussion on equitable subordination and legal liability.

² The corporate governance mechanisms facilitating restructuring actions include both external and internal controls. Specifically they include higher leverage (Ofek, 1993), outside block ownership (Kang and Shivdasani, 1997), and managerial disciplinary events (Denis and Kruse, 2000).

large drop in their operating performance, the uncertain future perspectives of the firms may increase the lenders' incentives to monitor firms' managerial decisions such as restructuring decisions which affect their existing debt claims. Therefore if private lenders have the ability to exert control over their borrowers' investment decisions, there would be a detectable link between lending relationships and corporate restructuring actions. Therefore investigation of a link between corporate restructuring and lending relationships during performance declines provides an ideal opportunity to document the monitoring roles of private lenders as a corporate control mechanism.

Banking theories present two competing views on lenders' incentives regarding corporate restructuring. First, when firms experience a significant drop in their operating performance, the lenders that maintain a close relationship with their client firms may have monitoring incentives to facilitate firms' value-increasing restructuring to help them survive and improve long-term performance (the monitoring hypothesis). The theoretical implications in studies such as Diamond (1984), Fama (1985), and Admati and Pfleiderer (1994) support this view. In contrast, the performance drops can create conflicts of interest between the client firms and their private lenders. To the extent that firms experiencing a performance shock have uncertain future perspectives, their lenders may have incentives to induce these firms to engage in restructuring actions that provide mainly short-term proceeds or short-term safety to secure their existing loan repayment (the conflicts of interest hypothesis). In Diamond (1993), lenders inefficiently liquidate their borrowing firms that suffer from liquidity problems since the lenders ignore the projects returning only to their borrowers. Sharpe (1990) and Rajan (1992) also present theoretical models that banks have bargaining power over their client firms and extract rents from them.

To identify close lending relationships we depend on two dimensions of relations between borrowing firms and their lenders. The first measure is the duration of the private lending relationships, which is one of the most common indicators of the close lending relationships in the banking literature (Petersen and Rajan, 1994; Berger and Udell, 1995). Private lenders are information producers that resolve information asymmetry between management and outside investors, and the soft information about borrowers is cumulatively acquired in their relationships over time. If lenders with a long-term relationship with their borrowing firms discontinue their lending, it could be a signal that the borrower's future performance is in question to other outside investors, indicating more ability to control firms for long-term relationship lenders. Since a long-term lending relationship is also valuable to private lenders, they are likely to have more incentive to monitor or control their borrowers when they have maintained a long-term relationship³. Thus, lenders with a durable relationship with their borrowing firms are more likely to have ability as well as incentives to influence restructuring decisions of their borrowers. The second measure of closeness of lending relationships is the actual amount borrowed from private lenders. If firms are more dependent on their private lending relationships for financing, it would be more difficult for them to access other financing resources such as public markets and other private lenders, especially when they experience financial difficulties. Thus, the more firms borrow from their private lenders, the more likely the private lenders have an ability to affect their restructuring decisions during performance declines.

³ Regarding this, Dahiya, Saunders, and Srinivasan (2003) report that financial distress of borrowing firms results in larger wealth declines for their banks when they have a past lending relationship before distress. The result is interpreted as evidence that long-term banking relationships are valuable to lenders.

Using the above two measures of close lending relationships, we show that private lenders with close lending relationships with their borrowers affect their restructuring actions during performance declines. Our results support the monitoring hypothesis. When downsizing actions are divided into actions that generate immediate cash flows, such as asset sales, and those that do not generate immediate cash flows, for example layoffs, firms with greater borrowing from their long-term lending relationships are more likely to engage in both types of downsizing actions. To the extent that non-cash-generating downsizing actions are not beneficial to private lenders who just want to secure their short-term loan claims, the results can be interpreted as favorable to the monitoring hypothesis rather than the conflict-of-interest hypothesis.

The investigation of the announcement effects of downsizing actions is also consistent with the monitoring hypothesis. Firms have significantly positive stock price reactions to downsizing actions particularly when they have more amount of borrowing from their lead credit facility. The effect is more pronounced for cash-generating downsizing actions. For non-cash-generating downsizing actions, the stock price reaction is higher when firms maintain long-term lending relationships with their lead lenders. In that lending relationship variables are positively related to the valuation effects of downsizing announcements, these findings favor the monitoring hypothesis.

In addition, we examine the change in the amount borrowed from the lead credit facility after downsizing actions to see whether the actions are induced to repay the borrowing firms' existing loans. Our results show that when firms have more debt from their lead credit facilities, the amount borrowed reduces following downsizing actions. However, there is a sharp difference in the loan changes between firms with and without

long-term lending relationships. We show that firms that have long-term lending relationships do not reduce their amount borrowed even following downsizing actions, indicating that the downsizing actions are not for loan repayments. These findings are similar to Hoshi, Kashyap, and Scharfstein (1990, 1991) showing that Japanese firms are less liquidity constrained even during financial distress when they have close ties to their main banks.

Finally, we examine the industry-adjusted long-term operating performance following firms' downsizing actions and show that it is higher when firms have a durable relationship with their lead lenders and have more borrowings from their lead credit facilities. In addition, our findings show that the firms that have a long-term lending relationship are less likely to be acquired by other firms following their performance shocks. Thus, our long-term performance results suggest that private lenders help firms survive performance declines and engage in restructuring actions focused on long-term performance improvement when they maintain close lending relationships.

In summary, our results present evidence that private lenders play a monitoring role in corporate restructuring during performance declines. We find that lenders with close relationships with their borrowers in terms of the duration of their relationships and the amount of their lending encourage firms to conduct downsizing actions resulting in greater firm value and higher long-term performance. However, we do not find strong evidence for the monitoring roles of lenders when they do not have a long-term relationship with their borrowers.

Previous research exploring the effects of banking relationships on corporate restructuring is limited. There are two related papers using data from the countries with

relatively strong creditor rights. First, using a set of Japanese firms that experience performance declines, Kang and Shivdasani (1997) find that firms with close ties to their main banks are more likely to undertake asset contracting actions and layoffs. Their results are interpreted as evidence that the main bank system functions as an alternative disciplinary mechanism in the absence of external corporate control pressures such as takeover threats in Japan. However, in their study the ties to their main banks are mainly measured by the ownership of the main banks, and therefore the results are derived from the disciplinary roles of banks as shareholders rather than those as creditors. Second, Bertrand, Schoar, and Thesmar (2007) investigate how the deregulation of the French banking industry in the 1980s affects firms' behavior and industrial structure. Their results show that banks are less willing to bail out poorly performing firms and firms in more bank-dependent sectors are more likely to undertake restructuring after the deregulation. Bertrand, Schoar, and Thesmar (2007) is different from our study in that they examine the effects of a shock on the banking sector rather than a shock on the corporate sector and do not consider the different characteristics of lending relationships. Therefore, the evidence in this study broadens our knowledge about the relationship between corporate restructuring and firms' lending relationships with their private lenders.

This paper proceeds as follows. Section 2 discusses the two competing hypotheses and testable implications to distinguish between them. Section 3 describes the data and sample characteristics. In Section 4, we present the results from our empirical analysis. Section 5 summarizes and concludes the paper.

2. Hypotheses and testable implications

We develop two competing hypotheses in this section and both hypotheses assume that private lenders have the ability to exert control over the borrowing firms' investment policies. Therefore, the first null hypothesis we are testing is that private lenders do not have incentives or ability to control firm's restructuring decisions. There are at least two arguments for expecting no influence of private lenders on corporate restructuring during performance declines. First, private lenders such as banks and financial institutions are considered inside investors able to access private information of their client firms. This indicates a possibility that private lenders are already informed about the performance declines of their borrowers and thus reflect expected financial status in the terms of their loan contracts so as not to be exposed to the financial risk. Second, as discussed above, the U.S. bankruptcy doctrines of equitable subordination and lender liability may discourage major private lenders from disciplining management. Thus, even if private lenders have disciplinary incentives, they may be hindered by the regulations especially when firms are at a high risk of bankruptcy. Therefore, by testing the two competing hypotheses described in detail below, we are simultaneously testing the hypothesis that private lenders do not or cannot exert control over corporate restructuring during performance declines.

