Hedge Funds in Chapter 11[*]

Wei Jiang
Columbia University[†]

Kai Li
University of British Columbia[‡]

Wei Wang
Queen's University[§]

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Abstract

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Keywords: Hedge funds; Chapter 11; Loan-to-own; Emergence; APR deviation; KERP; CEO Turnover
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This paper examines the roles of hedge funds in Chapter 11 and the effects of their presence on the nature of the bankruptcy process. Hedge funds' participation in the process takes on a variety of forms, including investing in debt claims, buying equity stakes, serving on the unsecured creditors or equity committees, and the pursuit of the "loan-to-own" strategy, where a hedge fund acquires the debt of a distressed borrower with the intention of converting its debt position into a controlling equity stake upon the firm's emergence from Chapter 11.

The bankruptcy of Northwestern Corporation, a utility company, is illustrative of hedge fund involvement in the restructuring process. The company filed a voluntary petition under Chapter 11 on September 14, 2003. Hedge funds, including AG Capital Funding Partners, Avenue Capital Management, Magten Offshore Partners, and Oaktree Capital Management, owned debt claims against the company and served on the unsecured creditors committee. Northwestern's Restated Plan of Reorganization was confirmed by the court on October 8, 2004. Under the plan, existing shareholders received no distribution. Holders of senior unsecured notes and some general unsecured notes would receive 92% of newly issued common stock. On its first day of trading, the stock price of the reorganized Northwestern was $24.95, implying a recovery rate of 90% for the senior unsecured creditors, and those hedge funds emerged as major shareholders.

The example above highlights several features of hedge funds' distress investing strategies. First, unlike traditional creditors (such as banks and insurance companies) that strive to contain damages on their existing investment at the bankruptcy bargaining table, hedge funds specifically seek out distressed claims for profitable investment. Second, hedge funds typically initiate their investment on the debt side, but with the strategic goal of influencing the restructuring process. In many cases, they end up with a controlling stake in the company upon emergence. Finally, the presence of hedge funds specialized in distress investing could be behind some secular trends in the U.S. Chapter 11 processes, notably, the strengthening of creditors' rights (Bharath, Panchapegesan, and Werner (2007), and Ayotte and Morrison (2009)), and a "management neutral" process (Harner (2008a)).

Hedge funds are uniquely suited to pursuing activist strategies, i.e., investing with an intention to intervene in distressed firms, due to the following reasons. First, compared to other institutional investors (such as banks, mutual funds, and pension funds), hedge funds are more incentivized to pursue high returns and are less subject to conflicts of interest due to a lack of other business relationships with the portfolio firms. Second, unlike mutual funds and pension funds that are required by law to maintain diversified and prudent portfolios, hedge funds are able to hold highly concentrated positions that strengthen their influence at the negotiation table. Third, banks and mutual funds are subject to regulatory restrictions that constrain their capacity in taking on legal liabilities[1] and getting involved in the management of their portfolio firms. For hedge funds, this is less of a concern. Finally, the combination of lock-up provisions with their own investors, the ability to use derivatives, and minimal disclosure requirements affords hedge funds greater flexibility in trading illiquid securities, such as those of distressed firms.

Using a comprehensive sample of 474 Chapter 11 cases from 1996 to 2007 formed by merging a multitude of data sources, we show that hedge fund presence in the Chapter 11 process has been prevalent—over 90% of the cases have publicly observable involvement by hedge funds. This is consistent with practitioners' observation that hedge funds have become the most active investors in the distressed debt market, generating approximately half of the annual trading volume in distressed debt, about one-third of the trading volume in leveraged loans, and one-quarter in high-yield bonds during 2005-2006.[2] Despite anecdotal evidence on hedge fund vultures in the media and case studies by law scholars on various strategies favored by hedge funds (most notably, "loan-to-own"), there has been no systematic study on hedge fund involvement in Chapter 11 in the past decade or so. Our paper aims to fill this void.

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[1] Holding a large position in a portfolio firm and/or being involved in the management of the firm bring legal uncertainties and obligations to an investor and often impose restrictions on the latter's trading due to insider trading considerations. This is one major reason cited by Black (1990) for why most mutual funds (for whom liquidity is important) and institutional fiduciaries (to whom legal risks can pass through) remain passive shareholders.
[2] See Aaron Siegel, "Hedge Funds Turn up the Volume," *Investment News,* September 14, 2006: http://www.investmentnews.com/apps/pbcs.dll/article?AID=/20060914/REG/609140707/1094/INDaily03&ht=.

In addition to updating earlier studies on bankruptcy,[3] our paper provides new insights about hedge funds as an emerging force in the Chapter 11 process. First and foremost, we find that hedge funds, rather than being simply "anti-management,"[4] are behind the transformation from the traditional "management-driven" restructuring process to a "management neutral" one.[5] Hedge fund presence on the debt side is associated with a higher probability of emergence. Though there is higher CEO turnover in cases involving hedge funds, there is also increased implementation of key employee retention plans (KERPs). Such a combination reflects hedge funds' desire to replace failed leaders while also ensuring continuity of management and operation after the firm emerges. Our findings offer both support and an explanation for the trend of management neutrality in the Chapter 11 process purported by recent legal studies (for example, Skeel (2003) and Harner (2008a)).

Second, hedge funds' strategic entry point to the distressed firm's capital structure improves their ability to have a big impact in the reorganization process, and they seem to be effective in achieving the intended goals for the part of capital structure they choose. Unsecured debt is the most common choice for hedge funds to approaching distressed companies. As mentioned above, hedge fund presence increases the likelihood of successful reorganization, as well as the likelihood of the unsecured debt being converted into new equity which allows hedge funds to enjoy the upside potential upon case resolution. Importantly, we find that the stock market responds positively to revealed hedge fund presence as the largest unsecured creditors at the time of a bankruptcy filing, suggesting a positive effect of hedge fund creditors on the total value of the firm. When hedge funds do choose to become large shareholders of bankrupt firms, they prefer firms with relatively strong fundamentals (as measured by asset liquidity and

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[3] An incomplete list of prior studies includes: Eberhart, Moore, and Roenfeldt (1990), Weiss (1990), Hotchkiss (1995), Betker (1995), Tashjian, Lease, and McConnell (1996), Hotchkiss and Mooradian (1997), Dahiya, John, Puri, and Ramirez (2003), Dawkins, Bhattacharya, and Bamber (2007), and Bharath, Panchapegesan, and Werner (2007).

[4] Anecdotal stories abound about hedge funds' ruthless confrontation with management in distressed firms. For example, Daniel Loeb (Founder of Third Point LLC) called the CEO of Intercept, John Collins, "CVD" (an abbreviation or "Chief Value Destroyer") in a public letter in 2004.

[5] According to Harner (2008a), "management neutral" restructuring refers to a process where managers facilitate and implement the distressed firm's restructuring plans, but they generally do not control the restructuring process. This represents a middle ground to "management driven" and "management replacing" (i.e., creditor driven) processes.

operating performance) and facilitate distributions that are more favorable to shareholders, i.e., those with more frequent and larger absolute priority rule deviations. Not surprisingly, the stock performance of Chapter 11 firms during the process is positively associated with hedge fund presence as the shareholders.

Third, we show that hedge funds participating in bankruptcy do not have as short a horizon as their counterparts specialized in pure trading. These hedge funds benefit more from companies' emergence where the long-term prospects of the firm are important, especially when they pursue a loan-to-own strategy. This phenomenon indicates that hedge funds pursuing a more activist agenda have considerably longer investment horizons than most other funds who engage in trading without any intention to intervene.

This paper adds to the understanding of the major forces underlying the patterns and changes in the Chapter 11 processes in the U.S. over the past decade. By analyzing the same hedge fund holding different types of stakes (e.g., debt versus equity or both) in a distressed firm over the course of Chapter 11 restructuring, our work may stimulate new theoretical research on bankruptcy that allows complex and dynamic interactions among various stakeholders. Our study also contributes to the burgeoning research on hedge fund activism in corporate decisions.[6]

The prior work most related to our study is Hotchkiss and Mooradian (1997). Using a sample of 288 firms that defaulted on their public debt during 1980-1993, they examine the role of vulture investors (predecessors to hedge funds specialized in distress investing) in the market for control of distressed firms. They measure vulture investors' involvement primarily in terms of their governance roles, such as joining the board, becoming the CEO/chairman, or gaining a majority of the voting stock of the reorganized firm, and conclude that the active involvement by vultures helps improve firm performance.

We update the Hotchkiss and Mooradian (1997) analysis of distress investing with new developments from the past decade. Exponential growth in the hedge fund sector, a more liquid debt

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[6] A partial list of this literature includes Brav, Jiang, Partnoy, and Thomas (2008) and Klein and Zur (2009) on hedge fund activism in U.S. corporations; Becht, Franks, Mayer, and Rossi (2009) on hedge fund activism in U.K.; Greenwood and Schor (2009) on hedge funds in mergers and acquisitions; Huang (2009) on hedge funds in leveraged buyouts; and Massoud, Nandy, Saunders, and Song (2010) on hedge funds in syndicated lending and short selling.

market, and an increasing activist stance among some hedge funds all contributed to the changing nature of the Chapter 11 process in our more recent sample period.[7] We also expand the scope of analysis by investigating the different roles that hedge funds take on either the debt or equity side or both (as in the case of loan-to-own), the timing of their entry into the bankrupt firms, and the effects of their involvement on bankruptcy outcomes.

The outline of the paper is as follows. Section I describes the data collection process and presents an overview of hedge funds' participation in Chapter 11. Section II examines the determinants of hedge funds' participation on the debt and equity sides. Section III analyzes the effects of hedge funds' involvement in Chapter 11 on the final outcomes. Finally, Section IV summarizes our results and concludes the paper.

I. Data and Overview

A. Data Collection

We compile the most comprehensive dataset on U.S. bankruptcies that has been used so far in empirical research from a variety of data sources, some of which requires intensive manual collection efforts. Our sample spans all major Chapter 11 filings over the period 1996-2007, and the status of firms is updated to the end of 2008.

A1. The sample of U.S. Chapter 11 firms

The Lynn M. LoPucki's Bankruptcy Research Database is our starting point to form a sample of large U.S. firms that filed for Chapter 11 during the period 1996-2007. For a firm to be included in our sample, we require that the firm have assets worth at least $100 million at the time of a bankruptcy filing, measured in 1980 constant dollars using the CPI deflator, and that it file form 10Ks with the SEC within three years of its Chapter 11 filing. We end up with 500 such cases for the sample period, which we cross check with the New Generation Research's BankruptcyData.com to verify their Chapter 11 status and to

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[7] See Rosenberg (2000) (especially Chapter 1) and Harner (2008a) for a discussion of the history of distress investing, and how distress-investing hedge funds in the past decade have evolved beyond their vulture predecessors.

obtain information on the final outcomes. Through this process, three cases are dropped because one case was in fact a Chapter 7 filing, and two cases were duplicates of or affiliated with other cases. Another 23 cases drop out of our sample because they were pending or dismissed by court as of December 31, 2008. Our final sample consists of 474 unique cases of Chapter 11 filings.

The Bankruptcy Research Database provides basic information about the cases including: the date of filing, major operational information (such as industry, sales, and assets), the type of filing (such as prepackaged, and pre-negotiated), and the outcomes and duration of the Chapter 11 process. Such information is cross-checked with BankruptcyData.com whenever possible. In case of an inconsistency, we resort to firms' 10K filings prior to their Chapter 11 filings to resolve the difference. All SEC filings are retrieved from the EDGAR website.

A2. Details about the bankruptcy process, outcomes, and key stakeholders

Before final outcomes such as emergence, acquisition, or liquidation,[8] a Chapter 11 case may reach certain milestones or intermediate outcomes, such as the debtor-in-possession (DIP) financing, approval of KERPs, management turnover, asset sales, and claim transfers. We obtain such information mainly from BankruptcyData.com, supplemented by the New Generation Research's Bankruptcy DataSource database and the Public Access to Court Electronic Records (PACER). BankruptcyData.com keeps bankruptcy reorganization and liquidation plans and provides summaries for most of the cases that include the following information: classes of claims, dollar amount of allowed claims, recovery, and whether cash or security distribution is made to each class of claimants. For four cases where the reorganization plans were not available, we directly purchased their plans from the U.S. bankruptcy courts. Combining all the above sources with firms' 8K filings, we are able to code, for all of our 474 cases, the key aspects of their Chapter 11 processes from the date of a Chapter 11 filing all the way up to the date of case resolution.

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[8] If Chapter 11 reorganization is not successful, then the firm is either liquidated in Chapter 11 by the debtor or converted to Chapter 7 for liquidation by a trustee.

In addition, BankruptcyData.com provides names of the major stakeholders including the largest shareholders, the largest holders of unsecured debt claims, members of the unsecured creditors committee, members of the equity committee, providers of DIP financing, and buyers of debt claims during the restructuring process. We supplement and complete the above information using the Bankruptcy DataSource database, 8K and 10K filings, proxy statements, and news search in NexisLexis and Factiva.

A3. Identifying hedge funds among stakeholders

In order to track the various roles that hedge funds play at different stages of the bankruptcy and in different parts of the bankrupt firm's capital structure, we first compile a master list of all key stakeholders collected from the sources described in Section I.A2 and then identify hedge funds from this list. Due to the nature of bankruptcy (which is usually triggered by a firm's failure to fulfill its obligations to its creditors), this list provides more detailed participant information on the debt side than on the equity side. To supplement information on the latter, we compile a list of institutions that make significant equity investments in the distressed firms both before and during the Chapter 11 process from two SEC filings on equity ownership.

The first source is the Schedule 13D filings (from the EDGAR website), which is the mandatory filing under Section 13(d) of the 1934 Exchange Act that requires investors to disclose within 10 days of acquisition or conversion of more than 5% of any class of securities of a publicly traded company if they have an interest in influencing the management of the company (including the reorganization of the company). The second source is the Form 13F filings (from the Thomson Reuters Ownership Database), required for all institutions that have investment discretion over $100 million or more in Section 13(f) securities (mostly publicly traded equity; but also includes convertible bonds, and some options) to disclose their quarter-end holdings in these securities. The window to collect equity ownership information from both sources spans from one year before a Chapter 11 filing to one year after the confirmation of the plan. For ownership information collected from the Form 13F, we impose a threshold

of 2% of the shares outstanding for "significant" equity ownership, as smaller stakes are unlikely to be effective in influencing the reorganization process.

In the appendix, we describe the steps and criteria that we used in manually classifying hedge funds from the combined list of key stakeholders. We end up with 619 unique hedge funds in our sample. Due to our "top-down" approach, our list includes all hedge funds that are publicly observed to be involved in bankruptcy during our sample period. With such information we are able to code hedge fund involvement along both the time dimension (before or during the Chapter 11 process) and the capital structure dimension (debt versus equity).