2.1. Monitoring hypothesis

According to the monitoring hypothesis, as inside investors informed lenders such as banks and financial institutions with close lending relationships help borrowing firms overcome their performance shocks and improve their long-term performance. Under this hypothesis, informed lenders encourage their client firms to make value-maximizing

restructuring decisions for the firms' survival and long-run performance improvements based on their private information. Consistent with the hypothesis, Diamond (1984) provides a model in which a financial intermediary bears the cost of monitoring client firms and assures right decisions in their investment. Previous studies also provide evidence that bank loans are the only financing method associated with positive announcement returns, which are attributed to monitoring services by informed lenders (Smith, 1986; James, 1987; Lummer and McConnell, 1989).

Further, the monitoring hypothesis is supported by Admati and Pfleiderer (1994) who present a model where conflicts of interest and information asymmetries can be resolved by inside investors such as venture capitalists and informed banks. Specifically, they assume an entrepreneur who always has an incentive to continue projects even when the projects are not profitable. The overinvestment problem can be solved if capital is obtained from an inside investor with close ties to the firm. While their model is more applicable to the lenders in the countries with relatively strong creditor rights such as Japan and Germany, under the monitoring hypothesis we expect informed private lenders to play a role of inside investors especially when their borrowers struggle with unexpected performance shocks and make restructuring decisions, which will critically affect their debt claims.

There are four testable implications for the monitoring hypothesis, as summarized in Table 1. First, we investigate the effects of lending relationships on the likelihood of corporate restructuring actions in response to performance declines. In particular, similar to Ofek (1993) we divide downsizing actions between cash-generating downsizing actions such as asset sales and non-cash-generating downsizing actions such as layoffs. Some

types of restructuring actions such as layoffs of employees, suspensions of operation, and withdrawals from line of business are not associated with generating immediate cash flows but frequently involve large charges to firms. Although such actions do not immediately solve liquidity problems of the firms, they are likely to improve performance of the firms in the long run. Thus, if private lenders are interested in long-term performance of their borrowers, they may increase the likelihood of downsizing actions, whether the actions generate immediate cash flow or not, as long as they increase the firm's long-term performance. Therefore, under the monitoring hypothesis, we predict positive effects of close lending relationships on both types of downsizing actions.

Second, we examine the stock price reactions around restructuring announcements to investigate the effects of close lending relationships on the announcement returns. The monitoring hypothesis expects that private lenders influence firms to undertake value-increasing restructuring actions responding to performance declines. In particular, when firms maintain close lending relationships, their lenders may have more incentives and ability to closely monitor their actions to ensure the right decisions. Thus, we predict a positive relation between announcement returns of restructuring and lending relationship measures under the monitoring hypothesis.

Third, we examine whether the actual amount of borrowing from banks or institutional lenders decreases after downsizing actions. The previous studies such as Petersen and Rajan (1994) and Hoshi, Kashyap, and Scharfstein (1990, 1991) present evidence that firms have more availability of financing with close ties to their creditors. Consistent with these studies, under the monitoring hypothesis the restructuring actions by firms with close lending relationships are more focused on their performance improvement than loan

payment since they have credit availability with favorable conditions from their lenders. Therefore, the hypothesis predicts that firms maintain their loans and lending relationships after downsizing actions when they have close ties to their lenders.

Fourth, industry-adjusted long-term performance following corporate restructuring activities is investigated. Since the monitoring hypothesis predicts that private lenders monitor firms to improve their long-term performance, long-term operating performance following restructuring actions would be positively related to the lending relationship measures. Thus, to the extent that private lenders have the ability to exert control over the firms' investment decisions, we predict that improvement of long-term performance following restructuring activities are more pronounced when firms have close relationships with their lenders.

Finally, as another measure of long-term performance, we examine the probability that firms become acquisition targets and taken over by other firms following performance declines. The exit of the firms suggests that they are more financially constrained and suffer more from liquidity problems during the shock period. Since firms are less credit constrained and encouraged to engage in restructuring actions for their survival by their private lenders under the monitoring hypothesis, we predict lower probability of acquisitions by others for firms with close lending relationships during the performance shock period.

2.2. Conflict-of-interest hypothesis

The conflict-of-interest hypothesis posits that during performance declines lenders' best interests are in the short-term security of their existing loans and thus they facilitate

their client firms to choose restructuring activities that help repay their loans, even when liquidating assets is costly to the firms. For instance, if firms bankruptcy risk increases during performance declines, lenders may refuse to renew their existing loans, influencing these firms to sell marketable assets or force clients to sell their profitable assets to generate cash flows using their bargaining power. In this context, a close firm-creditor relationship causes firms to make suboptimal decisions because of conflicts of interest between the borrowing firms and their lenders.

This hypothesis is closely related to the theoretical work by Rajan (1992), who develops a model where an entrepreneur always has the incentive to continue her project and informed banks are able to control its client firms' investment decisions using their bargaining power over the firm. Here, banks often demand repayment of their existing loans even when the firms have profitable projects in order to share the surplus and induce the entrepreneur to exert lower effort than optimal, decreasing the firm's performance. Diamond (1993) also presents a model where lenders force borrowing firms that experience liquidity problems to choose inefficient liquidation. Since lenders ignore projects that return only to borrowers, profitable assets are liquidated in his framework. These theories imply that suboptimal restructuring decisions can be caused by lenders' self-interests and excessive bargaining power. Consistently, Houston and James (1994) find that firms with more growth options are less likely to depend on bank loans when they have an exclusive lending relationship such as a single lender relation.

We provide the following testable implications for the conflict of interest hypothesis, also summarized in Table 1.

First, for the effects of lending relationships on the likelihood of corporate restructuring, we expect a positive relation between the likelihood of cash-generating downsizing actions and close lending relationships under the conflict-of-interest hypothesis. Since private lenders have a strong incentive to force firms to generate cash flows to secure their existing loan claims, the probability of cash-generating actions increases when lenders have bargaining power over firms. However, since non-cash generating downsizing does not generate immediate cash flows but often incurs large restructuring charges, these actions are not in the interests of private lenders focusing on securing their loan claims. Therefore, close firm-creditor ties do not increase the probability of downsizing actions without generating immediate cash flows under this hypothesis.

Second, the conflict-of-interest hypothesis suggests that at least some of the restructuring actions are triggered by lenders' self-interests. If firms inefficiently liquidate profitable assets since their lenders refuse to extend or expand their credit lines, there would be negative implications on stock returns on their downsizing announcements. Especially when firms are more dependent on private lending rather than other financing resources, liquidation of profitable assets is more likely to negatively impact their finances. Thus, under the conflict-of-interest hypothesis, we predict negative effects of lending relationship measures on the announcement returns of restructuring.

Third, if restructuring actions are conducted to repay existing loans rather than to improve firm value, we expect to see the actual amount borrowed from private lenders reduce following corporate restructuring. Therefore, under the conflict-of-interest

hypothesis, the changes in loan amount are negatively associated with the existence of close lending relationships.

Fourth, corporate restructuring actions are not focused on improving long-term performance of the borrowing firms under the conflict-of-interest hypothesis. If lenders control their borrowers and force them to take restructuring actions favorable to lenders rather than borrowers, we predict that the post-restructuring performance will be less improved for firms with close lending relationships.

Finally, if firms mainly depend on their private lending relationships for funding their business, whether they can extend the relationships become very critical for their survival when they experience large performance declines. Since private lenders likely demand loan payment to secure their loan claims under the conflict-of-interest hypothesis, firms more dependent on their private lenders are more likely to be a target of acquisitions during the shock period. Thus, we predict positive effects of lending relationships on the probability of acquisitions by other firms under this hypothesis.

As discussed above, we employ two measures of close lending relationships: the length of the lending relationship and the actual amount borrowed from lead lenders. In our analysis, if firms have a longer than three year relationship with their lenders before their performance drops, they are classified as firms with durable lending relationships⁴. If firms have multiple credit facilities, we focus on the largest credit facility in terms of the size of credit lines, defined as a lead credit facility. Additionally, if a lead credit facility is

⁴ Sufi (2007) documents that the average maturity of syndicated loans in *DealScan* database is 1,103 days. Therefore if a firm maintains a lending relationship with the same lender for longer than three years, it is likely that they renewed their credit contracts at least once in the past.

a syndicated loan with multiple lenders, we focus on the lead lender of the lead credit facility to identify the duration of their lending relationships⁵.

3. Sample selection and data

3.1. Sample selection

To identify a set of firms that are initially in a good shape and subsequently experience a large drop in performance, we first require firms to be listed in NYSE, AMEX, or NASDAQ during 1997 to 2001 period. We exclude financial and utility firms from the sample. We do not impose any size restrictions on sample firms since small firms are usually more dependent on private lending relationships,⁶ and thus the role of creditors is more important for these firms. Firms are included in our sample if they initially maintain at least two consecutive years of above-industry-adjusted-median operating performance and subsequently drop into the bottom quarter. The two-year above-median performance restriction is imposed to prevent firms in continuous trouble from entering the sample.⁷ These sample selection criteria result in 245 observations. We further delete 12 observations for which lending relationship data is not available in 10Ks. Thus, our final sample consists of 233 observations in which 4 firms enter the sample twice.

Operating performance is measured as the ratio of operating income before depreciation to total assets (*Compustat* item #13 divided by *Compustat* item #6). We

⁵ According to Sufi (2007), lead lender is the agent who monitors the firm, governs the terms of the loan, administers the drawdown of funds, calculates interest, and enforces financial covenants.

⁶ In Denis and Kruse (2000), their sample firms are required to be over \$100 million of total assets to increase coverage in newspaper articles.

⁷ Denis and Kruse (2000) require one year of above-industry-adjusted median performance before declines. We require two years to make sure that the above-industry-adjusted-median performance before the declines is not unusual for the firms.

compute industry-adjusted operating performance by subtracting the median operating performance of the firms having the same three-digit SIC from each firm's operating performance. As discussed in Kang and Shivdasani (1997) and Denis and Kruse (2000), I employ accounting measures instead of stock returns to gauge firm's performance since the stock price is already likely to reflect its ability to overcome the performance drop or market's expectation of its restructuring actions responding to the shock.

For the sample firms, detailed debt ownership and institutional holding data are collected from firms' financial statements and Thompson Financial Ownership Database, respectively. In particular, we obtain detailed data on debt ownership from firms' 10Ks using a *Loan Pricing Corporation's Dealscan* database as an additional information source. We obtain data on restructuring activities from *Factiva*. We examine *Factiva* during the period associated with a performance shock, for up to three years after the start of the shock year (fiscal year 0). Firms' financial and managerial ownership data are obtained from *Compustat* and *Compact Disclosure*, respectively.

3.2. Summary statistics

Table 2 presents summary statistics of the sample firms for the year of performance decline (Year 0) and the year prior to performance decline (Year -1). The firms in our sample are relatively small, having the mean (median) total assets of \$ 467 (\$82) million and the mean (median) market value equity of \$985 (\$135) million. In comparison, the mean total assets in Denis and Kruse (2000) who impose the \$100 million asset size requirement is \$805 million. Although both book value of assets and market value of equity decrease during the shock year, the decrease is statistically significant only for the

median market value of equity.

The comparison between ROA in the year prior to performance declines and that in the decline year shows that the sample firms suffer from a large drop in operating performance. The mean (median) of ROA drops from 0.17 (0.18) in Year -1 to -0.10 (-0.06) in Year 0 and the difference is statistically significant. The drops in operating performance are also confirmed when we calculate industry-adjusted ROAs by subtracting industrial medians from each firm's ROAs. Although the mean (median) current ratio, which is measured as current assets divided by current liability, also declines, the difference in the current ratio between the shock year and the year before the shock is not statistically significant. Finally, the mean debt ratio is 0.12 in Year -1 and 0.17 in Year 0, and the difference is significant, suggesting that the sample firms become more dependent on debt financing during performance declines. Overall, the results in Panel A indicate that the sample firms experience a large drop in operating performance and a significant increase in leverage during the year of the performance drop.

Panel B of Table 2 presents the summary statistics of the ownership structure. There are no significant changes detected during the shock year in terms of managerial ownership, institutional ownership, and institutional block holdings, which are aggregate ownership of financial institutions holding a 5% or more stake in the firm. Although the mean total institutional ownership decreases by around two percent, this decrease is statistically insignificant.

The summary of lending relationships is reported in Panel C of Table 2. Out of 233 firms in our sample, 189 (81.1%) have at least one credit facility such as a line of credit loan and a term loan, with their private lenders such as banks and financial institutions as of

the end of the year before the performance decline. The number (percentage) of the firms that have credit facilities decreases to a 173 (75.6%) during the year of the performance drop.⁸ We also find that only 11.6 percent of the sample firms have more than one credit facility. The average number of credit facilities that firms hold immediately before their performance drop is 1.17 and insignificantly increases to 1.21 as of the end of the shock year.

The mean (median) value of the total line amount of credit facilities is as much as 21.5% (18.4%) of the firm's total assets before performance decline and it significantly increases to 25.7% (21.4%) in the year of performance decline. The amount of the lead credit facility, defined as the largest credit facility of each firm, is very close to the total amount of the credit facilities of each firm, showing concentrated lending relationships of the sample firms. The lead credit facility accounts for more than 96% of total amount of the credit facilities in both the shock year and the year before the shock. In addition, we find a substantial difference between the total amount of credit facilities and the actual borrowing amount drawn from the credit facilities. The sample firms use about 30% of their total credit facility lines before experiencing their performance drop and the actual amount borrowed increases to about 38% of their total credit line as of the end of the shock year. We also find that borrowing from firms' credit facilities (lead credit facilities) is an important financing source for the sample firms, accounting for 52% (50%) of their total debt before the performance decline and 60% (57%) of their total debt in the year of performance decline.

⁸ We exclude 5 firms that are acquired during the shock year when we calculate the percentage of the firms that have credit facilities in the shock year.

4. Empirical results

4.1. Restructuring activities

Prior studies find that firms experiencing performance declines are likely to respond by implementing value-increasing restructuring actions such as asset contraction actions and employment policy changes, and document improved post-restructuring performance (Denis and Kruse, 2000; Kang and Shivdasani, 1997; Ofek, 1993). In this section, to investigate the restructuring actions in response to performance declines, we present the type and the frequency of the particular restructuring actions conducted by the sample firms. We find that 50 firms are acquired within three years following the performance shocks. For these firms, the information on restructuring actions is collected up to the point that they are acquired.

Table 3 shows that 58% of the sample firms undertake at least one type of downsizing actions in the year of the performance decline and the two years following the decline. In the shock year, 33% of the firms undertake downsizing actions and the frequency of the firms downsizing gradually decreases over the subsequent two years. These findings are generally consistent with those in Denis and Kruse (2000) who report the highest frequency of restructuring actions in the years immediately following performance declines. The proportions of the firms that downsize are also similar to those in the previous studies. For instance, in Denis and Kruse (2000), 53% (69%) of their sample firms undertake at least a type of downsizing actions within two (four) years following performance decline.

Following previous studies, we classify downsizing actions into asset contraction and employment change actions. Asset contraction actions include asset sales, operation

suspensions, withdrawals from line of business, and spin-offs of units. Employment change actions include layoffs, pay cuts, and early retirement incentives. Between these two types, asset contractions occur more frequently, with 38% of the firms contracting their assets. Specifically, out of 233 firms 75 announce asset sales, 31 suspend a part of their operations or withdraw from a line of their business, and 5 undertake spin-offs of their units in response to their poor performance. The percentage of the firms conducting asset restructuring is slightly lower than those of previous papers. For example, Denis and Kruse (2000) report that 44% of firms restructure their assets within two years of performance decline, while Kang and Shivdasani (1997) document that 49% of U.S. firms undertake asset contraction actions in the year of and after performance declines.