A4. Firm-level financial information and security prices

We merge our sample of Chapter 11 filers with CRSP/Compustat (available through WRDS) and Capital IQ to retrieve additional firm-level financial information. While Compustat provides standard information from firms' income statements and balance sheets, Capital IQ provides more detailed information about capital structure, and in particular, on the ratio of secured debt to total assets. When such information is missing from Capital IQ, we use data from BankruptcyData.com.

We primarily rely on CRSP to retrieve stock price information for our sample firms. Whenever CRSP stops covering the daily stock prices of a bankrupt firm (because it often gets delisted from public exchanges), we turn to "pink sheets" (the electronic quotation system that displays quotes from broker-dealers for inactively traded stocks) available through Bloomberg and Datastream, thus minimizing the delisting bias in our analysis (Shumway (1997)).

Finally, we code one of the key outcome variables in our analysis, absolute priority rule (APR) deviations, using a combination of information sources. First, the list of classes of claims from the summaries of bankruptcy plans (either the reorganization plan or the liquidation plan) is available through BankruptcyData.com. Most of the plans provide the estimated dollar amount of claims. When this amount is missing, we turn to the actual bankruptcy plans and Datastream to manually match debt claims and obtain their face value. Second, the type of distribution includes cash, newly issued debt, preferred equity, common equity, and warrants from the bankruptcy plans. Third, the first day trading price for newly

issued stocks and warrants is from CRSP, Bloomberg, Datastream, and the Bankruptcy DataSource database.

With all inputs in place, we compute APR deviations following Eberhart, Moore, and Roenfeldt (1990), and Betker (1995). There is deviation from APR if equity holders receive a payment before other senior classes of claims are paid in full. We construct two variables to capture APR deviations. The first is an indicator variable, *APR*, that takes a value of one if there is any APR deviation. The second is a continuous measure, *APR%*, calculated as the value of cash and new securities received by common equity holders divided by the value of cash and new securities received by all debt and common equity holders in the reorganization. The variable is measured in percentage terms and is bounded between 0 and 100%.

B. Overview of Chapter 11 Firms and Hedge Fund Involvement

B1. Patterns of the Chapter 11 process

Table 1 provides variable definitions and descriptive statistics of the sample. Panel A lists the variables, their definitions, and their data sources. Panel B presents a summary of Chapter 11 characteristics, and Panel C reports the outcomes, by year, for all 474 cases in our sample.

[Insert Table 1 here.]

Several time trends emerge from Panels B and C of Table 1. First, bankruptcy filings are highly cyclical. The burst of the Dotcom bubble in 2000 and subsequent recession is associated with a large number of Chapter 11 filings, while the boom that lasted prior to the 2008 financial crisis is associated with much fewer filings. The following industries have the highest representation in the sample. There are 69 bankruptcies from the communications sector (SIC code 4800-4899), mostly resulting from the burst of the technology bubble in 2000-2001. There are 37 bankruptcies from the financial sector (SIC code 6000-6799). The business services industry (SIC code 7300-7399) contributes 26 cases.

Second, the adoption of KERPs has been on the rise over the sample period. While only about a quarter of the filings in 1996 had KERPs in place (whereby top executives and key employees are given

incentives to stay and to help reach various milestones such as the filing of a reorganization plan or the confirmation of the plan), the proportion rose to about half towards the end of our sample period in 2007. This trend is also noted by Bharath, Panchapegesan, and Werner (2007).

Third, CEO turnover appears to decline over time. The average CEO turnover rate is about 27% for our sample, a number that is lower than the 33% to 75% range reported in earlier studies (see Gilson (1989), Gilson and Vetsuypens (1993), Betker (1995), and Hotchkiss (1995)).[9] The lower top management turnover in recent years cannot simply be explained by the rise of KERPs, though, because CEO turnover and KERPs are actually positively correlated (the correlation is 0.15) in our sample. This intriguing relation will be analyzed in more detail in a later section.

Finally, the average duration of bankruptcy has been substantially shortened, from 21 months at the beginning of our sample period to 8 months at the end of our sample period. In contrast, the average duration in Franks and Torous' (1994) sample over the period 1983-1988 is close to 30 months; and the average is 18 months in Bharath, Panchapegesan, and Werner's (2007) sample over the period 1979-2005.

Other statistics in Panels B and C, though exhibiting no obvious time trend within our sample period, display some distinct patterns from what has been documented in prior research. First, DIP financing has become quite common during our sample period—occurring in close to two thirds of our sample firms. The frequency of DIP financing ranges from 7% to 48% in Dahiya, John, Puri, and Ramirez's (2003) sample of 538 firms for 1988-1997, with a distinct jump around 1995. Our statistics are quite similar to those of Bharath, Panchapegesan, and Werner (2007) for the overlapped time period.

Second, close to 90% of our sample firms form the unsecured creditors committees during the restructuring process.[10] Such committees are usually appointed by the bankruptcy court upon request, and

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[9] The average turnover rate of other top executives in the senior management team such as CFOs and COOs is about 35%, showing no time trend over the past decade.

[10] In most Chapter 11 cases, the United States trustee appoints seven of the debtor's largest unsecured creditors to the unsecured creditors committee as dictated by the U.S. Bankruptcy Codes Section §1102. An appointment to the committee can enhance the controlling creditors' involvement in the debtor's restructuring and further their investment agenda (Harner (2008a)). The committee can recommend and vote on professionals to serve as its

are not usually formed in prepackaged bankruptcies. On the equity side, the court appoints the equity committees in only 11% of the cases. Bharath, Panchapegesan, and Werner (2007), while reporting an almost identical overall frequency, document a dwindling trend in the formation of equity committees after 1990. The diminishing role of shareholders in the Chapter 11 process is apparently matched by the rising importance of creditors in the process (Skeel (2003), and Ayotte and Morrison (2009)). However, we also note that during the most recent years (2005-2007), hedge funds are present on all equity committees when there is one (see Table 3 Panel A).

Finally, APR deviations are far from commonplace in our sample, occurring in less than 20% of the cases and in small magnitudes. The unconditional average size of APR deviations is 0.6% of the total value paid to all claimholders, and the average size conditional on APR deviations is 4.6%. These statistics are much smaller than those reported for the 1980s and early 1990s when APR deviations were the norm rather than the exception, with the average size of the deviations ranging between 2.3% to 7.6% of firm value.[11] On the other hand, our sample statistics are consistent with Bharath, Panchapegesan, and Werner (2007) using more recent data.

B2. Firm and case characteristics

Table 2 presents the summary statistics of firm and case characteristics. All firm-level variables are recorded at the fiscal year end prior to the date of the bankruptcy filing. To mitigate the influence of outliers, we winsorize all potentially unbounded variables at the 1% and 99% extremes throughout the paper. Panel A presents the descriptive statics, and Panel B presents their pair-wise correlations.

[Insert Table 2 here.]

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counsel and financial advisors. It typically receives non-public information regarding the debtor and its restructuring process. The committee does not directly vote on a specific reorganization plan but makes its voting recommendation to creditors. On the other hand, it is rare to have secured creditors to form a committee of their own given that their claims are already collateralized.

[11] For example, Weiss (1990) shows that priority of claims is not upheld in 29 of the 37 firms examined from 1979 to 1986. Eberhart, Moore, and Roenfeldt (1990) show that 23 of the 30 cases examined result in deviations from APR, and the average extent of APR deviations is 7.6% of the total value paid to all claimants during the same sample period. Franks and Torous (1994) find that APR deviations occur in 80% of their 37 Chapter 11 cases and the average percentage of APR deviations is 2.3% during 1983-1988. Using a sample of 75 Chapter 11 cases over the period of 1982-1990, Betker (1995) reports the frequency of APR deviations is 72% and the average extent of APR deviations is 2.9% of the firm value.

Panel A shows that the median size of our sample firms, measured by total assets (*Assets*) is $706 million, putting the typical sample firms between the 6th and 7th size-decile of the Compustat universe during the same period. Both the mean and median ratios of book leverage to total assets (*Leverage*) are close to one, much higher than the mean (median) leverage ratio of 68% (59%) for the Compustat universe. The high leverage ratio is a direct sign of financial distress. The mean (median) ratio of cash and short-term investments to total assets (*Cash*) is 6.8% (3.0%), much lower than the Compustat mean (median) of 18% (7%). The mean (median) ratio of PP&E to total assets (*Tangibility*), at 36% (34%), is slightly higher than that for the Compustat firms. The mean (median) return on assets (*ROA*) is 1% (4.3%), while the same measure for the Compustat universe is −3.3% (6.6%).[12] Finally, the mean (median) fraction of institutional equity ownership (*Institution*) is 28% (24%), lower than the Compustat mean (median) of 42% (40%).

By counting the number of different classes of claims[13] listed in the bankruptcy plans, we find that the mean (median) number of claim classes (*NumClasses*) is 9, with an inter-quartile range of 3. This variable is commonly used as a proxy for bargaining complexity in the restructuring process (Franks and Torous (1994), and Betker (1995)). Finally, close to a third of the cases are prepackaged Chapter 11 filings.[14]

B3. Hedge fund involvement

We construct a set of indicator variables to capture the different roles that hedge funds take on in Chapter 11. In general, an indicator variable takes a value of one if at least one hedge fund is involved in

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[12] The low average ROA of all Compustat firms is due to a small fraction of firms that have huge losses, especially young firms. Chapter 11 firms in our sample are mostly mature firms.

[13] The different classes of claims include, for example, tax claims, secured claims, priority non-tax claims, bank loan claims, secured debt claims, unsecured debt claims, worker compensation claims, general unsecured claims, litigation claims, intercompany interests, convenience claims (smaller amount unsecured claims), subordinated claims, equity claims, and warrants and unexercised options.

[14] This variable is taken directly from the Bankruptcy Research Database and cross-checked with BankruptcyData.com. According to the definition by LoPucki, a case is prepackaged if the debtor drafted the plan, submitted to a vote of the impaired classes, and claimed to have obtained the acceptance necessary for consensual confirmation before filing the case. It is necessary that no class rejects the plan or the class that rejects is minimal. On the other hand, if the debtor negotiates the plan with less than all groups or obtains the acceptance of less than all groups necessary to confirm before the bankruptcy case is filed, then the case is regarded as pre-negotiated.

the particular role examined.[15] On the debt side, "largest unsecured creditors" refers to cases where a

hedge fund is one of the creditors holding the 20 (and in some cases information is available for 50)

largest unsecured claims according to the Chapter 11 petition forms. In comparison, our data contains

little information about senior creditors.[16] "Unsecured creditors committee" refers to cases where a hedge

fund sits on the unsecured creditors committee approved by the bankruptcy court. "Buy debt claims"

refers to cases where a hedge fund buys debt claims during bankruptcy identified through the court

dockets. These claims could include trade credits.

In recent years, DIP financing has become creditors' new power tool of corporate governance in

Chapter 11 (Skeel (2003)). DIP lenders are sometimes granted by the court the so-called "priming lien," a

super seniority status that is even above the status of existing senior secured claims. Through these loan

contracts, DIP lenders are able to take control of the bankrupt firm by bargaining for seats on the board of

directors and receiving shares in the newly reorganized company. Very often, a Chapter 11 firm receives

exit financing to replace its DIP financing, thus a majority of DIP financing is expected to be repaid by

cash or newly issued securities before the firm's emergence from Chapter 11. In our analysis, "DIP

financing" refers to cases where a hedge fund provides such financing during the restructuring process.

On the equity side, "largest shareholders" refers to cases where a hedge fund is listed among the

largest equity holders on the company's proxy statements or its holding is greater than 2% of the shares

outstanding as disclosed in the 13F filings. "13D filing" refers to cases where a hedge fund files a

Schedule 13D for equity ownership exceeding 5%. Finally, "equity committee" refers to cases where a

hedge fund serves on the official equity committee.

The above variables are grouped and summarized to provide evidence on hedge funds'

participation on the debt, equity, and both sides in the Chapter 11 process. A hedge fund is considered to

be involved on the debt side if it satisfies at least one of the following: (i) it is one of the 20 (or 50 when

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[15] We conduct sensitivity analysis using continuous versions of these variables, such as the number of hedge funds involved in the specific role, or the total value of claims they hold.
[16] In practice, the identities of secured loan providers (usually banks) are generally known before a bankruptcy filing.

information is available) largest unsecured creditors; (ii) it is on the unsecured creditors committee; (iii) it is the recipient of debt claims during the bankruptcy process; or (iv) it is the provider of DIP financing. Similarly, a hedge fund is considered to be involved on the equity side if one of the following applies: (i) it is listed as one of the largest shareholders; (ii) it files the Schedule 13Ds or discloses on the Form 13Fs an equity holding greater than 2%; or (iii) it is on the equity committee.

An increasingly important strategy that hedge funds take in the Chapter 11 process is "loan-to-own" (LTO) where a hedge fund enters the restructuring process as a major creditor with the intention to emerge from the process as a significant shareholder. Such a strategy is an alternative to the conventional asset, stock, or merger transactions, and is used by hedge funds to encroach on the traditional territory of banks (Nadler (2009)).

Our first indicator variable for "loan-to-own" takes a value of one if any of the following situations applies:[17] (i) a hedge fund is on the list of the largest unsecured creditors and/or on the unsecured creditors committee, and the reorganization plan indicates that the unsecured debt holders receive equity; or (ii) a hedge fund is identified as a creditor in all possible forms except as a provider of DIP financing, and the same hedge fund holds significant equity within one year after the confirmation of Chapter 11 plans as evidenced by either a Schedule 13D or a Form 13F filing.

In recent years, hedge funds have become more involved in providing DIP financing to distressed firms. Often, these DIP loans have trigger clauses that replace the DIP debt with preferred or common equity to avoid default, and that replace exit financing with debt-for-equity swaps.[18] For this reason, we also construct a second indicator variable, "loan-to-own_DIP," which takes a value of one if any of the above (conditions (i) to (ii)), or (iii) a hedge fund is the provider of DIP financing, holds.

[Insert Table 3 here.]

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[17] The reorganization plan does not identify whether a particular creditor receives equity distribution. Instead, we infer this information from statements that indicate a certain class of creditors receives equity distribution.
[18] A recent example is General Growth Properties Inc. in 2009. Farallon Capital Management LLC offered DIP financing that can be converted into 8-10% of the common stock on the effective date of the reorganization plan. For recent examples and related discussions, see "KKR Turns Vulture Investor as Distressed Debt Beckons," by Bravo and Hester in Bloomberg News, September 3, 2009.

Table 3 presents an overview of hedge fund involvement during the Chapter 11 process. Panel A presents different channels and timing of hedge fund presence. The statistics are grouped by year, by the type of stakes that hedge funds acquire, and by the timing of their involvement (including both before and during bankruptcy).

The general pattern that emerges from Table 3 is that hedge funds' participation in Chapter 11 bankruptcies is commonplace: 94% of the cases have publicly observable hedge fund involvement in some form; and in 2005 and 2006, hedge funds were involved in all bankruptcy cases in our sample. In 79% (53%) of the cases, hedge funds are present on the debt (equity) side. Moreover, the industry representation of our full sample is preserved in the subsamples of firms with various forms of hedge fund presence. Some more specific patterns are summarized as follows.

First, despite the absence of an obvious time trend, hedge funds' participation on the debt side exhibits significant cyclicality. The percentage of cases with hedge funds listed among the largest unsecured creditors and the percentage of cases with hedge funds on the unsecured creditors committee are relatively low in the years of 1997, 2001 and 2007 compared to the sample average, suggesting the tightening of credit conditions during or ahead of recessions.

Second, there is a distinct rising trend of hedge funds as providers of DIP financing over our sample period, coinciding with the overall rising trend of DIP financing since 1990 (Dahiya, John, Puri, and Ramirez (2003) and Bharath, Panchapegesan, and Werner (2007)). While the majority providers of DIP financing in the 1990s and early 2000s were banks and financial institutions that had prior lending relationships with the borrower, we show that hedge funds have become a new force in providing DIP financing since 2003.

Third, hedge funds' overall involvement on the equity side is smaller as compared to their presence on the debt side. In about half of the cases hedge funds are among the largest shareholders at the bankruptcy filing. In about 6% of the cases hedge funds serve on the equity committee, and the

percentage number increases to double digits in recent years. This increase could be attributed to the fact that more equity committees have been formed in recent years (see Table 1 Panel B).[19]

Conditional on having an equity committee, hedge funds have representation in more than half of the cases, and in all cases during the period 2004-2006 (untabulated). Therefore, it seems that hedge funds have strong incentives to represent shareholders by forming and joining the official equity committee.

Finally, based on our definitions of the loan-to-own strategies, hedge funds are creditors-turned-shareholders in a quarter of the cases if DIP financing is not considered and in 31% of the cases if it is. These numbers are remarkably close to the survey evidence in Harner (2008b).[20] Hedge funds' loan-to-own strategies are clearly cyclical. In the years of 1997, 2001, and 2007 with tightening credit conditions, the percentage of cases where hedge funds engaged in the loan-to-own strategy ranges from 0 to 18%, considerably lower than the sample average frequency of 25%.

While Panel A of Table 3 summarizes the patterns of hedge funds' participation at the event level, Panels B lists the five most active hedge funds by the particular roles they assume in Chapter 11. It is not surprising that Oaktree Capital Management, one of the world's largest distressed debt investors with $25 billion assets under management (Goldschimid (2005)), is ranked at the top in the largest unsecured creditors and unsecured creditors committee categories. It also appears on the lists of most active providers of DIP financing and largest shareholders. Cerberus Capital Management is the most active provider of DIP financing and also holds large unsecured claims and serves on the unsecured creditors committee.[21] The top five hedge fund players in Chapter 11 by overall ranking are: Oaktree

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[19] Unlike the unsecured creditors committee, the equity committee is not common (see Bharath, Panchapegesan, and Werner (2007) and our statistics in Table 1 Panel B). Parties (usually the seven largest equity holders as dictated by the U.S. Bankruptcy Codes Section §1102) that have intention to form the equity committee need to submit motions to the court. Once approved by the court, these parties will most likely become members.

[20] One of Harner's (2008b) survey questions is "how often does your firm invest in a company's distressed debt to try to acquire the company or a controlling ownership position in the company, and how often is your firm successful in acquiring at least controlling ownership position?" 32% of the respondents indicate they engage and succeed in this practice.

[21] Cerberus Capital Management, among the five largest hedge funds in the world (with more than $10 billion assets under management as of 2007), set up a special unit, Ableco Finance, in 1992 to specialize in DIP financing to distressed borrowers.

Capital Management, Cerberus Capital Management, Appaloosa Management, Loomis Sayles & Co., and PPM America Special Investments Fund. These funds collectively are present in 20% of the cases examined.

In summary, hedge funds are present in a great majority of the bankruptcy cases during our sample period. Moreover, these hedge funds are more likely to approach distressed firms from the debt side, rather than from the equity side, though a high percentage of them become equity holders *ex post*. Within the debt category, the most popular entry point for hedge funds is the unsecured debt (Baird and Rasmussen (2008), and Harner (2008a)). This preference is consistent with the argument put forth by recent legal studies (see for example, Lichtenstein and Cheney (2008)) that hedge funds have a strong preference for the so-called "fulcrum" securities in the capital structure.

A "fulcrum" security is the point in the capital structure where the enterprise value just fails to fully cover the claims. Upon confirmation of the reorganization plan, these securities are most likely to receive equity in the reorganized firm. Such securities are appealing to hedge funds because of the potential upside gain due to their option-like features and, more importantly, the sensitivity of the value of the securities to their actions. Given that most of the Chapter 11 cases in our sample have their leverage ratio close to one, and their ratio of secured debt to assets around 25%, the "fulcrum" securities are most likely to be the unsecured debt claims, and in some cases equity.

II. Determinants of Hedge Fund Presence in Chapter 11

Hedge funds make calculated choices in timing their involvement (before versus after the Chapter 11 filing) in the distressed firm, and in picking their entry point (e.g., acquiring debt versus equity) to the capital structure. To analyze such choices, we start with predictive regressions that relate hedge fund distress investing strategies to firm and case characteristics.

The dependent variables we consider span the set of observable hedge fund strategies defined in the previous section. They include: (1) hedge funds being among the largest unsecured creditors (*HFLargestCreditor*); (2) hedge funds serving on the unsecured creditors committee

(*HFCreditorsCommittee*); (3) hedge funds providing DIP financing (*HFDIP*); (4) the joint equity

ownership of all participating hedge funds exceeding 5% (*HFJoint5%*); (5) hedge funds serving on the

equity committee (*HFEquityCommittee*); and (6)-(7) hedge funds adopting the loan-to-own strategy

(*HFLTO* and *HFLTO_DIP*, depending on whether DIP financing is included). The set of explanatory

variables is chosen following prior literature on bankruptcy. These variables are defined and summarized

in Section I and Table 2. Table 4 presents the results.[22]

[Insert Table 4 here.]

Table 4 shows that hedge fund presence on the debt side, especially through their representation

on the unsecured creditors committee, is positively associated with firm size (significant at the 1% level).

Not surprisingly, hedge funds invest on the debt side when the distressed firm has more cash and liquid

assets on its balance sheet, which helps debt recovery. Interestingly, hedge funds prefer to invest in

distressed debt when the ratio of secured debt to assets (*SecuredDebt*) is lower, and the negative

coefficient is significant at the 5% level when *HFCreditorsCommittee* is the dependent variable. When

the senior debt is over-collateralized (i.e., a low ratio of secured debt to total assets), there is room for a

more active role for the unsecured creditors. Needless to say, the secured debt ratio and the leverage ratio

are positively correlated (the correlation is 0.23). However, the significance of the coefficient on

SecuredDebt seems to come more from the amount of secured debt than from the amount of total debt

because the coefficient remains significant regardless of whether *Leverage* is controlled for, while the

latter becomes insignificant in the presence of *SecuredDebt*.

On the equity side, hedge funds' holding of large equity stakes is positively associated with cash

holdings and return on assets, where the effects are significant at the 5% and 10% levels, respectively.

Large values of both variables suggest relatively strong fundamentals and lower risk for the equity

holders. However, the same relations are weaker when *HFEquityCommittee* is the dependent variable.

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[22] It is worth noting that adding year and industry (based on two-digit SIC codes) fixed effects does not qualitatively change our main findings in the paper. Further, under most model specifications, these fixed effects are not statistically significant.

More interestingly, in contrast to the result on hedge fund presence on the unsecured creditors committee, hedge funds as shareholders prefer to invest in firms with higher levels of secured debt. One possible explanation for this contrast in findings is that in firms with high secured debt to assets ratios, the senior debt is likely to be under-collateralized, and hence the secured creditor-driven fire-sale bias is weakened (Ayotte and Morrison (2009)), leaving more upside potential for the shareholders (including the hedge funds).

Not surprisingly, hedge fund presence on the equity side is positively associated with institutional equity ownership before bankruptcy (significant at the 1% level).[23] Such stocks may possess characteristics that are appealing to institutional investors (which include hedge funds) in the first place; but more importantly hedge funds prefer to work with other institutional rather than individual investors when they intend to influence corporate policy and control, a phenomenon documented by Brav, Jiang, Partnoy, and Thomas (2008) and Bradley, Brav, Goldstein, and Jiang (2010) among hedge funds that pursue activist agendas in under-performing companies and in discounted closed-end funds, respectively. Finally, hedge funds' large equity ownership is negatively associated with the number of claim classes (significant at the 5% level), as more complex claim structure leads to less bargaining power of large shareholders.

Certain firm attributes predict hedge funds' adopting loan-to-own strategies.[24] We find that firm size, leverage, assets tangibility, the number of claim classes, and prepackaged Chapter 11 cases are positively associated with adoption of the strategy, while secured debt ratios are negatively associated with hedge funds' loan-to-own strategy. The combination of high leverage and low secured debt indicates a high probability that the unsecured debt will be converted into the equity upon reorganization, a natural route for loan-to-own. Asset tangibility facilitates asset valuation because of lower information asymmetry in tangible assets. The large number of claim classes is usually associated with greater

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[23] The significant relation holds if we exclude the participating hedge funds from the institutional ownership calculation.

[24] It is worth noting that our coding of loan-to-own relies on *ex post* observable equity ownership by the hedge fund, and therefore does not include cases where the hedge fund invests in distressed debt with an intention to own but that intention is not materialized.

difficulty in reaching agreement among different groups of investors. However, the involvement of hedge funds in different parts of the capital structure through the loan-to-own strategy would help internalize such costs.

Finally, we show that hedge funds are more likely to adopt loan-to-own strategies in prepackaged bankruptcies, which are usually utilized by better performing firms that are easier to reorganize. Tashjian, Lease, and McConnell (1996) find that the unsecured creditors prefer prepackaged bankruptcies to traditional Chapter 11 reorganizations because the priority for secured creditors is less likely to be upheld under prepackaged bankruptcies. Their results are consistent with our evidence that hedge funds start their loan-to-own strategy by first investing in the unsecured debt, which tends to enjoy higher recovery rates under prepackaged bankruptcies.

In summary, the general pattern of firm and case characteristics associated with hedge fund presence in bankruptcy reflects their strategic choice of seeking an entry point to the capital structure of the distressed firm that allows them to have a big impact in reorganization. For example, firms with high levels of secured debt are more likely to have under-collateralized secured debt, providing less room for the unsecured creditors and hence less appeal for hedge funds to influence the process through the unsecured creditors committee. In the meantime, given the senior creditors' weaker incentive to push for liquidation, the potential for reorganization and emergence gives the shareholders more upside potential, which attracts more hedge funds to the equity side.

III. Hedge Fund Presence and Bankruptcy Outcomes

A. Relating Bankruptcy Outcomes to Hedge Fund Presence

This section examines the relation between hedge fund involvement and bankruptcy outcomes as measured by the following four sets of variables. (i) *Emergence* is an indicator variable for the emergence of the firm from bankruptcy (as opposed to being liquidated or acquired). (ii) *Duration* is the number of months (measured in log) spent in bankruptcy till resolution (including emergence, liquidation, or acquisition). (iii) Two variables capture APR deviations: *APR* is an indicator variable that takes a

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value of one if there is any APR deviation; while *APR%* measures the extent of such deviation. Finally, (iv) two variables capture the incentives and stability of senior management during the Chapter 11 process: *KERP* is an indicator variable that takes a value of one if a key employee retention plan is approved by the court; and *CEOTurnover* is an indicator variable tracking CEO turnover during the reorganization process.

Table 5 presents the relation between the outcome of emergence and various forms of hedge fund presence. Hedge funds' loan-to-own strategy is not considered here because *ex post* identified loan-to-own strategies are largely associated with successful emergence from the Chapter 11 process.

[Insert Table 5 here.]

Hedge fund presence in all forms considered is positively associated with the probability of firm emergence from bankruptcy. Moreover, when hedge funds are among the largest unsecured creditors or serve on the unsecured creditors committee, the likelihood of firm emergence is significantly higher (at the 5% level). In contrast, there is no significant relation between hedge fund presence on the equity side and firm emergence. To refine our analysis, we collect information on the stated purpose in Item 4 of Schedule 13D filings by hedge funds in the bankrupt firms. It turns out that in about two-thirds of the filings, hedge funds state that influencing the restructuring process is their goal, suggesting a strong activist bias in hedge funds' investment in distressed firms.[25] When we include an indicator variable for the stated goal in the probit regression to explain emergence (not tabulated), the new variable is positively associated with the likelihood of emergence (significant at the 10% level). Moreover, the marginal effect associated with this new indicator variable is close to 20 percentage points, which is economically significant as compared to the sample average emergence frequency of 60%.

The next outcome variable that we examine is the duration of the Chapter 11 process. The mean (median) duration is 17 (13) months. Table 6 shows that hedge fund presence on the unsecured creditors committee or as providers of DIP financing are significantly (at the 5% level) associated with the

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[25] Passive shareholders with large (above 5%) holdings can opt for filing the Schedule 13G instead of the Schedule 13D. The former filing requires less information and allows longer delays.

lengthening of the bankruptcy process. It is worth noting that unsecured creditors committees (present in 86% of the cases in our sample) are usually formed in more complex bankruptcies which take longer to resolve. For example, such committees are usually not formed in prepackaged cases. If we include in the regression both hedge fund presence on the unsecured creditors committee and the existence of such a committee, we find that the latter variable overwhelms the former. That is, hedge funds do not lengthen the Chapter 11 process conditional on the formation of an unsecured creditors committee. On the other hand, hedge fund presence on the unsecured creditors committee remains significant in the regressions examining the likelihood of emergence, even when the existence of an unsecured creditors committee is controlled for. The combination of the results from both emergence and duration indicate that while the unsecured creditors committees are more likely to be formed in more complex cases (which take longer to resolve), hedge fund presence on such committees favors the emergence outcome.

[Insert Table 6 here.]

APR deviations are at the center of bankruptcy outcomes. Table 7 shows that hedge funds have no impact on this outcome as creditors, but their presence on the equity committee and their adoption of loan-to-own strategies are positively and significantly (at the 5% and 10% levels, respectively) associated with the occurrence and extent of APR deviations. Though APR deviations have been in secular decline in the past decade, we show that hedge fund presence on the equity side and/or their goal of becoming new equity holders of the emerged firms have been against this trend. Further, while Bharath, Panchapegesan, and Werner (2007) document that the formation of an equity committee is positively associated with APR deviations, we clarify that such an effect is driven by hedge fund presence on the committee. That is, the coefficient in front of an indicator variable for the existence of an equity committee would be rendered insignificant if hedge fund presence is controlled for. On the other hand, the coefficient in front of *HFEquityCommittee* would retain its significance even if the existence of an equity committee is controlled for.

[Insert Table 7 here.]