We also find that changes in employment are a typical response to performance declines. The change is made mostly by layoffs, with 72 (31%) firms engaging in layoffs of their employees. The proportion is generally similar to those in previous work. For two years from the start of the shock year, 20% of the sample firms perform layoffs in Denis and Kruse (2000) and 32 % of firms undertake employment change actions in Kang and Shivdasani (1997).

In order to put the frequency of downsizing actions in a different perspective, we divide downsizing actions into two different categories: cash-generating and non-cash-generating downsizing actions. The cash-generating downsizing actions are defined as downsizing actions that generate immediate cash flows such as asset sales, while non-cash-generating actions include those that do not generate immediate cash flows such as layoffs and plant closures, most of which incur restructuring charges. Ofek (1993) argues that non-cash-generating downsizing actions are likely to focus on improving firm's long-term

performance, while some of the cash-generating actions are conducted just to relax firms' liquidity constraints. We find that 32% (41%) of the firms engage in cash (non-cash)-generating downsizing actions in the year of performance decline and the subsequent two years.

We also collect data on expansionary actions conducted during performance declines. These expansionary actions include full or partial acquisitions, joint ventures, new plant construction, etc. As long as the investment opportunities are economically profitable, expansionary actions can be an optimal choice to overcome performance declines. The results show that 61% of the firms expand their operations during their performance decline. The percentage of firms undertaking expansionary actions is high during the first two years and decreases in the third year, suggesting that at least some of the firms choose expansionary actions as a response to their performance shock. Full or partial acquisitions are the most frequent type of expansionary action firms undertake, with 53% of the sample firms fully or partially acquiring other firms. Similarly, Kang and Shivdasani (1997) show that 53% of sample firms expand their business in the year of and the year after performance decline.

In summary, the findings from the restructuring actions confirm those documented in prior studies. Firms respond to their performance decline frequently by undertaking corporate restructuring. We also find that the types of restructuring vary across firms, such as downsizing actions including cash-generating and non-cash-generating actions and expansionary actions.

4.2. Determinants of restructuring decisions

This section analyzes how the lending relationship variables are related to the likelihood of restructuring actions reported in Table 3. We use logit regression models where the dependent variable equals one if a particular restructuring action occurs in the year of the performance decline and the following two years, and zero otherwise. All explanatory variables are measured at the fiscal year-end that immediately precedes a performance decline.

In the regressions, we include control variables that might affect the probability of restructuring actions. First, we include firm size (logarithm of the book value of total assets) since large firms have more resources such as plants and employees and thus more likely downsize than small firms. Second, we control for restructuring incentives of managers and institutional shareholders by including managerial and block institutional ownership. Block institutional ownership is defined as holdings larger than 5 percent. Third, we include firm's debt ratio since Ofek (1993) shows that leverage functions as a control mechanism to facilitate restructuring actions during performance declines. Fourth, the proportion of tangible assets in total assets is included since a higher tangible asset base indicates that firms have a larger base to contract from, implying a higher probability of downsizing. Fifth, we control for the ratio of operating income before depreciation to assets (ROA) as a measure of firm's prior performance. Sixth, because the degree of the performance shock varies across the sample firms, we include the magnitude of the performance shock, which is calculated by subtracting the ROA in the shock year from that in the year prior to the shock. Finally, we control for industrial performance change by

including the median change in ROA between the shock year and the year before the shock year for the industry.

We use two variables as our key lending relationship variables: a dummy variable which equals one if the firm maintains a lending relationship with its current lender for longer than three years before the shock year, and zero otherwise, and the actual amount borrowed from the lead credit facility. Based on the discussion in the previous section, we expect close lending relationships to increase the probability of downsizing actions in response to a drop in operating performance under both hypotheses.

The results are reported in Table 4. In column (1), we examine the likelihood of downsizing actions including asset contraction actions and employment change actions. The results show that the dummy for durable lending relationship is positive, but insignificant, and the lead facility borrowing is positive and significant at the 1 percent level. Therefore, when firms borrow more from their lead credit facility, they are more likely to respond to their performance declines with downsizing actions.

To see whether the credit facility loan effects are different depending on the duration of the lending relationships, the dummy variable for long-term relationships and borrowing from the lead credit facility variable are interacted in column (2). The interaction term turns out to be significant at the 5% level and positive, suggesting that the loans form durable lending relationships increase the likelihood of downsizing actions in response to performance declines.⁹

⁹ Regarding the interpretation of interaction terms, Ai and Norton (2003) point out that the interaction effect in nonlinear models cannot be evaluated by looking at the coefficients on interaction terms. We examine the interaction effects of our logit models following their suggestions, and find that all the interaction effects in Table 4 are consistent with our interpretation. For example, the interaction effects in columns (2), (4), and (6) are statistically significant with the same signs at the 5% or 10% level for most observations. See Ai and Norton (2003) for further discussion regarding interaction effects in nonlinear regression models.

In columns (3) to (6), downsizing actions are divided into cash-generating and non-cash-generating downsizing actions. In columns (3) and (4), the dependent variable is set to one if firms engage in cash-generating downsizing actions, and zero otherwise. The results in column (3) show that the amount borrowed from the lead credit facility is positively related to the likelihood that firms undertake cash-generating downsizing actions. The coefficient on the amount borrowed from the lead credit facility is significant with a p-value of 0.03. In column (4), the interaction term between the amount borrowed from the lead credit facility and a dummy for long-term lending relationship is positive and significant at the 5% level. Therefore, the probability of cash-generating downsizing actions increases when firms borrow more from their lead lenders that maintain a long-term relationship.

The probability that a firm engages in downsizing actions without cash generation is investigated in columns (5) and (6). The results from these columns are particularly critical since the predictions on the effects of close lending ties on non-cash-generating downsizing actions are different between the monitoring and the conflict-of-interest hypotheses. In column (5), neither the long-term lending relation dummy nor the lead credit facility loan variable is statistically significant. When the two variables, however, are interacted in column (6), the interaction effect is positively significant at the 10% level. Thus, the firms with strong ties to long-term relationship lenders are more likely to undertake non-cash-generating downsizing actions, supporting the monitoring hypothesis rather than the conflict-of-interest hypothesis.

Columns (7) and (8) present logit regression estimates for the probability of undertaking expansionary actions. The results show that firms holding a long-term lending

relationship are less likely to expand their operations during the shock period. The amount borrowed from the lead credit facility variable and its interaction term with the long-term lending relationship dummy do not have significant effects on the probability of expansion. In unreported tests where the dependent variable is set to one if firms acquire other firms and zero otherwise, we find similar results. These results are consistent with Kang and Shivdasani (1997) who find that Japanese firms with larger ownership of their main banks and block holders are less likely to engage in acquisitions of other firms. In addition, Admati and Pfleiderer (1994) suggest monitoring roles of inside investors in controlling overinvestment incentives of the management. Therefore, to the extent that some of the expansionary actions of the sample firms are not optimal choices and they are determined by overinvestment incentives, we interpret these results as additional evidence that long-term relationship lenders play a disciplinary role in mitigating the overinvestment problems.

Among control variables, managerial ownership is negatively associated with the probability of downsizing actions, implying the incentive of managers to continue existing projects. As expected, firm size increases the probability of downsizing. Interestingly, debt ratio is negatively related to downsizing actions, but only for non-cash-generating actions. One possible explanation is that non-cash-generating downsizing actions are frequently involved with large charges to earnings and cash outflows, so firms with a large burden of leverage have difficulties in taking such actions. In addition, firms with better prior performance are more likely to take expansionary actions, while the larger magnitude of performance shock is positively associated with the probability of downsizing actions.

In summary, the logit regression results favor the monitoring hypothesis in that firms with close ties to their long-term lead lenders are more likely to engage in not only cash-generating downsizing actions but also non-cash-generating ones. The results also provide evidence that long-term relationship lenders discourage expansionary actions of firms regardless of their loan amounts, further supporting the monitoring hypothesis.

4.3 Valuation effects of restructuring announcements

In this section we investigate the valuation effects of restructuring announcements during performance declines and the factors deriving the announcement returns. A standard event-study approach is employed to calculate cumulative abnormal returns around restructuring announcements. First, we identify initial public announcement dates of restructuring actions from *Factiva*. The observations are excluded if there is a confounding announcement within five days before or after the announcement date. Next, daily abnormal returns are computed using a market model with a 200 trading day estimation period beginning 220 days before and ending 21 days before the announcements. Finally, cumulative abnormal returns (CARs) are computed by summing up the abnormal returns using different windows reported in Table 5. The *t*-statistics and the Wilcoxon sign-rank *z*-statistics are reported to test whether the mean CAR is equal to zero and the CARs are symmetrically distributed around zero, respectively.

The results in Table 5 show that the announcement stock returns for downsizing actions are significantly positive only for CAR (-2, 2) in terms of the mean. However, when the downsizing actions are divided into cash- and non-cash- generating actions, the results for the two subsamples show a sharp difference. The announcement returns for

cash-generating downsizing actions are significantly positive for all three windows, while those without cash generation are significantly negative for CAR (-1, 1) and negative but insignificant for CAR (-1, 0) and CAR (-2, 2). The difference between the two subsamples is statistically significant for all the windows. The results are generally consistent with the findings in Denis and Kruse (2000) who show that the announcement effects of asset sales are significantly positive and those of cost cutting or layoffs are insignificantly negative. One possible explanation for the negative returns for non-cash-generating actions is that the announcement of these actions is a signal of financial difficulties or liquidity problems of announcing firms. Often restructuring announcements are accompanied by the announcements on the firms' recent earnings, which are usually negative news for the firm. Although these announcements are excluded in our analysis due to the confounding effects, restructuring announcements can still be interpreted as a signal that the firm's bankruptcy risk increases, especially if the information regarding the firm's performance decline is not already publicly known and the announced restructuring actions do not generate immediate cash flows to mitigate liquidity concerns.

Since our main interest is in the relationship between the restructuring announcement returns and the lending relationship measures, we present multivariate regression estimates using the CAR (-1, 1) as the dependent variables in Table 6. In addition to the control variables used in Table 4, we add a dummy variable, which equals one for the first restructuring announcement of the firm during the sample period, and zero otherwise. We include this variable because the initial announcement effects are expected to be stronger if the firm has a subsequent corporate restructuring program.

In column (1), we show that the amount borrowed from the lead credit facility is positively associated with the announcement returns of downsizing actions. In column (2), the results show that the downsizing announcement returns for firms that maintain lending relationships longer than three years are 5.5% greater than those for firms that maintain shorter lending relationships. The actual amount borrowed from the lead lenders also increases the announcement returns, but the coefficient on an interaction term between the amount borrowed from the lead lenders and a dummy variable for long-term relationships is not significant.

In columns (3) through (6), we divide downsizing actions depending on whether they immediately generate cash flows or not. The results in column (3) find that the stock returns of cash-generating downsizing actions are positively related to the loans drawn from the lead credit facility before the actions. However, the insignificant effects of the long-term lending relationship dummy and the interaction between this dummy and the lead credit facility loans in column (4) suggest that the presence of long-term lenders does not make a significant difference in announcement returns of cash-generating downsizing actions.

When downsizing actions are not associated with the generation of immediate cash flows, a dummy variable for long-term lending relationship is positively and significantly related to the stock returns in column (5). Column (6) shows that the announcement returns increase by 11% with the existence of a long-term lending relationship with a lead lender. The size of lead credit facility loans has no significant effect on the announcement returns.

Overall, the results from the multiple regressions provide evidence of positive relations between downsizing announcement returns and lending relationship measures, supporting the monitoring hypothesis. Larger loans may provide lead lenders with stronger incentives to monitor the firm's decisions particularly when they sell their assets, some of which serve as their collateral. In addition, we find that the stock market applauds non-cash-generating downsizing actions especially when firms have long-term relationship lenders, who are more likely to be interested in the long-term performance of their borrowers.

Among control variables, managerial ownership is positively related to stock returns, especially for cash-generating downsizing actions. Thus, the downsizing actions conducted by firms with larger managerial ownership are valued more favorably by the market. We also find that total leverage effects are sharply different from the effects of facility loans. The total debt ratios are significantly and negatively associated with downsizing announcement returns, especially those of the cash-generating downsizing actions.

4.4 Loan changes following restructuring actions

This section examines how the changes in loans from lead credit facilities following downsizing actions are related to the lending relationship measures. As discussed in the previous section, the monitoring hypothesis predicts that firms maintain their borrowing following downsizing actions when they are closely tied to their lenders. In contrast, the conflict-of-interest hypothesis predicts a reduction of loans after downsizing actions for the firms with close lending relations. The loan changes are computed for the firms downsizing within two years after the start of the performance decline by subtracting the

ratio of the actual loan amount to assets in the year prior to downsizing actions (Year -1) from that in the year after downsizing actions (Year 1). If firms undertake multiple downsizing actions, we choose the first downsizing action of each firm. We then run multiple regression models using the loan changes as dependent variables and the same variables as those in the previous regressions as explanatory variables. The results are presented in Table 7.

The estimates in column (1) show that there is a negative relation between the loans from the lead credit facility and the loan changes following downsizing actions. Therefore, firms with larger loans from their lead credit facilities are more likely to repay their loans from the credit facility after their downsizing actions. However, we also show that the interaction term between the long-term relationship dummy and the lead credit facility loans is significantly positive. In terms of magnitudes, the coefficient on the interaction term is slightly larger than that on the loan amount before downsizing variable, indicating that firms with long-term relationship lenders maintain their loans even following downsizing actions. These results reduce the possibility that our results in the previous sections are derived by the lenders' pressure to force the borrowing firms to repay their existing loans, further supporting the monitoring hypothesis.

4.5 Industry-adjusted long-term performance following restructuring actions

In this section, we examine the three-year industry-adjusted operating performance following downsizing actions. If private lenders monitor firms with a long-term perspective and facilitate firms to engage in restructuring actions focused on improvement in long-term performance, we expect a positive relation between long-term performance

and lending relationship measures. To explore this issue, we compute the changes in industry-adjusted ratio of operating income before depreciation to assets for three years from the year that downsizing actions occur. The changes are measured for those firms that downsize within two years from the start of the decline year. We run multiple regressions where dependent variable is the change in operating performance.

The results in column (1) of table 8 show no significant effects of lending relationship measures on the long-term performance following downsizing actions. However, when we include the interaction term between long-term lending relationship dummy and loans from lead credit facility, the interaction variable is significantly positive at the 1% level. Thus, post-restructuring performance improves when firms borrow more from their lead long-term lenders, again supporting the monitoring hypothesis.

Because some firms are acquired following performance declines, our long-term performance results might be affected by the disappearance of these firms.¹⁰ Moreover, the acquisitions suggest that the firms experience difficulties in financing possibly because their lenders decide to break the lending relationships with the firms. To address this issue, we conduct logit regression analyses where the dependent variable equals one if firms are acquired within the three years from the start of the performance shock year, and zero otherwise.

The results in Table 9 help alleviate this concern. In column (1), the probability of acquisitions is negatively related to the existence of long-term lending relationships. Thus, if firms have a relationship with their lead lender for longer than three years, they are less likely to be acquired following performance declines. In column (2), the long-term lending

¹⁰ Out of 233 sample firms, 50 firms are acquired within three years from the start of the shock year. No firms go bankrupt during this same period.

relation dummy is again significantly negative, while its interaction term with loans from the lead credit facility is not significant. These results suggest that durable lending relationships help firms survive during their performance shock.

In summary, the results from the analysis on post-restructuring performance again support the monitoring hypothesis rather than the conflict-of-interest hypothesis. When firms have a durable relationship with their lead lenders, not only the post-restructuring performance improves as loans from the credit facility increase, but the probability of being taken over by other firms is significantly lower.