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Finally, Tables 8 and 9 examine the relation between hedge fund presence and managerial incentives in Chapter 11. We first note that a bankrupt firm is more likely to adopt KERPs if hedge funds serve on the unsecured creditors committee (significant at the 5% level). This is related to findings in Gilson and Vetsuypens (1993) and Blumestein (2002) that KERPs tie managers' pay to creditors' recoveries and the duration of bankruptcy. Hence, it is not surprising that unsecured creditors committees with hedge funds on board are more likely to push for KERPs. On the equity side, the significantly positive (at the 5% level) relation between hedge funds' loan-to-own strategy and the adoption of KERPs indicates that hedge funds value continuity in companies' key positions given that they have a relatively long investment horizon (first as creditors and then as new shareholders) in firms that emerge from Chapter 11.

[Insert Table 8 here.]

Regarding CEO turnover, Table 9 shows that hedge funds as the largest unsecured creditors (significant at the 10% level) and hedge funds on the equity committee (significant at the 5% level) are both positively associated with CEO turnover. Although hedge funds' large equity holdings do not lead to higher CEO turnover per se, an explicitly stated purpose to "seek board representation" by hedge funds in the Schedule 13D filings is significantly associated with top management replacement (not tabulated), consistent with the findings of Brav, Jiang, Partnoy, and Thomas (2008) who show that the CEO turnover rate among firms targeted by activist hedge funds doubles the normal level.

[Insert Table 9 here.]

To summarize Tables 5 to 9, we find that hedge funds tend to favor emergence over liquidation or acquisition, even though they tend to participate in more complex cases that take longer to resolve. These hedge funds benefit more from companies' emergence where there are long-term prospects; such prospects are irrelevant for straight liquidation. Further, several key results from the above tables add to our understanding of or even challenge the conventional wisdom about hedge funds in bankruptcy. First, hedge funds are not necessarily anti-management. In fact, hedge funds could be better described as transforming the traditional "management-driven" restructuring process to a "management neutral" one, a

trend analyzed by Skeel (2003), Adler, Capkun, and Weiss (2006), and Harner (2008a). Though hedge

fund presence is associated with high CEO turnover, they are equally eager to retain key employees

through KERPs. The correlation between the adoption of a KERP and CEO turnover among bankrupt

firms in our sample is positive (0.15). While it seems counter-intuitive, the positive correlation indicates

a common practice of replacing the former leader of a bankrupt company while striving to retain key

employees at the same time. The WorldCom case provides such an example. While the company's CEO

(Bernard Ebbers) and CFO (Scott Sullivan) were both forced out, a KERP was approved in order to retain

329 key employees.[26] Hedge funds (including Blue River Capital and Cerberus Capital), among the

largest unsecured creditors and members of the unsecured creditors committee, played an active role in

selecting the new CEO of WorldCom and worked with the management to develop long-term strategic

plans.

Second, hedge funds seem to be effective in achieving intended goals for the side they take on. In

Section II, we discuss hedge funds' general preference for "fulcrum" securities. To the extent that hedge

fund presence increases the likelihood of reorganization, the likelihood of converting these securities

(unsecured debt and sometimes equity) into new equity upon case resolution also increases (which brings

more upside potential). Moreover, when hedge funds are shareholders of the bankrupt firms, APR

deviations occur more often and in bigger magnitude, indicating distributions more in favor of the

shareholders.

Finally, hedge funds that play activist roles in distressed companies do not necessarily have as

short an investment horizon as the typical hedge funds, which tend to have significantly quicker portfolio

turnover than other institutional investors (Agarwal, Fos, and Jiang (2009)). These hedge funds benefit

more from companies' emergence where the long-term prospects of the companies are important, and the

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[26]For a more detailed story, see "WorldCom Judge Approves Plan to Keep Employees," by Blumenstein, in the *Wall Street Journal*, October 30, 2002. Movies Gallery Inc. is another example. Its 2008 10K filings stated that the company "expect[s] to make cash payments during the course of fiscal 2008 of approximately $13 million for employee retention and severance programs related to changes in our management team and consolidation of certain corporate functions." On the other hand, the former chairman/CEO/founder, Joe Malugen was replaced by C.J. Gabriel Jr. on May 20, 2008.

increasingly popular loan-to-own strategy necessitates their transition to holding long term stakes in the underlying firm. This phenomenon extends Brav, Jiang, Partnoy, and Thomas' (2008) finding that hedge funds pursuing an activist agenda in under-performing firms have considerably longer investment horizon than their counterparts that simply trade on securities without any intention to intervene.

In addition to the effects of hedge fund involvement on bankruptcy outcomes, Tables 5 to 9 also relate firm and case characteristics to outcomes. Most of these results are consistent with the prior literature. The main results regarding the control variables can be summarized as follows. First, prepackaged Chapter 11 bankruptcies are associated with a higher likelihood of emergence and shorter duration in bankruptcy. Relatedly, prepackaged Chapter 11 cases are associated with more frequent and larger APR deviations, fewer adoptions of KERPs, and lower CEO turnover. Second, high leverage is associated with a higher likelihood of emergence, and high leverage and high return on assets are associated with more frequent adoptions of KERPs. These relations indicate that firms with strong fundamentals but that suffer from financial distress are more likely to retain their key employees and to emerge from Chapter 11. Third, higher levels of both cash holdings and secured debt are associated with shorter duration in bankruptcy. The latter might be due to the fact that secured creditors tend to be more concentrated and thus there are fewer conflicts among themselves, which facilitates faster resolution.

Finally, cases with a large number of classes of claims favor reorganization. High institutional equity ownership is associated with more APR deviations and more frequent adoptions of KERPs. The first result might seem counter-intuitive in that more claim classes tend to make negotiations more difficult, but it is consistent with the general goal of bankruptcy courts to facilitate an outcome that makes the greatest economic gains rather than to simply protect the most senior parties (Harner (2008a)). In cases with a large number of claim classes, liquidation will result in zero distribution to many classes in order to secure payments to the most senior classes. As a result, parties involved are more likely to lean toward reorganization when there are a large number of claim classes. The second result is consistent with institutional shareholders' interests in maintaining continuity in companies' operation and receiving a higher distribution.

B. Selection Models

It is natural to ask whether the various relations between hedge fund presence in the Chapter 11

process and bankruptcy outcomes reported in Tables 5 to 9 represent more a selection or a treatment

effect.[27] In the former case, participation in bankruptcy by hedge funds is just one form of informed

trading and the value of the underlying assets is exogenous to hedge fund actions. In the latter case,

hedge fund participation changes the outcome and hence the value of the underlying assets.

Considering the following model:

$$HFPart_i^* = X_i\beta + \varepsilon_i,$$
$$HFPart_i = 1 \text{ if } HFPart_i^* > 0; \text{ and } HFPart_i = 0 \text{ if otherwise,} \qquad (1)$$
$$Outcome_i = Z_i\gamma + \mu HFPart_i + \eta_i.$$

In the above system, *HFPart* is an indicator variable for hedge funds' participation in various ways as

analyzed in Table 4, and *Outcome* is one of the outcome variables that are analyzed in Tables 5 to 9.

There are two types of potential selection effects. The first type prescribes a passive role for

hedge funds, that is, hedge funds are informed investors and therefore are able to choose bankruptcy cases

that are predisposed to certain outcomes (such as emergence). As a result, the significant relation

between hedge fund presence and the outcome can arise even without hedge funds taking an active role.

In other words, the same outcome would prevail in the absence of hedge funds. Econometrically this

amounts to a non-zero correlation between the error disturbances of the two equations in (1), that is,

$corr(\varepsilon_i, \eta_i) \neq 0$. Consequently, the estimated $\hat{\mu}$ could be significantly positive (negative) if $corr(\varepsilon_i, \eta_i)$

is positive (negative) even when the truth is that $\mu = 0$.

Second, it is possible that hedge funds do assume an active role in the sense that the bankruptcy

outcomes would be different in their absence. But the effects of hedge funds in bankruptcy (i.e., the

coefficient μ in (1)) are not the same if hedge funds were to participate in all cases. Naturally, they

choose to participate in particular forms and at particular stages where they could have a bigger impact (in

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[27] See Li and Prabhala (2007) for an overview of self-selection in corporate finance.

absolute terms) on the outcomes. If we treat μ as a random coefficient, then econometrically, this second type of selection effect amounts to $corr(\varepsilon_i, \eta_i) = 0$ but $corr(\varepsilon_i, |\mu|) > 0$.

We believe that the second type of selection effect is at work, and do not view it as contradictory to the active role of hedge funds. Our analysis in Section II shows that hedge funds' choices of participation are indeed consistent with their strategic considerations to have a big impact in reorganization. In comparison, it is far more important to rule out the first type of selection effect (or to assess its magnitude) in order to establish that hedge funds took an active role. For the purpose of this identification, we would need instrumental variables that effectively predict hedge funds' participation but do not affect outcome variables other than through hedge funds. We do not find satisfactory candidates for such instruments. As a step back, we test the sign and significance of $corr(\varepsilon_i, \eta_i)$ by examining the following system:

$$Outcome_i = Z_i\gamma_1 + \delta_1 \frac{\phi(X_i\beta)}{\Phi(X_i\beta)} + \eta_{i,1}', \text{ if } HFPart = 1;$$

$$Outcome_i = Z_i\gamma_0 + \delta_0 \frac{\phi(X_i\beta)}{1 - \Phi(X_i\beta)} + \eta_{i,0}', \text{ if } HFPart = 0. \tag{2}$$

The derivation of (2) from (1) follows from the standard Heckman's (1979) two-step procedure. Because the inverse Mills ratios ($\frac{\phi(X_i\gamma)}{\Phi(X_i\gamma)}$ and $\frac{\phi(X_i\gamma)}{1 - \Phi(X_i\gamma)}$) are non-linear, the above system can be estimated even without instrumental variables that satisfy the exclusion criterion. The coefficients in front of the inverse Mills ratio, δ_1 and $-\delta_0$, are effectively the linear projections of the residual in the outcome (η) on the residual in the propensity of hedge fund participation (ε).

If hedge funds tend to participate in a particular way (such as joining the unsecured creditors committee) in bankrupt firms that would have a higher propensity for certain outcomes to prevail (such as emergence) even in their absence, then $\delta_1 > 0$ (or $\delta_0 < 0$) because $corr(\varepsilon_i, \eta_i) > 0$. In summary, a

significant $\hat{\delta}_1$ (or $\hat{\delta}_0$) estimate is indicative of a selection effect. A positive $\hat{\delta}_1$ (or negative $\hat{\delta}_0$) is

indicative that the coefficient μ is over-estimated in Tables 5 to 9; and vice versa.

Table 10 examines all the pairs of significant relations between measures of hedge fund presence

and bankruptcy outcomes (from Tables 5 to 9) using this method. The two equations in (2) should convey

the same information asymptotically, but could have different numerical results in limited samples like

ours. Hence we report estimation results from both equations. To be on the conservative side, we note a

possible selection effect if at least one of the two equations produces a significant coefficient on the

inverse Mills ratio (at the 10% level or higher). We use the linear probability model rather than probit if

the dependent variable in (2) is an indicator variable. This is because the inverse Mills ratio does not

enter linearly if the second-stage regression is non-linear.[28]

[Insert Table 10 here.]

Results from the positive response subsample (Panel A) show that the only significant coefficient

in front of the inverse Mills ratio appears in the relation between hedge funds' loan-to-own strategy

(*HFLTO*) and the incidence of APR deviations (*APR*). The coefficient is significantly (at the 10% level)

negative, suggesting that hedge funds are more likely to adopt the strategy if the case is less likely to have

APR deviations. As a result, the coefficient on *HFLTO* was under-estimated in Table 7. In other words,

the treatment effect of *HFLTO* should be strengthened if the first type of selection effect is corrected.

Results from the negative response subsample (Panel B) point to two cases of possible selection

effects. In the first case between hedge fund presence on the unsecured creditors committee

(*HFCreditorsCommittee*) and firm emergence from bankruptcy (*Emergence*), the coefficient in front of

the inverse Mills ratio is significantly (at the 10% level) positive. That is, hedge funds are more likely to

join the unsecured creditors committee if the firm is *a priori* more likely to be liquidated or acquired.

Again, the coefficient on *HFCreditorsCommittee* in Table 5 was likely to be under-estimated due to the

selection bias.

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[28] See Wooldridge (2002) Chapter 15.7.3. for a discussion of the issue.

In both cases discussed above, hedge funds are motivated to take a more proactive role to influence the bankruptcy process in a direction likely opposite from its natural course (i.e., absent their activism). As a result, the treatment effect is likely to be stronger than what appears in Tables 5 to 9 once the selection effect is controlled for. In the first case, hedge funds' dual role as both creditors and shareholders helps internalize the conflicts between the two sides, making distributions to shareholders more likely. In the second case, when they are junior creditors in firms that stand less chances of emergence *ex ante*, hedge funds are motivated to exert more influence by joining the unsecured creditors committee and to push for an outcome (emergence) that favors junior creditors relative to the alternatives (liquidation or acquisition) in which they would receive little distribution.

On the other hand, in the second case between hedge fund presence on the equity committee (*HFEquityCommittee*) and the occurrence of APR deviations, the coefficient in front of the inverse Mills ratio is significantly (at the 5% level) negative. That is, hedge funds are more likely to join the equity committee if the case is *a priori* more likely to achieve resolutions that favor shareholders (i.e., APR deviations). As such, the coefficient on *HFEquityCommittee* in Table 7 was more likely to be over-estimated. Given that shareholders overall have less influence over the bankruptcy process compared to creditors, hedge funds are more opportunistic in their equity investment, that is, they pick firms where equity holders stand a higher *ex ante* chance of receiving distributions.

Given that all but one pairs of relations exhibit the first type of selection effect which works in favor of finding our results in Tables 5 to 9, the treatment effect interpretation in those tables is largely valid in the sense that the effects, if significant, are unlikely to be over-estimated due to hedge funds' selective participation in Chapter 11 firms based on unobserved heterogeneities.

C. Event Studies

This section presents two event studies that analyze the abnormal stock returns of Chapter 11 firms around a short window centered on the bankruptcy filing and a longer window that spans the full bankruptcy process. We relate these abnormal returns to the various forms of hedge fund participation.

While the first study informs us of the stock market's expectation of the impact of hedge funds, the second study validates such expectation with *ex post* outcomes.

As described in Section I.A4, we primarily rely on CRSP for stock price information, and when such information is unavailable due to delisting we turn to "pink sheets" available through Bloomberg and Datastream. The two data sources allow us to extend the coverage of security pricing information beyond exchange-traded companies. We drop trading days with zero or unavailable trading volume.

C1. *Returns around the Chapter 11 Filing*

In this *ex ante* analysis, we relate changes in stock prices around the bankruptcy filing to hedge fund involvement on the debt side that is observable at the time. To the extent that equity prices are forward looking, they should incorporate information that is predictive of the effect of hedge funds on future outcomes.