5. Summary and conclusion

We investigate the influence of lending relationships on corporate restructuring using 233 firms that had large performance declines between 1997 and 2001. We consider two competing hypotheses regarding the effects of lending relationships. According to the monitoring hypothesis, private lenders such as banks and financial institutions help their borrowing firms survive and improve long-run performance by facilitating value-increasing restructuring actions. In contrast, the conflict-of-interest hypothesis argues that private lenders focus on the short-term security of their existing loans and thus force their borrowers to undertake restructuring actions to ensure repayment of current loans. The assumption in both hypotheses is that private lenders have incentives and ability to control investment decisions of their borrowing firms.

We focus on two dimensions of lending relations to identify close lending relationships. First, we consider the duration of the private relationships since long-term lenders are expected to have more soft information about their borrowers and more

incentives to monitor the firms because the long-run relation may be more valuable to lenders. Second, we employ the firm's actual amount borrowed from its largest credit facility as our second measure. If firms are more dependent on their private lenders for financing, they are more likely to be under the influence of their lenders.

Our empirical findings are consistent with the monitoring hypothesis. We first find that the likelihood of downsizing actions increase when firms have more borrowings from their long-term lenders. Firms with close lending relationships in terms of our two measures are more likely to downsize, whether the actions immediately generate cash flows or not. Since non-cash-generating downsizing actions are often involved with large charges, the close lending relationships increasing the probability of such actions support the monitoring hypothesis. In addition, we show that the likelihood of expansionary actions decreases with the presence of long-term lending relations.

Our results on announcement returns of downsizing also support the monitoring hypothesis. We find that larger loans from lead credit facilities are positively related to the stock price reactions to downsizing announcements, especially for cash-generating-downsizing actions. The stock returns are also greater when firms with long-term relation lenders announce non-cash-generating downsizing actions. The positive association between lending relationship measures and the announcement returns is consistent with the monitoring hypothesis.

We show that firms also maintain their loans from their lead credit facilities following downsizing actions when they have loans from durable lending relationships, while other firms reduce their amount borrowed. The results are against the view that firms with close

ties to their lenders downsize more because of the lenders' pressure on loan repayment, again favoring the monitoring hypothesis.

In addition, we find that firms have better post-restructuring performance when they have more borrowing from their long-term relationship lenders, indicating the monitoring roles of private lenders with long-run perspective. Moreover, firms maintaining durable lending ties are less likely to be acquired during their performance decline, suggesting that they are less financially constrained in the period.

Overall our findings suggest that private lenders have the incentives and ability to influence firm's investment decisions particularly when firms have financial difficulties. Our results are consistent with the view that close lending relationships create value by monitoring the borrowers to make right decisions in their investments. Additional future evidence regarding the influence of lenders on firm's investment may be able to broaden our knowledge about the roles of private lenders as active monitors.

APPENDIX

Table 1
Predicted effects of close lending relationships

These predictions are provided to distinguish between the monitoring hypothesis and the conflict-of-interest hypothesis. The monitoring hypothesis predicts that when firms experience performance declines, lenders that maintain a close relationship with their client firms have monitoring incentives to facilitate firms' value-increasing restructuring to help them survive and improve long-term performance. In contrast, the conflict-of-interest hypothesis argues that the performance drops can create conflicts of interest between the client firms and their private lenders and that lenders have incentives to induce borrowing firms to engage in restructuring actions that provide mainly short-term proceeds or short-term safety to secure repayment of their existing loans.

Testable implications	Monitoring hypothesis	Conflict of interests hypothesis
The likelihood of restructuring	Positive on both cash-generating downsizing and non-cash-generating downsizing actions	Positive only on cash-generating downsizing actions
Valuation effects of restructuring announcements	Positive	Negative
Changes in borrowing following restructuring	Not negative	Negative
Long-term performance following restructuring	Positive	Negative
Probability of being acquired	Negative	Positive

Table 2
Descriptive statistics of firm characteristics

The sample consists of 233 non-financial firms listed on the NYSE, NASDAQ, or AMEX that experience a large one year drop in their operating performance (ROA) following at least two years of above-industry-adjusted-median performance during the 1997-2001 period. Firms are included in our sample if they initially maintain at least two consecutive years of above-industry-adjusted-median operating performance and subsequently drop into the bottom quartile. Year -1 denotes the year prior to the decline in performance and Year 0 denotes the year of performance decline. The difference in each variable between Year -1 and Year 0 is tested using a t-test and a Wilcoxon z-test, and statistics for the tests are reported in the last two columns.

	Year -1		Year 0		Test of difference	
	Mean	Median	Mean	Median	t-test	Wilcoxon z-test
<i>Panel A: Financial characteristics</i>						
Assets (millions)	466.54	81.94	409.24	77.18	-0.22	-0.45
Market value of equity (millions)	985.04	135.06	456.17	73.73	-1.10	-3.78
Raw ROA	0.171	0.178	-0.099	-0.060	-20.49	-16.74
Industry-adjusted ROA	0.132	0.123	-0.109	-0.084	-26.17	-18.39
Current ratio	4.045	3.068	3.689	2.512	-1.08	-2.40
Total debt / assets	0.123	0.039	0.165	0.062	2.19	1.36
<i>Panel B: Ownership structure characteristics</i>						
Managerial ownership	0.252	0.194	0.245	0.199	-0.42	0.27
Institutional ownership	0.325	0.299	0.307	0.272	-0.86	-1.07
Institutional block ownership larger than 5 percent	0.110	0.090	0.122	0.078	1.07	-0.67
<i>Panel C: Lending relationship characteristics</i>						
Number (percentage) of firms with credit facilities	189 (81.1%)		173 (75.6%)			
Number (percentage) of firms with multiple credit facilities	27 (11.6%)		32 (14.0%)			
Number of credit facilities	1.169	1.000	1.214	1.000	0.90	1.06
Total amount of credit facilities / assets	0.215	0.184	0.257	0.214	2.08	2.17
Amount of lead credit facility / assets	0.208	0.170	0.249	0.199	2.06	2.23
Total borrowing from credit facilities / assets	0.064	0.00	0.099	0.036	2.70	2.78
Borrowing from lead credit facility / assets	0.061	0.00	0.094	0.031	2.56	2.68

Table 3
Frequency of restructuring actions during performance declines

The sample consists of 233 non-financial firms listed on the NYSE, NASDAQ, or AMEX that experience a large one year drop in their operating performance (ROA) following at least two years of above-industry-adjusted-median performance during the 1997-2001 period. Firms are included in our sample if they initially maintain at least two consecutive years of above-industry-adjusted-median operating performance and subsequently drop into the bottom quartile. The information on restructuring activities by sample firms is collected from newspaper articles using the *FACTIVA* system. We examine news articles on *FACTIVA* for up to three years after the start of the shock year (fiscal year 0). For each restructuring event, the first number in each cell represents the actual number of firms announcing a particular restructuring action and the number in parentheses represents the percentage of firms that announce the restructuring action.

	Year 0 (233 firms)	Year 1 (228 firms)	Year 2 (205 firms)	Years 0 to 2
<i>All downsizing actions (A + B)</i>	78 (33.4)	63 (27.6)	51 (24.9)	136 (58.4)
<i>Asset contraction actions (A)</i>	47 (20.2)	39 (17.1)	38 (18.5)	89 (38.2)
Asset sales	33 (14.2)	31 (13.6)	32 (15.6)	75 (32.2)
Operation suspensions or withdrawals from line of business	17 (7.3)	10 (4.4)	6 (2.9)	31 (13.3)
Spin-offs of units	5 (2.1)	0 (0.0)	1 (0.5)	5 (2.1)
<i>Employment changes (B)</i>	41 (17.6)	31 (13.6)	14 (6.8)	72 (30.9)
Layoffs	41 (17.6)	31 (13.6)	14 (6.8)	72 (30.9)
Pay cuts or early retirement incentives	1 (0.4)	0 (0.0)	0 (0.0)	1 (0.4)
<i>Downsizing actions by cash generation</i>				
With cash generation	34 (14.6)	31 (13.6)	32 (15.6)	74 (31.8)
Without cash generation	56 (24.0)	39 (17.1)	20 (9.8)	95 (40.8)
<i>Expansionary actions</i>	81 (34.8)	71 (31.1)	51 (24.9)	143 (61.4)
Full or partial acquisitions	68 (29.2)	60 (26.3)	44 (21.5)	124 (53.2)
Other expansionary actions	21 (9.0)	18 (7.9)	11 (5.4)	44 (18.9)