There are 276 out of 474 cases in our sample where the full set of required information is available. We then separate this event sample into two groups depending on whether there is publicly known hedge fund involvement on the debt side at the time of the Chapter 11 petition: 75 out of the 276 cases have hedge funds listed among the largest unsecured creditors on the petition forms on the day of bankruptcy filing.

Figure 1 plots the cumulative abnormal returns (CAR) of both groups in the [-10, +10] window where day 0 is the date of the Chapter 11 filing.[29] Following Dawkins, Bhattacharya, and Bamber (2007), we use the CRSP equal-weighted return as the market return as most of these bankrupt firms experience a large reduction in market capitalization before filing for Chapter 11. Results are qualitatively similar if the CRSP value-weighted return is used. We show that the stock market in general reacts negatively to bankruptcy filings. Both groups experience price declines leading to the filing of Chapter 11, but cases with hedge funds on the debt side fare much better. Immediately after the petition, the group with hedge

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[29] In unreported analysis, we have also examined event windows that are longer and found that the abnormal returns during the short windows do not revert.

funds as the largest unsecured creditors experience price increases while the group without hedge fund presence continues with price declines.

[Insert Figure 1 here.]

Table 11 Panel A presents the multivariate regression results where the dependent variables are CARs over five different event windows: [-10, +10], [-5, +5], [-5, +5], [-1, +5], and [-1, +10]. The key independent variable of interest is hedge fund presence as the largest unsecured creditors (*HFLargestCreditor*), the only debt-side participation variable that is known at the time of a bankruptcy filing. We find that the coefficient in front of this variable is positive in all, and significant in three out of the five regressions; suggesting that the market perceives hedge funds as the largest unsecured creditors to be favorable to the shareholders of Chapter 11 firms. In contrast, almost none of the other control variables seem to explain the cross-sectional variation in CARs.

[Insert Table 11 here.]

Results in Table 11 Panel A are closely related to our analysis on emergence reported in Table 5, which shows that a Chapter 11 firm is more likely to emerge when hedge funds hold large debt claims or serve on the unsecured creditors committee. In general, emergence from Chapter 11 is good news to equity holders because the absolute priority rule would be strictly upheld in liquidation while the firm as a going-concern leaves some upside potential for shareholders, and hence the favorable stock market reaction to hedge fund presence.

We are not able to conduct a similar analysis for hedge fund presence on the equity side because public releases of such information are not as timely and accurate as disclosures on the debt side. The equity committee is usually not formed until further along into the Chapter 11 process, and the disclosure of hedge funds' holdings of large equity stakes through their SEC filings (such as the Schedule 13D and the Form 13F) are usually not concurrent with the bankruptcy filings. This information is therefore either unknown or stale at the time of the bankruptcy filing. When we use the presence of large (above 5%) aggregated hedge fund equity stakes known at the time of bankruptcy filing as an indicator variable for hedge fund presence on the equity side, we find a mildly positive but insignificant market reaction. Either

the timing of the information or the overall weak shareholder influence over the bankruptcy process could be responsible for this insignificant result.

C2. Returns during the Chapter 11 Process

We next examine the relation between hedge funds being equity investors and stock returns during the Chapter 11 process, where the latter is measured by the abnormal holding period returns from the last trading day prior to the Chapter 11 filing to the date of plan confirmation (or case resolution). We confirm Li and Zhong's (2009) finding that there exists active trading for Chapter 11 stocks throughout the bankruptcy process despite high trading costs.

We start with 298 cases that have information on trading prices both within 30 days before Chapter 11 filing and on the plan confirmation date. For 43 more cases we are able to form approximations using information on the distribution to common shareholders from the bankruptcy plan by dividing the dollar amount of distribution by the total number of distributed shares. The final sample has 341 cases for this event study.

We define the holding period return for Chapter 11 stocks as:

$$HPR_i = (P_{i,Case\ resolution} - P_{i,Before\ filing})/P_{i,Before\ filing}$$

We obtain the standardized abnormal monthly return by subtracting the contemporaneous holding period return of the CRSP equal-weighted index (HPR_M) and then normalizing by the number of months in the Chapter 11 process:

$$AR_i = (HPR_i - HPR_M)\ /\#\ of\ months\ in\ Chapter\ 11. \qquad (3)$$

Table 11 Panel B presents the multivariate regression results that relate stock returns during the bankruptcy process (as defined in (3)) to the various measures of hedge fund involvement as equity investors: (i) *HF13D*, an indicator variable that takes a value of one if at least one hedge fund files a Schedule 13D during the Chapter 11 process; (ii) *HF13D_Ownership*, the total percentage of holdings by all Schedule 13D-filing hedge funds; (iii) *HF13D_Reorganize*, an indicator variable that takes a value of one if at least one hedge fund explicitly states in its Schedule 13D filing that reorganization is the purpose of acquiring the ownership; (iv) *HFEquityCommittee*, an indicator variable as defined in Section I.B3.

The mean and median standardized abnormal monthly returns are −5.5% and −7.3%, respectively, and the average (median) stock loses 37% (95%) of its value throughout the bankruptcy process. The monthly abnormal return measures for cases with hedge fund equity involvement (in the form of 13D filing or serving on equity committee) are considerably higher at 8.8% and −4.0%, respectively.[30] Panel B of Table 11 shows that the coefficient in front of each and every of the four variables for hedge fund involvement as equity holders is positive, statistically significant (at the 1% level), and economically large (15 to 23 percentage points[31]), suggesting that hedge funds as large shareholders are positively associated with stock returns over the Chapter 11 process.

In unreported analyses, we also examine the role of hedge funds in post-emergence firm performance. We find that hedge fund presence in Chapter 11 is positively associated with reduced leverage (measured as the change in leverage between the time of bankruptcy filing and one year after emergence), but do not find a significant relation with respect to *ex post* operating performance (such as industry-adjusted return on assets). This combination of results suggests that hedge fund involvement is most conducive to reducing financial constraints faced by the distressed firms. Such a pattern is consistent with the practitioners' view about hedge funds picking firms with "good fundamentals" but "bad balance sheets," and echoes the results in Table 5 which show that emergent firms tend to be those with strong operating performance but suffering from financial distress.

Both event studies show that hedge funds' influence as creditors does not come at the expense of shareholders. The fact that their presence greatly benefits the current shareholders over the short and long term is a strong indication that they enhance the overall value of firms in Chapter 11. They (apparently) achieve this by alleviating financial constraints, reducing the frequency of inefficient liquidation, and mitigating conflicts among different classes of claims. Our result is consistent with Hotchkiss and

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[30] These numbers are not necessarily equal to the returns that hedge funds obtain from their equity investment because they could buy into the equity at distressed prices during the bankruptcy process. What we show here is that hedge fund participation is associated with more favorable returns to the existing shareholders of the bankrupt firms.

[31] The mean (median) value of *HF13D_Ownership* is 18% (9.9%), implying an average (median) effect of 23 (13) percentage points.

Mooradian (1997) who show a positive stock price reaction to purchases of public debt by vulture investors, and supports the conclusion by Goldschimid (2005) that distressed debt investors "are more like phoenix than vulture" as they add value to the restructuring process.

IV. Conclusion

In this paper, we document that hedge funds are almost ever-present in the restructuring process and play an active role in shaping bankruptcy outcomes, notably in terms of a higher probability of emergence, more frequent and larger APR deviations, more CEO turnovers, and more frequent adoptions of KERPs, using a comprehensive sample of Chapter 11 firms from 1996 to 2007. We conclude that the prevalence of hedge funds contributes to the trend toward a "management neutral" restructuring process, and is viewed by the market as enhancing the overall value of bankrupt firms.

Appendix:

Identifying Hedge Funds in Chapter 11

We manually identify hedge fund management companies from a master list of large unsecured creditors, members of unsecured creditors committees, members of equity committees, DIP providers, and large shareholders. The general criterion for an institutional investor to be classified as a hedge fund management company (or loosely, a "hedge fund") is that hedge fund management represents the institution's major business. The more detailed classification criteria are as follows:

1. Banks, insurance companies, trusts, endowment funds, real estate investment companies, and regular corporations are not classified as hedge funds.

2. Full-service brokerages and investment banks, such as Goldman Sachs and Citigroup, are excluded even if some of them have large in-house hedge funds.

3. An institution is classified as a hedge fund if it satisfies at least one of the following:

    i.   It is listed by industry publications (Hedge Fund Group, Barron's, Alpha Magazine, Business Week, and Institutional Investors) as a hedge fund.

    ii. The company's own website claims itself as a hedge fund management company or lists hedge fund management as a major line of business, or mentions that it manages pooled, privately organized investment vehicles that adopt performance-based compensation.

    iii. The company is featured by news articles in Factiva as a hedge fund manager/sponsor.

4. Some names in the master list are those of individuals (e.g., Stephen Feinberg, Carl Icahn, and George Soros). In such cases we search the full name of the individual over the internet (mostly through the filer and co-filer identity information on various SEC filings) and classify the name as a hedge fund if that individual is the founder, partner, chairman, or other leading personnel of a hedge fund company.

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Figure 1: Event study around Chapter 11 filing

This figure shows the cumulative abnormal returns (CAR, adjusted by the CRSP equal-weighted index) from the ten days prior to the ten days after a Chapter 11 filing. The solid line represents CARs for cases with at least one hedge fund listed as the largest unsecured creditor. The dashed line represents CARs for cases without any hedge fund listed as the largest unsecured creditor.
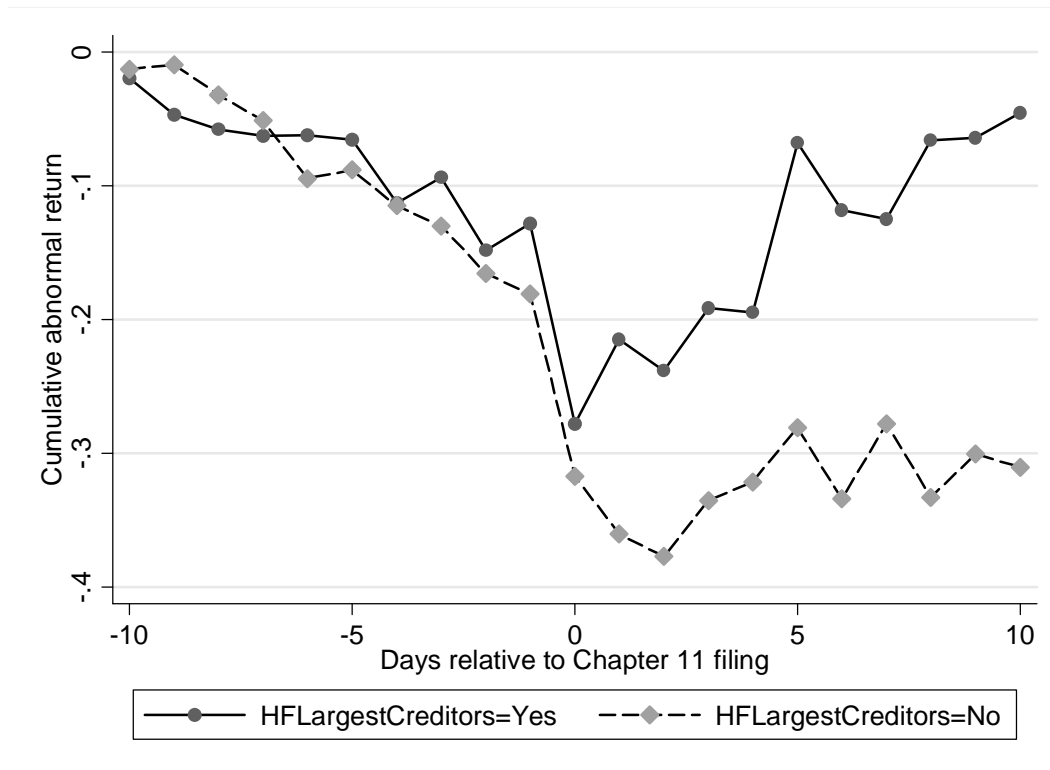
Table 1: Variable definition and sample overview

Our sample consists of the 474 largest Chapter 11 filings over 1996-2007. Panel A presents variable definitions and data sources. Panel B presents Chapter 11 case characteristics. Panel C presents Chapter 11 case outcomes.

Panel A: Variable definitions

Variable	Definition	Data Source
Firm Characteristics		
Assets	Book assets measured in 2008 dollars.	Bankruptcy Research Database, BankruptcyData.com, Compustat
Sales	Sales measured in 2008 dollars.	Bankruptcy Research Database, BankruptcyData.com, Compustat
Leverage	The ratio of total liabilities to book assets.	Compustat, EDGAR (10Ks), BankruptcyData.com
Cash	The ratio of cash and short-term investments to book assets.	Compustat, EDGAR (10Ks), BankruptcyData.com
Tangibility	The ratio of net PP&E to book assets.	Compustat, EDGAR (10Ks), BankruptcyData.com
ROA	The ratio of EBITDA to book assets.	Compustat, EDGAR (10Ks), BankruptcyData.com
SecuredDebt	The ratio of secured debt to book assets.	Capital IQ, BankrutpcyData.com, Compustat
Institution	Percentage of institutional ownership.	Thomson Reuters Ownership Database (13Fs)
NumClasses	Number of claim classes.	Bankruptcy Plans
Bankruptcy Case Characteristics		
Prepack	An indicator variable takes a value of one if a bankruptcy is prepackaged or pre-negotiated.	Bankruptcy Research Database, BankruptcyData.com, Bankruptcy Plans
DIP	An indicator variable takes a value of one if the bankrupt firm receives court approval of debtor-in-possession financing.	BankruptcyData.com, Bankruptcy DataSource, Bankruptcy Plans, LexisNexis, Factiva
KERP	An indicator variable takes a value of one if a key employee retention plan is approved by the court.	BankruptcyData.com, Bankruptcy DataSource, Bankruptcy Plans, LexisNexis, Factiva
CreditorsCommittee	An indicator variable takes a value of one if an unsecured creditors committee is appointed by the court.	BankruptcyData.com, LexisNexis, Factiva
EquityCommittee	An indicator variable takes a value of one if an equity committee is appointed by the court.	BankruptcyData.com, LexisNexis, Factiva
CEOTurnover	An indicator variable takes a value of one if the CEO of a bankrupt firm is replaced during the Chapter 11 restructuring.	BankruptcyData.com, LexisNexis, Factiva, EDGAR (Proxy Statements and 10Ks)
Emerged	An indicator variable takes a value of one if the bankrupt firm emerges from bankruptcy.	Bankruptcy Research Database, BankruptcyData.com
Liquidated	An indicator variable takes a value of one if the bankrupt firm is liquidated (liquidation in Chapter 11 or conversion to Chapter 7).	Bankruptcy Research Database, BankruptcyData.com
Acquired	An indicator variable takes a value of one if the bankrupt firm is acquired.	Bankruptcy Research Database, BankruptcyData.com