Table 4
Logit estimates of the likelihood of restructuring actions during performance declines

The sample consists of 233 non-financial firms listed on the NYSE, NASDAQ, or AMEX that experience a large one year drop in their operating performance (ROA) following at least two years of above-industry-adjusted-median performance during the 1997-2001 period. Firms are included in our sample if they initially maintain at least two consecutive years of above-industry-adjusted-median operating performance and subsequently drop into the bottom quartile. The information on restructuring activities by sample firms is collected from newspaper articles using the *FACTIVA* system. We examine news articles on *FACTIVA* for up to three years after the start of the shock year (fiscal year 0). The dependent variable equals one if firms undertake the particular restructuring actions described in Table 2. The dummy for lead lending relationship longer than 3 years takes a value of one if firms maintain lending relationships with their lead lenders for longer than three years before performance declines. Borrowing from lead credit facility is the actual amount borrowed from the largest credit facility of the firms immediately before performance declines. All accounting variables are measured at the end of the fiscal year immediately before the performance declines of the sample firms. Numbers in parentheses are *p*-values. The symbols *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

Table 4

	Downsizing actions			Downsizing actions with cash generation		Downsizing actions without cash generation		Expansory actions	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
Intercept	-2.953*** (0.00)	-2.892*** (0.01)	-2.858*** (0.00)	-2.857*** (0.00)	-3.125*** (0.00)	-3.165*** (0.00)	-0.281 (0.74)	-0.289 (0.73)	
Dummy for lead lending relationship longer than 3 years (A)	0.451 (0.22)	-0.017 (0.97)	0.454 (0.21)	0.018 (0.97)	0.143 (0.69)	-0.152 (0.70)	-1.249*** (0.00)	-1.190*** (0.00)	
Borrowing from lead credit facility / assets (B)	6.480*** (0.01)	3.992 (0.15)	5.517** (0.03)	3.317 (0.21)	1.520 (0.59)	-1.413 (0.71)	1.337 (0.57)	1.719 (0.52)	
(A) × (B)		9.105** (0.04)		8.449** (0.04)		7.424* (0.09)		-1.150 (0.74)	
Managerial ownership	-2.765*** (0.00)	-2.876*** (0.00)	-2.084* (0.06)	-2.239** (0.05)	-1.766* (0.07)	-1.865** (0.05)	-0.627 (0.49)	-0.615 (0.50)	
Institutional block ownership	-2.352 (0.14)	-2.288 (0.15)	-0.851 (0.59)	-0.894 (0.58)	-0.199 (0.90)	-0.071 (0.96)	-0.235 (0.87)	-0.243 (0.87)	
Log (assets)	0.832*** (0.00)	0.849*** (0.00)	0.434*** (0.01)	0.464*** (0.01)	0.718*** (0.00)	0.744*** (0.00)	0.135 (0.36)	0.132 (0.37)	
Total debt / assets	-4.889*** (0.00)	-5.004*** (0.00)	-0.415 (0.77)	-0.524 (0.71)	-5.511*** (0.00)	-5.726*** (0.00)	-0.340 (0.80)	-0.313 (0.82)	
Tangible assets / assets	10.947 (0.19)	11.107 (0.24)	-3.813 (0.72)	-4.022 (0.68)	12.378* (0.07)	12.313* (0.09)	-8.585 (0.31)	-8.634 (0.32)	
ROA	-0.897 (0.59)	-0.797 (0.64)	-0.480 (0.79)	-0.540 (0.76)	-1.276 (0.44)	-1.236 (0.45)	4.264*** (0.01)	4.249*** (0.01)	
Change in ROA from year -1 to year 0	-2.948** (0.05)	-2.935** (0.05)	-0.858 (0.34)	-0.984 (0.28)	-2.227* (0.10)	-2.322* (0.09)	-0.846 (0.29)	-0.838 (0.29)	
Industrial median change in ROA from year -1 to year 0	8.672** (0.05)	8.496** (0.05)	4.044 (0.37)	4.225 (0.35)	6.612 (0.12)	6.739 (0.12)	-3.286 (0.42)	-3.269 (0.42)	
Number of firms	196	196	196	196	196	196	196	196	
Model p-value	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Table 5
Mean and median cumulative abnormal returns surrounding the announcement of restructuring activities

The sample consists of 233 non-financial firms listed on the NYSE, NASDAQ, or AMEX that experience a large one year drop in their operating performance (ROA) following at least two years of above-industry-adjusted-median performance during the 1997-2001 period. Firms are included in our sample if they initially maintain at least two consecutive years of above-industry-adjusted-median operating performance and subsequently drop into the bottom quartile. Initial public announcement dates of restructuring are identified from a *Factiva* search. If there is a confounding announcement within five days before or after the announcement date, the observations are deleted. Daily abnormal returns are computed using a market model with a 200 trading day estimation period beginning 220 days before and ending 21 days before the restructuring announcement. Cumulative abnormal returns are computed by summing up the abnormal returns using different windows reported in this table. T-statistics and Wilcoxon sign-rank z-statistics are reported to test whether the mean values of the CARs are equal to zero and whether the CARs are symmetrically distributed around zero, respectively. The symbols *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

	<i>Full sample</i>		<i>Downsizing with cash generation (N= 101): (A)</i>		<i>Downsizing without cash generation (N= 103): (B)</i>		<i>Test of difference: (A)-(B)</i>	
	Mean	Median	Mean	Median	Mean	Median	t-test	wilcoxon-z test
Cumulative abnormal returns (-1, 0)	0.0099	-0.0021	0.0306**	0.0009	-0.0104	-0.0083	2.56	1.90
Cumulative abnormal returns (-1, 1)	0.0042	-0.0053	0.0378**	0.0006	-0.0289*	-0.0172**	2.88	2.38
Cumulative abnormal returns (-2, 2)	0.0219*	-0.0056	0.0610***	0.0203**	-0.0165	-0.0184	3.02	2.58

Table 6
OLS regressions of cumulative abnormal returns [CAR (-1, 1)] surrounding the
announcements of restructuring activities

The sample consists of 233 non-financial firms listed on the NYSE, NASDAQ, or AMEX that experience a large one year drop in their operating performance (ROA) following at least two years of above-industry-adjusted-median performance during the 1997-2001 period. Firms are included in our sample if they initially maintain at least two consecutive years of above-industry-adjusted-median operating performance and subsequently drop into the bottom quartile. Initial public announcement dates of restructuring are identified from a *Factiva* search. If there is a confounding announcement within five days before or after the announcement date, the observations are deleted. Daily abnormal returns are computed using a market model with a 200 trading day estimation period beginning 220 days before and ending 21 days before the restructuring announcement. Cumulative abnormal returns [CAR (-1, 1)] are computed by summing up the abnormal returns using a three-day window. The dummy for lead lending relationship longer than 3 years takes a value of one if firms maintain lending relationships with their lead lenders for longer than three years before performance declines. Borrowing from lead credit facility is the actual amount borrowed from the largest credit facility immediately before performance decline. The dummy variable for the first downsizing action is set to one if the downsizing action is the first downsizing action for the firm, and zero otherwise. All the independent variables are measured as of the end of the fiscal year immediately before the downsizing announcements. Numbers in parentheses are *p*-values. The symbols *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