Variable	Definition	Data Source
Duration	Number of months in bankruptcy, from the date of filing to the date of plan confirmation.	Bankruptcy Research Database, BankruptcyData.com
APR	An indicator variable takes a value of one if there is APR deviation.	BankruptcyData.com, CRSP, Bloomberg, DataStream, Bankruptcy DataSource
APR%	Percentage of the value of cash and new securities received by common equity holders divided by the value of cash and new securities received by all debt and common equity holders in the reorganization.	BankruptcyData.com, CRSP, Bloomberg, DataStream, Bankruptcy DataSource
Hedge Fund Presence		
HFLargestCreditors	An indicator variable takes a value of one if at least one hedge fund is one of the largest unsecured creditors as listed on the Chapter 11 petition forms.	BankruptcyData.com, LexisNexis, Factiva
HFCreditorsCommittee	An indicator variable takes a value of one if at least one hedge fund is on the unsecured creditors committee.	BankruptcyData.com, LexisNexis, Factiva
HFDIP	An indicator variable takes a value of one if at least one hedge fund is the provider of DIP financing.	BankruptcyData.com, Bankruptcy Plans, LexisNexis, Factiva
HFJoint5%	An indicator variable takes a value of one if the total equity ownership by all hedge funds is at least 5%.	Thomson Reuters Ownership Database (13Fs), EDGAR (13Ds, Proxy Statements, 10Ks)
HFEquityCommittee	An indicator variable takes a value of one if at least one hedge fund is on the equity committee.	BankruptcyData.com, LexisNexis, Factiva
HFLTO	An indicator variable takes a value of one if at least one hedge fund takes the loan-to-own (LTO) strategy. A hedge fund is taking the LTO strategy if hedge funds are identified from a list of the largest unsecured creditors and/or are on the unsecured creditors committee, and unsecured debt holders receive equity in the bankruptcy plan, or hedge funds are identified as creditors from all sources except as providers of DIP financing and they are matched to 13D and 13F filings within one year after bankruptcy.	BankruptcyData.com, Bankruptcy DataSource, Bankruptcy Plans, LexisNexis, Factiva, Thomson Reuters Ownership Database (13Fs), EDGAR (13Ds, Proxy Statements, 10Ks)
HFLTO_DIP	An indicator variable takes a value of one if either HFLTO or HFDIP equals one.	
HF13D	An indicator variable takes a value of one if at least one hedge fund files 13D during Chapter 11 reorganization.	EDGAR (13Ds)
HF13D_Ownership	Total equity ownership by all 13D-filing hedge funds during Chapter 11 reorganization.	EDGAR (13Ds)
HF13D_Reorganization	An indicator variable takes a value of one if at least one hedge fund states reorganization as its purpose in its 13D filing during Chapter 11 reorganization.	EDGAR (13Ds)

Panel B: Chapter 11 case characteristics

Filing Year	# cases	Prepack	DIP	KERP	Unsecured Creditors Committee	Equity Committee
1996	15	46.7%	73.3%	26.7%	73.3%	6.7%
1997	17	41.2%	70.6%	29.4%	70.6%	5.9%
1998	31	29.0%	64.5%	29.0%	90.3%	16.1%
1999	42	35.7%	69.0%	42.9%	81.0%	14.3%
2000	77	19.5%	62.3%	28.6%	88.3%	6.5%
2001	88	21.6%	53.4%	38.6%	83.0%	8.0%
2002	80	36.3%	57.5%	40.0%	86.3%	8.8%
2003	50	24.0%	60.0%	54.0%	100.0%	14.0%
2004	28	46.4%	78.6%	57.1%	82.1%	17.9%
2005	23	17.4%	78.3%	60.9%	91.3%	13.0%
2006	13	38.5%	84.6%	46.2%	84.6%	38.5%
2007	10	40.0%	70.0%	50.0%	70.0%	10.0%
All	474	29.3%	63.5%	40.5%	85.9%	11.2%

Panel C: Chapter 11 case outcomes

Filing Year	CEO Turnover	Emerged	Liquidated	Acquired	Duration (months)	APR	APR%
1996	60.0%	40.0%	46.7%	13.3%	20.5	33.3%	0.5%
1997	29.4%	76.5%	11.8%	11.8%	21.0	17.6%	0.3%
1998	30.0%	71.0%	22.6%	6.4%	17.0	16.1%	1.1%
1999	39.0%	54.8%	31.0%	14.2%	19.0	31.0%	0.6%
2000	23.4%	55.8%	32.5%	11.7%	20.6	9.1%	0.5%
2001	18.1%	47.7%	42.0%	10.3%	17.6	14.8%	0.8%
2002	18.3%	58.8%	25.0%	16.2%	14.1	20.0%	0.1%
2003	30.0%	68.0%	24.0%	8.0%	15.9	10.0%	0.3%
2004	21.4%	85.7%	14.3%	0.0%	11.6	25.0%	0.3%
2005	50.0%	69.6%	21.7%	8.7%	14.7	0.0%	0.0%
2006	23.1%	84.6%	15.4%	0.0%	11.4	30.8%	6.4%
2007	20.0%	50.0%	50.0%	0.0%	8.4	10.0%	0.2%
All	26.7%	60.3%	29.3%	10.3%	16.8	16.7%	0.6%

Table 2: Summary statistics of firm and case characteristics

This table presents summary statistics of the main firm and case characteristics variables. Definitions of the variables are provided in Table 1 Panel A. Panel A presents descriptive statistics. Panel B presents the pair-wise correlation coefficients. P-values are in the parentheses.

Panel A: Summary statistics

	# cases	Mean	SD	Min	25th Percentile	Median	75th Percentile	Max
Assets	474	2718	8975	220	424	706	1686	124363
Sales	474	1901	6914	0	323	615	1324	122787
Leverage	474	0.997	0.390	0.254	0.767	0.919	1.129	2.707
Cash	473	0.068	0.097	0	0.011	0.030	0.082	0.513
Tangibility	474	0.358	0.240	0	0.150	0.339	0.527	0.896
ROA	473	0.010	0.164	-1.073	-0.026	0.043	0.093	0.297
SecuredDebt	466	0.296	0.488	0	0.034	0.226	0.426	8.777
Institution	474	0.278	0.254	0	0.018	0.239	0.435	1
NumClasses	414	9	3.118	3	7	9	10	27
Prepack	474	0.293	0.456	0	0	0	1	1

Panel B: The correlation matrix

	Assets	Sales	Leverage	Cash	Tangibility	ROA	SecuredDebt	Institution	NumClass
Sales	0.669								
	(0.00)								
Leverage	-0.100	-0.081							
	(0.04)	(0.08)							
Cash	0.026	-0.063	0.034						
	(0.57)	(0.17)	(0.46)						
Tangibility	-0.030	-0.023	0.152	-0.091					
	(0.56)	(0.61)	(0.00)	(0.05)					
ROA	0.030	0.058	-0.087	-0.380	0.022				
	(0.51)	(0.21)	(0.06)	(0.00)	(0.64)				
SecuredDebt	-0.060	-0.060	0.225	-0.090	0.091	0.040			
	(0.22)	(0.19)	(0.00)	(0.05)	(0.05)	(0.39)			
Institution	0.134	0.122	-0.161	0.049	0.003	0.073	-0.096		
	(0.00)	(0.00)	(0.00)	(0.29)	(0.96)	(0.11)	(0.04)		
NumClasses	0.225	0.162	0.031	-0.088	0.141	0.113	0.026	0.101	
	(0.00)	(0.00)	(0.52)	(0.07)	(0.00)	(0.02)	(0.60)	(0.04)	
Prepack	-0.040	-0.073	0.253	0.000	-0.031	0.096	0.032	-0.112	0.035
	(0.37)	(0.11)	(0.00)	(0.99)	(0.50)	(0.04)	(0.49)	(0.02)	(0.48)

Table 3: Hedge fund presence in Chapter 11

Our sample consists of the 474 largest Chapter 11 filings over 1996-2007. This table presents an overview of hedge fund presence in Chapter 11. Definitions of the variables are provided in Table 1 Panel A. Panel A presents descriptive statistics of hedge fund presence by year. Panel B presents summary statistics of hedge fund presence by the nature of their involvement in Chapter 11 firms.

Panel A: Hedge fund presence by years

Filing Year	# cases	HF presence before bankruptcy			HF presence during bankruptcy					Both before and during bankruptcy				
		Largest unsecured creditors	Largest shareholders	13D filing	Unsecured creditors committee	Buy debt claims	DIP financing	13D filing	Equity committee	Debt	Equity	Loan-to-own	Loan-to-own_DIP	Overall
1996	15	16.7%	27.3%	0.0%	30.8%	20.0%	0.0%	6.7%	6.7%	64.3%	36.4%	26.7%	26.7%	83.3%
1997	17	7.7%	42.9%	17.6%	40.0%	47.1%	11.8%	0.0%	0.0%	78.6%	42.9%	17.6%	29.4%	86.7%
1998	31	32.0%	48.4%	9.7%	40.7%	30.0%	0.0%	3.2%	9.7%	74.1%	58.1%	19.4%	19.4%	96.6%
1999	42	39.5%	50.0%	4.8%	50.0%	50.0%	4.8%	0.0%	2.4%	84.6%	52.5%	35.7%	38.1%	95.0%
2000	77	33.3%	55.4%	5.2%	30.9%	39.0%	5.2%	3.9%	0.0%	77.8%	56.0%	22.1%	27.3%	93.0%
2001	88	11.3%	44.7%	5.7%	29.4%	50.6%	3.4%	2.3%	3.5%	82.0%	48.2%	13.6%	17.0%	94.5%
2002	80	28.3%	47.4%	2.5%	43.5%	45.2%	7.5%	3.8%	3.8%	82.5%	50.0%	27.5%	30.0%	94.0%
2003	50	20.9%	50.0%	8.0%	47.6%	39.1%	12.0%	2.0%	10.2%	85.4%	59.2%	32.0%	42.0%	93.6%
2004	28	29.6%	25.0%	14.3%	48.1%	17.9%	21.4%	7.1%	7.4%	67.8%	35.7%	42.9%	50.0%	85.7%
2005	23	21.7%	59.1%	13.0%	40.9%	52.4%	21.7%	17.4%	13.0%	77.3%	73.9%	30.4%	47.8%	100.0%
2006	13	30.8%	61.5%	7.7%	38.5%	53.8%	38.5%	30.8%	38.5%	92.3%	69.2%	23.1%	23.8%	100.0%
2007	10	0.0%	80.0%	20.0%	20.0%	30.0%	20.0%	0.0%	10.0%	40.0%	80.0%	0.0%	20.0%	90.0%
All	474	25.1%	48.5%	7.0%	39.5%	41.8%	8.6%	4.4%	5.8%	78.7%	53.4%	24.7%	30.8%	93.5%

Panel B: Top hedge fund players in Chapter 11 by categories

Rank	Largest unsecured creditors
1	Oaktree Capital Management, LLC
2	Appaloosa Management, LP
3	Apollo Advisors, LP
4	Cerberus Capital Management
5	Loomis Sayles & Co., LP

Rank	Unsecured creditors committee
1	Oaktree Capital Management, LLC
2	PPM America Special Investments Fund
3	Cerberus Capital Management
4	Appaloosa Management, LP
5	Loomis Sayles & Co., LP

Rank	DIP financing providers
1	Cerberus Capital Management
2	Silver Point Capital Group, LP
3	Black Diamond Capital Management, LLC
4	DDJ Capital Management, LLC
5	Oaktree Capital Management, LLC

Rank	Largest shareholders and/or with 13D filing before bankruptcy
1	Bain Capital Funds
2	Loomis Sayles & Co., LP
3	Oaktree Capital Management, LLC
4	Rutabaga Capital Management, LLC
5	Warburg, Pincus Ventures, LP

Rank	Equity committee and/or with 13D filing during bankruptcy
1	Harbinger Capital Partners Master Fund
2	Xerion Capital Partners, LLC
3	Lonestar Partners, LP
4	Appaloosa Management, LP
5	Prescott Group Capital Mgmt

Rank	Overall involvement
1	Oaktree Capital Management, LLC
2	Cerberus Capital Management
3	Appaloosa Management, LP
4	Loomis Sayles & Co., LP
5	PPM America Special Investments Fund

Table 4: Predicting hedge fund presence in Chapter 11

Definitions of all variables are provided in Table 1 Panel A. The dependent variable is an indicator variable for hedge fund presence. The model is estimated by probit. Marginal effects, capturing the incremental change in predicted probability change for one unit of change in the regressor, while holding other regressors at their respective mean levels, are reported in the table. Standard errors are in brackets. Superscripts ***, **, * correspond to statistical significance at the 1%, 5%, and 10% levels, respectively.

	Debt Side			Equity Side		Loan-to-own	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	HFLargestCreditors	HFCreditorsCommittee	HFDIP	HFJoint5%	HFEquityCommittee	HFLTO	HFLTO_DIP
Ln(Assets)	-0.0273	0.0635***	-0.0212	-0.0292	0.0076	0.0602***	0.0466**
	[0.0212]	[0.0245]	[0.0133]	[0.0241]	[0.0064]	[0.0191]	[0.0210]
Leverage	-0.0813	0.0953	0.0286	-0.0184	-0.0606*	0.1065*	0.1368**
	[0.0699]	[0.0805]	[0.0367]	[0.0711]	[0.0303]	[0.0590]	[0.0641]
Cash	0.1160	0.5850*	-0.0658	0.5946**	-0.1455	-0.2700	-0.1911
	[0.2463]	[0.2999]	[0.1503]	[0.2790]	[0.1193]	[0.2568]	[0.2626]
Tangibility	0.0228	0.1304	-0.0862	-0.0100	-0.0323	0.1457*	0.0777
	[0.0967]	[0.1121]	[0.0565]	[0.1063]	[0.0340]	[0.0869]	[0.0951]
ROA	0.0133	0.3064	0.0884	0.3104*	0.0366	0.0734	0.1504
	[0.1974]	[0.2271]	[0.1102]	[0.1813]	[0.0760]	[0.1648]	[0.1776]
SecuredDebt	-0.0214	-0.2777**	-0.0163	0.2491***	0.0034	-0.1365*	-0.1272
	[0.0924]	[0.1113]	[0.0505]	[0.0946]	[0.0338]	[0.0797]	[0.0864]
Institution	0.0370	-0.0728	0.0755	0.4382***	0.1109***	-0.0048	0.1420
	[0.0940]	[0.1083]	[0.0516]	[0.1056]	[0.0335]	[0.0846]	[0.0909]
NumClasses	0.0107	0.0056	0.0019	-0.0184**	0.0013	0.0212***	0.0232***
	[0.0080]	[0.0092]	[0.0047]	[0.0089]	[0.0027]	[0.0072]	[0.0080]
Prepack	0.0762	-0.0764	0.0183	0.0653	0.0194	0.1404***	0.1268**
	[0.0546]	[0.0578]	[0.0303]	[0.0552]	[0.0213]	[0.0489]	[0.0516]
# cases	361	369	466	447	459	466	466
Pseudo R^2	0.014	0.049	0.031	0.056	0.153	0.092	0.073

Table 5: Hedge fund presence and Chapter 11 emergence

Definitions of all variables are provided in Table 1 Panel A. The dependent variable is an indicator variable for Chapter 11 emergence. The model is estimated by probit. Marginal effects, capturing the incremental change in predicted probability change for one unit of change in the regressor, while holding other regressors at their respective mean levels, are reported in the table. Standard errors are in brackets. Superscripts ***, **, * correspond to statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)
HFLargestCreditors	0.1254**				
	[0.0556]				
HFCreditorsCommittee		0.1286**			
		[0.0510]			
HFDIP			0.0718		
			[0.0800]		
HFJoint5%				0.0082	
				[0.0504]	
HFEquityCommittee					0.1363
					[0.0874]
Ln(Assets)	0.0209	0.0088	0.0175	0.0187	0.0126
	[0.0237]	[0.0241]	[0.0231]	[0.0238]	[0.0233]
Leverage	0.3088***	0.2906***	0.2975***	0.2950***	0.3022***
	[0.0995]	[0.0959]	[0.0818]	[0.0829]	[0.0830]
Cash	-0.3785	-0.5602*	-0.3487	-0.3873	-0.3086
	[0.2900]	[0.2908]	[0.2769]	[0.2806]	[0.2822]
Tangibility	-0.0030	0.0713	0.0616	0.0690	0.0824
	[0.1130]	[0.1133]	[0.1062]	[0.1087]	[0.1067]
ROA	0.3935*	0.0336	0.2825	0.2826	0.3190*
	[0.2266]	[0.2213]	[0.1762]	[0.1775]	[0.1787]
SecuredDebt	0.1021	0.0361	0.0367	0.0294	0.0268
	[0.1152]	[0.1220]	[0.1001]	[0.1020]	[0.1014]
Institution	0.0054	0.0463	0.0847	0.0770	0.0405
	[0.1087]	[0.1069]	[0.1011]	[0.1053]	[0.1059]
NumClasses	0.0466***	0.0504***	0.0456***	0.0480***	0.0470***
	[0.0109]	[0.0108]	[0.0098]	[0.0100]	[0.0099]
Prepack	0.3051***	0.3436***	0.3559***	0.3575***	0.3540***
	[0.0478]	[0.0444]	[0.0419]	[0.0423]	[0.0421]
# cases	361	369	466	447	459
Pseudo R^2	0.217	0.234	0.204	0.209	0.207

Table 6: Hedge fund presence and Chapter 11 duration

Definitions of all variables are provided in Table 1 Panel A. The dependent variable is the number of months spent in Chapter 11 (measured in logs). Standard errors are in brackets. Superscripts ***, **, * correspond to statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
HFLargestCreditors	-0.1289						
	[0.0907]						
HFCreditorsCommittee		0.1780**					
		[0.0812]					
HFDIP			0.2799**				
			[0.1188]				
HFJoint5%				-0.0215			
				[0.0715]			
HFEquityCommittee					0.1634		
					[0.1494]		
HFLTO						0.0319	
						[0.0817]	
HFLTO_DIP							0.1102
							[0.0757]
Ln(Assets)	0.0538	0.0322	0.0546*	0.0502	0.0458	0.0471	0.0439
	[0.0359]	[0.0364]	[0.0324]	[0.0338]	[0.0330]	[0.0329]	[0.0327]
Leverage	-0.1188	-0.1345	-0.1175	-0.0928	-0.0886	-0.1115	-0.1228
	[0.1198]	[0.1184]	[0.0979]	[0.1005]	[0.1003]	[0.0987]	[0.0987]
Cash	-0.9610**	-0.9200**	-0.9108**	-0.9018**	-0.9178**	-0.9198**	-0.9072**
	[0.4391]	[0.4445]	[0.3814]	[0.3899]	[0.3995]	[0.3840]	[0.3830]
Tangibility	-0.2213	-0.1890	-0.0784	-0.1263	-0.0920	-0.1089	-0.1122
	[0.1677]	[0.1663]	[0.1456]	[0.1506]	[0.1475]	[0.1465]	[0.1458]
ROA	-0.1052	0.0047	-0.0353	0.0037	-0.0215	-0.0178	-0.0279
	[0.3345]	[0.3339]	[0.2388]	[0.2436]	[0.2430]	[0.2401]	[0.2397]
SecuredDebt	-0.3393**	-0.2750*	-0.3286**	-0.3390**	-0.3373**	-0.3271**	-0.3178**
	[0.1578]	[0.1621]	[0.1296]	[0.1343]	[0.1316]	[0.1308]	[0.1304]
Institution	0.1012	0.1559	0.1517	0.2199	0.1534	0.1753	0.1598
	[0.1626]	[0.1601]	[0.1412]	[0.1488]	[0.1488]	[0.1416]	[0.1417]
NumClasses	0.0244*	0.0255*	0.0160	0.0139	0.0173	0.0159	0.0140
	[0.0139]	[0.0137]	[0.0120]	[0.0124]	[0.0122]	[0.0122]	[0.0122]
Prepack	-1.2111***	-1.2283***	-1.2535***	-1.2526***	-1.2505***	-1.2518***	-1.2608***
	[0.0906]	[0.0873]	[0.0768]	[0.0792]	[0.0779]	[0.0780]	[0.0776]
Intercept	2.5367***	2.5159***	2.5017***	2.5608***	2.5411***	2.5686***	2.5970***
	[0.2809]	[0.2765]	[0.2433]	[0.2550]	[0.2468]	[0.2473]	[0.2452]
# cases	361	369	466	447	459	466	466
R^2	0.431	0.448	0.439	0.433	0.432	0.432	0.434

Table 7: Hedge fund presence and APR deviation

Definitions of all variables are provided in Table 1 Panel A. In Panel A, the dependent variable is an indicator variable for APR deviation. The model is estimated by probit. Marginal effects, capturing the incremental change in predicted probability change for one unit of change in the regressor, while holding other regressors at their respective mean levels, are reported in the table. In Panel B, the dependent variable is the size of APR deviation. The model is estimated by tobit with APR deviation bounded between zero and 100%. Standard errors are in brackets. Superscripts ***, **, * correspond to statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: The likelihood of APR deviation

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
HFLargestCreditors	-0.0138						
	[0.0396]						
HFCreditorsCommittee		-0.0084					
		[0.0395]					
HFDIP			-0.0253				
			[0.0504]				
HFJoint5%				-0.0144			
				[0.0339]			
HFEquityCommittee					0.2727***		
					[0.1076]		
HFLTO						0.0716*	
						[0.0418]	
HFLTO_DIP							0.0452
							[0.0370]
Ln(Assets)	-0.0218	-0.0184	-0.0201	-0.0185	-0.0242	-0.0258	-0.0232
	[0.0177]	[0.0189]	[0.0164]	[0.0167]	[0.0164]	[0.0167]	[0.0166]
Leverage	-0.0478	-0.0356	-0.0110	-0.0037	-0.0039	-0.0167	-0.0173
	[0.0529]	[0.0543]	[0.0450]	[0.0458]	[0.0446]	[0.0446]	[0.0450]
Cash	-0.2636	-0.1716	-0.1557	-0.1418	-0.0937	-0.1430	-0.1401
	[0.2238]	[0.2298]	[0.2010]	[0.2020]	[0.1990]	[0.1986]	[0.1985]
Tangibility	0.1593**	0.1119	0.1270*	0.1098	0.1547**	0.1172*	0.1259*
	[0.0739]	[0.0786]	[0.0671]	[0.0689]	[0.0667]	[0.0666]	[0.0665]
ROA	-0.2534*	-0.1496	-0.0331	-0.0199	-0.0334	-0.0341	-0.0329
	[0.1509]	[0.1585]	[0.1264]	[0.1299]	[0.1250]	[0.1264]	[0.1270]
SecuredDebt	-0.0720	-0.1104	-0.0840	-0.0858	-0.0912	-0.0733	-0.0777
	[0.0724]	[0.0767]	[0.0624]	[0.0647]	[0.0621]	[0.0620]	[0.0624]
Institution	0.1148	0.1061	0.0717	0.0670	0.0209	0.0711	0.0641
	[0.0770]	[0.0798]	[0.0682]	[0.0710]	[0.0725]	[0.0675]	[0.0678]
NumClasses	0.0050	0.0047	0.0055	0.0054	0.0050	0.0044	0.0047
	[0.0062]	[0.0064]	[0.0055]	[0.0057]	[0.0056]	[0.0055]	[0.0055]
Prepack	0.3917***	0.3878***	0.3643***	0.3656***	0.3609***	0.3500***	0.3552***
	[0.0542]	[0.0518]	[0.0473]	[0.0483]	[0.0473]	[0.0476]	[0.0475]
# cases	361	369	466	447	459	466	466
Pseudo R^2	0.217	0.210	0.200	0.200	0.220	0.207	0.203

Panel B: The size of APR deviation

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
HFLargestCreditors	-0.3463						
	[2.5104]						
HFCreditorsCommittee		-0.5518					
		[2.2411]					
HFDIP			-1.9374				
			[3.2515]				
HFJoint5%				-0.8443			
				[1.9636]			
HFEquityCommittee					13.1476***		
					[3.0049]		
HFLTO						3.7691*	
						[2.0716]	
HFLTO_DIP							2.6046
							[1.9725]
Ln(Assets)	-2.0954*	-1.7961*	-1.7334*	-1.7236*	-2.0407**	-2.1191**	-1.9434**
	[1.1022]	[1.0645]	[0.9526]	[0.9801]	[0.9046]	[0.9994]	[0.9836]
Leverage	-2.9832	-2.4542	-0.8605	-0.7483	-0.0367	-1.3249	-1.3710
	[3.2469]	[3.0264]	[2.5675]	[2.6476]	[2.4002]	[2.5983]	[2.6189]
Cash	1.0129	5.6458	3.9862	5.1501	9.0942	4.7989	4.9466
	[12.8912]	[12.2296]	[11.0487]	[11.2090]	[10.3027]	[11.1008]	[11.0679]
Tangibility	9.1979**	7.7787*	5.7112	6.1983	8.0030**	5.0888	5.6641
	[4.6546]	[4.3975]	[3.8452]	[3.9770]	[3.6749]	[3.8637]	[3.8510]
ROA	-6.2880	0.7059	3.7592	5.2662	3.6604	3.7433	3.9479
	[10.2120]	[9.7237]	[8.1993]	[8.5744]	[7.6855]	[8.3284]	[8.3871]
SecuredDebt	-3.8002	-5.7487	-3.4798	-3.8827	-4.3588	-2.8263	-3.1403
	[4.5713]	[4.3370]	[3.6166]	[3.8023]	[3.3963]	[3.6466]	[3.6623]
Institution	15.5051***	14.0886***	11.9777***	11.5675***	7.9706**	12.2637***	11.7693***
	[4.8897]	[4.4830]	[3.9241]	[4.0882]	[3.8707]	[3.9511]	[3.9396]
NumClasses	0.3529	0.4157	0.3672	0.3637	0.2669	0.3061	0.3193
	[0.3864]	[0.3616]	[0.3282]	[0.3398]	[0.3119]	[0.3292]	[0.3308]
Prepack	15.9826***	15.6065***	14.0225***	14.1069***	13.3514***	13.7419***	13.8940***
	[2.9304]	[2.7275]	[2.3028]	[2.3723]	[2.1631]	[2.3024]	[2.3106]
Intercept	-14.2325*	-15.1929*	-14.9447**	-14.9939*	-12.5493*	-12.6562*	-13.8159*
	[8.5754]	[8.0903]	[7.2792]	[7.6805]	[6.7998]	[7.3886]	[7.3569]
# cases	350	357	451	433	444	451	451
Pseudo R^2	0.099	0.103	0.097	0.094	0.122	0.101	0.099

Table 8: Hedge fund presence and KERP

Definitions of all variables are provided in Table 1 Panel A. The dependent variable is an indicator variable for KERP. The model is estimated by probit. Marginal effects, capturing the incremental change in predicted probability change for one unit of change in the regressor, while holding other regressors at their respective mean levels, are reported in the table. Standard errors are in brackets. Superscripts ***, **, * correspond to statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
HFLargestCreditors	-0.0600						
	[0.0646]						
HFCreditorsCommittee		0.1153**					
		[0.0586]					
HFDIP			0.1274				
			[0.0857]				
HFJoint5%				0.0157			
				[0.0511]			
HFEquityCommittee					-0.0685		
					[0.1036]		
HFLTO						0.1202**	
						[0.0604]	
HFLTO_DIP							0.1014*
							[0.0553]
Ln(Assets)	0.1004***	0.1007***	0.1167***	0.1109***	0.1168***	0.1074***	0.1098***
	[0.0265]	[0.0275]	[0.0246]	[0.0250]	[0.0248]	[0.0247]	[0.0246]
Leverage	0.1703**	0.2018**	0.1291*	0.1528**	0.1231*	0.1244*	0.1223*
	[0.0858]	[0.0868]	[0.0710]	[0.0721]	[0.0717]	[0.0710]	[0.0711]
Cash	-0.1440	-0.0070	0.0303	0.0259	0.0177	0.0527	0.0447
	[0.3228]	[0.3384]	[0.2821]	[0.2848]	[0.2937]	[0.2833]	[0.2824]
Tangibility	-0.1317	-0.1688	-0.1073	-0.1184	-0.1149	-0.1355	-0.1256
	[0.1213]	[0.1236]	[0.1069]	[0.1092]	[0.1067]	[0.1069]	[0.1066]
ROA	0.2408	0.5468**	0.3566**	0.3585**	0.3522*	0.3630**	0.3563**
	[0.2350]	[0.2629]	[0.1810]	[0.1826]	[0.1813]	[0.1807]	[0.1809]
SecuredDebt	0.1283	0.0391	0.0897	0.0641	0.0892	0.1022	0.0985
	[0.1140]	[0.1196]	[0.0959]	[0.0978]	[0.0960]	[0.0962]	[0.0961]
Institution	0.3097***	0.2871**	0.2926***	0.3163***	0.2860***	0.3018***	0.2886***
	[0.1163]	[0.1171]	[0.1017]	[0.1058]	[0.1061]	[0.1020]	[0.1019]
NumClasses	0.0115	0.0148	0.0059	0.0052	0.0065	0.0038	0.0040
	[0.0102]	[0.0100]	[0.0088]	[0.0090]	[0.0088]	[0.0089]	[0.0089]
Prepack	-0.3797***	-0.4115***	-0.3351***	-0.3341***	-0.3282***	-0.3457***	-0.3428***
	[0.0530]	[0.0510]	[0.0456]	[0.0461]	[0.0460]	[0.0457]	[0.0457]
# cases	361	369	466	447	459	466	466
Pseudo R^2	0.174	0.208	0.158	0.158	0.153	0.161	0.160