Table 6

	Downsizing actions		Downsizing actions with cash generation		Downsizing actions without cash generation	
	(1)	(2)	(3)	(4)	(5)	(6)
Intercept	-0.176** (0.02)	-0.163** (0.04)	-0.415*** (0.00)	-0.411*** (0.00)	-0.013 (0.90)	-0.009 (0.93)
Dummy for lead lending relationship longer than 3 years (A)	0.030 (0.26)	0.055* (0.08)	-0.037 (0.35)	-0.030 (0.58)	0.102*** (0.01)	0.107*** (0.01)
Borrowing from lead credit facility / assets (B)	0.301* (0.06)	0.500** (0.02)	0.530*** (0.01)	0.554** (0.02)	-0.053 (0.87)	0.127 (0.85)
(A) × (B)		-0.370 (0.14)		-0.063 (0.84)		-0.228 (0.76)
Managerial ownership	0.444*** (0.00)	0.435*** (0.00)	0.846*** (0.00)	0.845*** (0.00)	0.068 (0.57)	0.060 (0.62)
Institutional block ownership	-0.026 (0.80)	-0.046 (0.66)	0.140 (0.40)	0.137 (0.42)	-0.144 (0.24)	-0.152 (0.23)
Log (assets)	0.021** (0.05)	0.018 (0.11)	0.056*** (0.00)	0.055*** (0.00)	0.001 (0.93)	0.000 (0.98)
Total debt / assets	-0.220** (0.02)	-0.191** (0.05)	-0.377*** (0.00)	-0.367** (0.01)	-0.208 (0.21)	-0.202 (0.23)
Tangible assets / assets	-0.278 (0.54)	-0.302 (0.51)	0.433 (0.74)	0.416 (0.75)	-0.612 (0.18)	-0.612 (0.19)
ROA	-0.173* (0.06)	-0.168** (0.07)	-0.305** (0.02)	-0.299** (0.03)	-0.165 (0.22)	-0.160 (0.24)
Change in ROA from year -1 to year 0	-0.022 (0.79)	-0.023 (0.78)	0.079 (0.50)	0.077 (0.51)	-0.028 (0.81)	-0.033 (0.78)
Industrial median change in ROA from year -1 to year 0	-0.030 (0.93)	-0.067 (0.85)	-0.240 (0.66)	-0.242 (0.66)	-0.369 (0.38)	-0.383 (0.36)
Dummy for the first downsizing action	-0.021 (0.45)	-0.025 (0.37)	0.023 (0.56)	0.021 (0.62)	-0.037 (0.37)	-0.037 (0.36)
Number of observations	169	169	82	82	87	87
Adjusted R ²	0.143	0.150	0.284	0.274	0.112	0.101

Table 7
OLS regression of loan changes of lead credit facilities following downsizing actions

The sample consists of 233 non-financial firms listed on the NYSE, NASDAQ, or AMEX that experience a large one year drop in their operating performance (ROA) following at least two years of above-industry-adjusted-median performance during the 1997-2001 period. Firms are included in our sample if they initially maintain at least two consecutive years of above-industry-adjusted-median operating performance and subsequently drop into the bottom quartile. The dependent variables are loan changes, which are computed for the firms downsizing within two years after the start of performance declines by subtracting the ratio of the actual loan amount to assets in the year prior to downsizing actions (Year -1) from that in the year after downsizing actions (Year 1). If firms undertake multiple downsizing actions, we choose the first downsizing actions of each firm. The dummy variable for lead lending relationship longer than 3 years takes a value of one if firms maintain lending relationships with their lead lenders for longer than three years before performance decline. Borrowing from lead credit facility is the actual amount borrowed from the largest credit facility immediately before performance decline. Numbers in parentheses are *p*-values. The symbols *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

Table 7

	Changes in borrowing from lead credit facility following downsizing actions (Year-1 to Year1)	
	(1)	(2)
Intercept	0.085 (0.26)	0.098 (0.17)
Dummy for lead lending relationship longer than 3 years (A)	0.024 (0.43)	-0.013 (0.69)
Borrowing from lead credit facility / assets (B)	-0.510** (0.02)	-0.723*** (0.00)
(A) × (B)		0.760*** (0.01)
Managerial ownership	-0.017 (0.86)	-0.032 (0.73)
Institutional block ownership	-0.225* (0.10)	-0.221* (0.09)
Log (assets)	-0.007 (0.56)	-0.004 (0.70)
Total debt / assets	0.081 (0.56)	0.039 (0.77)
Tangible assets / assets	0.246 (0.51)	0.164 (0.65)
ROA	-0.045 (0.81)	-0.094 (0.61)
Change in ROA from year -1 to year 0	0.035 (0.49)	0.023 (0.64)
Industrial median change in ROA from year -1 to year 0	0.057 (0.87)	0.117 (0.73)
Number of observations	71	71
Adjusted R ²	0.034	0.127

Table 8
OLS regressions of industry-adjusted performance following downsizing actions

The sample consists of 233 non-financial firms listed on the NYSE, NASDAQ, or AMEX that experience a large one year drop in their operating performance (ROA) following at least two years of above-industry-adjusted-median performance during the 1997-2001 period. Firms are included in our sample if they initially maintain at least two consecutive years of above-industry-adjusted-median operating performance and subsequently drop into the bottom quartile. The dependent variables are the changes in industry-adjusted ratio of operating income before depreciation to assets for three years from the year that the downsizing actions occur. The changes are measured for those firms that downsize within two years from the start of the decline year. If firms undertake multiple downsizing actions, we choose the first downsizing actions of each firm. The dummy variable for lead lending relationship longer than 3 years takes a value of one if firms maintain lending relationships with their lead lenders for longer than three years before performance decline. Borrowing from lead credit facility is the actual amount borrowed from the largest credit facility of the firms immediately before performance declines. Numbers in parentheses are *p*-values. The symbols *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

Table 8

	Three-year post-restructuring Industry-adjusted performance	
	(1)	(2)
Intercept	0.074 (0.49)	0.112 (0.28)
Dummy for lead lending relationship longer than 3 years (A)	0.023 (0.59)	-0.028 (0.54)
Lead facility loans / assets (B)	-0.131 (0.71)	-0.604 (0.12)
(A) × (B)		1.207*** (0.01)
Managerial ownership	-0.152 (0.29)	-0.154 (0.27)
Institutional block ownership	0.170 (0.43)	0.160 (0.44)
Log (assets)	0.006 (0.72)	0.008 (0.62)
Total debt / assets	0.075 (0.74)	0.025 (0.91)
Fixed assets / assets	0.079 (0.88)	-0.014 (0.98)
ROA	-0.290 (0.36)	-0.444 (0.15)
Change in ROA from year -1 to year 0	0.271* (0.08)	0.284* (0.06)
Industrial median change in ROA from year -1 to year 0	-0.748 (0.19)	-0.553 (0.32)
Number of observations	70	70
Model p-value	-0.013	0.077

Table 9
Logit estimates of the likelihood of being acquired

The sample consists of 233 non-financial firms listed on the NYSE, NASDAQ, or AMEX that experience a large one year drop in their operating performance (ROA) following at least two years of above-industry-adjusted-median performance during the 1997-2001 period. Firms are included in our sample if they initially maintain at least two consecutive years of above-industry-adjusted-median operating performance and subsequently drop into the bottom quartile. The dependent variable is equal to one if firms are acquired within the three years from the start of the performance shock year, and zero otherwise. The dummy variable for lead lending relationship longer than 3 years takes a value of one if firms maintain lending relationships with their lead lenders for longer than three years before performance decline. Borrowing from lead credit facility is the actual amount borrowed from the largest credit facility immediately before performance declines. Numbers in parentheses are *p*-values. The symbols *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

Table 9

	Likelihood of being acquired	
	(1)	(2)
Intercept	-1.459 (0.14)	-1.434 (0.15)
Dummy for lead lending relationship longer than 3 years (A)	-0.758* (0.07)	-1.094** (0.03)
Lead facility loans / assets (B)	-0.654 (0.80)	-2.122 (0.47)
(A) × (B)		5.594 (0.16)
Managerial ownership	1.008 (0.30)	0.986 (0.32)
Institutional block ownership	2.904* (0.08)	3.013* (0.07)
Log (assets)	0.025 (0.88)	0.033 (0.85)
Total debt / assets	0.935 (0.53)	0.797 (0.60)
Fixed assets / assets	-1.221 (0.91)	-1.128 (0.91)
ROA	-2.359 (0.17)	-2.356 (0.17)
Change in ROA from year -1 to year 0	0.023 (0.98)	-0.032 (0.98)
Industrial median change in ROA from year -1 to year 0	1.630 (0.71)	1.570 (0.73)
Number of observations	196	196
Model p-value	0.46	0.38

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