Table 9: Hedge fund presence and CEO turnover

Definitions of all variables are provided in Table 1 Panel A. The dependent variable is an indicator variable for CEO turnover. The model is estimated by probit. Marginal effects, capturing the incremental change in predicted probability change for one unit of change in the regressor, while holding other regressors at their respective mean levels, are reported in the table. Standard errors are in brackets. Superscripts ***, **, * correspond to statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
HFLargestCreditors	0.1132**						
	[0.0584]						
HFCreditorsCommittee		0.0517					
		[0.0498]					
HFDIP			0.0733				
			[0.0781]				
HFJoint5%				-0.0404			
				[0.0446]			
HFEquityCommittee					0.2430**		
					[0.1049]		
HFLTO						-0.0435	
						[0.0491]	
HFLTO_DIP							-0.0003
							[0.0472]
Ln(Assets)	0.0501**	0.0452**	0.0541***	0.0490**	0.0514***	0.0555***	0.0526***
	[0.0208]	[0.0212]	[0.0193]	[0.0200]	[0.0195]	[0.0196]	[0.0194]
Leverage	-0.0192	0.0160	0.0267	0.0300	0.0263	0.0345	0.0292
	[0.0792]	[0.0765]	[0.0659]	[0.0667]	[0.0670]	[0.0657]	[0.0660]
Cash	-0.6287**	-0.6167**	-0.4750*	-0.4256*	-0.5073*	-0.4949**	-0.4820*
	[0.2934]	[0.2911]	[0.2487]	[0.2530]	[0.2599]	[0.2500]	[0.2499]
Tangibility	-0.0825	-0.0773	-0.0605	-0.0610	-0.0347	-0.0609	-0.0679
	[0.1009]	[0.1019]	[0.0917]	[0.0944]	[0.0919]	[0.0918]	[0.0916]
ROA	0.2063	-0.0767	0.0320	0.0585	0.0278	0.0359	0.0376
	[0.2357]	[0.1994]	[0.1611]	[0.1646]	[0.1622]	[0.1606]	[0.1610]
SecuredDebt	-0.1289	-0.0968	-0.1993**	-0.1857**	-0.1977**	-0.2048**	-0.1987**
	[0.1039]	[0.1046]	[0.0908]	[0.0934]	[0.0909]	[0.0909]	[0.0908]
Institution	0.1978**	0.1449	0.1228	0.1393	0.0683	0.1293	0.1281
	[0.0937]	[0.0927]	[0.0839]	[0.0884]	[0.0881]	[0.0839]	[0.0842]
NumClasses	-0.0017	0.0002	0.0015	0.0016	0.0015	0.0028	0.0016
	[0.0084]	[0.0082]	[0.0075]	[0.0076]	[0.0075]	[0.0076]	[0.0076]
Prepack	-0.0911*	-0.1100**	-0.1163***	-0.1038**	-0.1141**	-0.1098**	-0.1137**
	[0.0518]	[0.0501]	[0.0444]	[0.0460]	[0.0446]	[0.0449]	[0.0447]
# cases	356	362	449	430	442	449	449
Pseudo R2	0.084	0.062	0.067	0.060	0.078	0.066	0.065

Table 10: Selection effects

Definitions of all variables are provided in Table 1 Panel A. This table reports results from linear regressions (equation (2)) of Chapter 11 outcome variables on firm and case characteristics, and the inverse Mill's ratio from a first-stage probit regression of hedge fund presence. Panel A presents the regression results for the subsample with *ex post* hedge fund presence. Panel B presents the regression results for the subsample without *ex post* hedge fund presence. Standard errors are in brackets. Superscripts ***, **, * correspond to statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Subsample with ex post hedge fund presence

	(1)	(2)	(3)	(4)	(5)	(6)
Endogenous Variable	HFLargestCreditors	HFCreditorsCommittee	HFCreditorsCommittee	HFDIP	HFEquityCommittee	HFLTO
Dependent Variable	Emergence	Emergence	Duration	Duration	APR	APR
Ln(Assets)	0.2739*	-0.0650	0.3057	2.9471	-0.9608	-0.2614*
	[0.1523]	[0.2535]	[0.4259]	[3.1874]	[0.7219]	[0.1406]
Leverage	1.1118**	0.0424	0.6025	-3.8207	8.0987	-0.5296**
	[0.4671]	[0.4040]	[0.6790]	[4.2026]	[5.8578]	[0.2670]
Cash	-2.0556***	-1.4900	2.6870	10.5898	16.6774	0.0649
	[0.7552]	[2.3518]	[3.9523]	[10.0209]	[13.6661]	[0.8473]
Tangibility	-0.1619	-0.0940	0.4898	11.9999	3.8429	-0.3487
	[0.2117]	[0.5830]	[0.9798]	[13.0517]	[3.0290]	[0.3656]
ROA	-0.0054	0.1548	1.9744	-13.2232	-3.7745	-0.3784
	[0.3677]	[1.3415]	[2.2544]	[13.3313]	[3.7273]	[0.4294]
SecuredDebt	0.1937	0.5515	-1.8202	1.2306	-1.0215*	0.5717
	[0.2057]	[1.2138]	[2.0398]	[2.5306]	[0.5234]	[0.3552]
Institution	-0.3079	-0.0236	0.0363	-10.9446	-14.0716	0.1437
	[0.2608]	[0.3104]	[0.5215]	[11.2396]	[10.4982]	[0.1544]
NumClasses	-0.0692	0.0273	0.0553	-0.2248	-0.1357	-0.0754*
	[0.0613]	[0.0252]	[0.0423]	[0.2759]	[0.1208]	[0.0452]
Prepack	-0.5320	0.2429	-1.4839***	-3.2446	-1.8946	-0.0967
	[0.4174]	[0.3319]	[0.5577]	[2.6557]	[1.8019]	[0.3125]
Inverse Mills Ratio	**-3.7802**	**-0.6945**	**3.2603**	**-24.7652**	**-11.4218**	**-1.7375***
	[2.3513]	**[2.4048]**	**[4.0412]**	**[27.3484]**	**[8.4700]**	**[0.9894]**
Intercept	3.5624	1.4861	-3.4016	33.0399	27.7824	5.4573*
	[2.3120]	[4.5964]	[7.7243]	[33.4851]	[20.6347]	[2.9662]
# cases	92	146	146	41	27	117
R^2	0.266	0.225	0.375	0.471	0.347	0.241

	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Endogenous Variable	HFEquityCommittee	HFLTO	HFCreditorsCommittee	HFLTO	HFLTO_DIP	HFLargestCreditors	HFEquityCommittee
Dependent Variable	APR%	APR%	KERP	KERP	KERP	CEO Turnover	CEO Turnover
Ln(Assets)	0.2497	-1.3281	0.1208	0.0765	0.0434	-0.7015	-0.5657
	[14.1796]	[1.2989]	[0.2788]	[0.1507]	[0.1161]	[1.1387]	[0.7209]
Leverage	-8.1884	-0.7578	0.1374	-0.1624	-0.1777	-2.2586	4.5798
	[115.3020]	[2.4630]	[0.4444]	[0.2862]	[0.3490]	[3.3681]	[5.8503]
Cash	-28.8833	-1.3623	1.1943	1.2156	0.6666	3.2347	8.4655
	[268.5876]	[7.8145]	[2.5866]	[0.9080]	[0.7205]	[4.7598]	[13.6485]
Tangibility	-5.7965	-0.4474	0.0765	-0.2262	-0.3636	0.6252	2.3351
	[59.5029]	[3.4057]	[0.6412]	[0.3919]	[0.2431]	[0.9809]	[3.0251]
ROA	12.6085	2.8771	1.3690	0.7429	0.5788	0.5715	-1.7827
	[73.0563]	[4.0761]	[1.4754]	[0.4602]	[0.5335]	[0.8256]	[3.7225]
SecuredDebt	-11.9036	0.0338	0.0789	0.1937	0.3268	-0.5905	-0.6883
	[10.9455]	[3.2990]	[1.3350]	[0.3807]	[0.3435]	[0.9353]	[0.5228]
Institution	52.8575	4.7362***	0.2012	-0.0058	-0.2737	1.4608	-9.2312
	[206.7361]	[1.4279]	[0.3413]	[0.1654]	[0.3801]	[1.5657]	[10.4847]
NumClasses	-0.0288	-0.1449	0.0229	0.0102	-0.0248	0.2928	-0.1128
	[2.3823]	[0.4167]	[0.0277]	[0.0484]	[0.0524]	[0.4426]	[0.1206]
Prepack	9.1149	0.7708	-0.4567	-0.4571	-0.5801*	1.9678	-1.4632
	[35.3127]	[2.8799]	[0.3650]	[0.3349]	[0.3069]	[3.0757]	[1.7995]
Inverse Mills Ratio	**24.8745**	**-4.0414**	**0.8278**	**0.0458**	**-0.6785**	**12.1701**	**-7.6148**
	[166.6629]	**[9.1390]**	**[2.6448]**	**[1.0603]**	**[1.2177]**	**[17.6300]**	**[8.4591]**
Constant	-56.8655	15.7416	-1.5564	0.0902	1.6167	-11.9566	19.3164
	[406.0114]	[27.4040]	[5.0552]	[3.1789]	[3.1142]	[16.9782]	[20.6082]
# cases	26	113	146	117	146	90	27
R^2	0.469	0.167	0.241	0.320	0.261	0.132	0.385

Panel B: Subsample without ex post hedge fund presence

	(1)	(2)	(3)	(4)	(5)	(6)
Endogenous Variable	HFLargestCreditors	HFCreditorsCommittee	HFCreditorsCommittee	HFDIP	HFEquityCommittee	HFLTO
Dependent Variable	Emergence	Emergence	Duration	Duration	APR	APR
Ln(Assets)	0.1032	-0.3267*	-0.1729	-0.0862	-0.0032	0.0203
	[0.0952]	[0.1795]	[0.3322]	[0.1043]	[0.0182]	[0.0493]
Leverage	0.3313	-0.2979	-0.6935	0.0885	-0.0855	0.1013
	[0.2770]	[0.2680]	[0.4960]	[0.1774]	[0.0534]	[0.0916]
Cash	-0.4539	-3.3860**	-4.0679	-1.4383***	-0.2677	-0.1296
	[0.5196]	[1.6559]	[3.0650]	[0.4846]	[0.2083]	[0.2536]
Tangibility	-0.0909	-0.5901	-0.6113	-0.7021	0.1035	0.2037
	[0.1403]	[0.3583]	[0.6632]	[0.4426]	[0.0757]	[0.1256]
ROA	0.3253	-1.8078**	-1.3921	0.5355	-0.0291	0.0176
	[0.2350]	[0.8405]	[1.5557]	[0.4470]	[0.1126]	[0.1182]
SecuredDebt	0.1862	1.3565*	0.7778	-0.3778**	-0.0627	-0.2287*
	[0.1277]	[0.7237]	[1.3395]	[0.1536]	[0.0617]	[0.1191]
Institution	-0.1657	0.4517**	0.2691	0.7941*	0.2630**	0.0614
	[0.1755]	[0.2183]	[0.4041]	[0.4176]	[0.1315]	[0.0727]
NumClasses	0.0029	0.0079	0.0032	0.0292*	0.0053	0.0260
	[0.0377]	[0.0198]	[0.0366]	[0.0155]	[0.0059]	[0.0184]
Prepack	0.1464	0.8417***	-0.9978**	-1.1591***	0.3793***	0.4428***
	[0.2597]	[0.2079]	[0.3848]	[0.1205]	[0.0382]	[0.1133]
Inverse Mills Ratio	**1.9693**	**3.5486***	**2.7847**	**-4.1212**	**-0.8134****	**-0.5811**
	[2.3030]	**[1.8352]**	**[3.3968]**	**[2.9045]**	**[0.3806]**	**[0.5310]**
Intercept	-1.2975	0.5145	2.9136***	3.9136***	0.1227	-0.2270
	[1.4184]	[0.4391]	[0.8128]	[1.0286]	[0.1202]	[0.3766]
# cases	269	223	223	425	432	349
R^2	0.242	0.326	0.497	0.458	0.212	0.192

	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Endogenous Variable	HFEquityCommittee	HFLTO	HFCreditorsCommittee	HFLTO	HFLTO_DIP	HFLargestCreditors	HFEquityCommittee
Dependent Variable	APR%	APR%	KERP	KERP	KERP	CEO Turnover	CEO Turnover
Ln(Assets)	-0.0235	0.2307	0.1413	0.1492**	0.1447**	-0.0169	0.0515**
	[0.1464]	[0.5763]	[0.1826]	[0.0698]	[0.0712]	[0.1929]	[0.0237]
Leverage	-0.4301	0.7844	0.2437	0.2369*	0.3026	-0.2228	0.0634
	[0.4298]	[1.0747]	[0.2727]	[0.1299]	[0.2086]	[0.5698]	[0.0712]
Cash	2.4941	1.4367	-0.1065	-0.2135	-0.1935	-0.4461	-0.3113
	[1.6893]	[2.9676]	[1.6851]	[0.3595]	[0.3716]	[0.9286]	[0.2709]
Tangibility	0.5998	1.2009	-0.0430	0.0296	0.0067	-0.0357	0.0012
	[0.6162]	[1.4706]	[0.3646]	[0.1781]	[0.1525]	[0.2029]	[0.0994]
ROA	0.3509	0.4339	0.4035	0.2876*	0.3440	0.1809	-0.0007
	[0.9211]	[1.3835]	[0.8553]	[0.1675]	[0.2383]	[0.2797]	[0.1567]
SecuredDebt	-0.0838	-1.6602	-0.2410	-0.0518	-0.0805	-0.1817	-0.1631**
	[0.4999]	[1.3874]	[0.7364]	[0.1688]	[0.2005]	[0.1803]	[0.0803]
Institution	1.3891	1.8663**	0.2344	0.3848***	0.5965**	0.2443	-0.0439
	[1.0686]	[0.8480]	[0.2221]	[0.1030]	[0.2418]	[0.2941]	[0.1745]
NumClasses	0.0253	0.2041	0.0138	0.0155	0.0318	0.0237	0.0022
	[0.0477]	[0.2140]	[0.0201]	[0.0261]	[0.0361]	[0.0780]	[0.0076]
Prepack	1.3722***	2.2975*	-0.3774*	-0.1810	-0.1448	0.1012	-0.1289**
	[0.3137]	[1.3300]	[0.2115]	[0.1606]	[0.1903]	[0.5334]	[0.0500]
Inverse Mills Ratio	**-4.1317**	**-5.8109**	**-0.1984**	**-0.4679**	**-0.7299**	**-1.4890**	**0.2655**
	[3.0731]	**[6.2139]**	**[1.8675]**	**[0.7527]**	**[1.0105]**	**[4.8695]**	**[0.5068]**
Intercept	0.1025	-2.4072	-0.6771	-0.8509	-0.9079	0.9987	-0.1008
	[0.9686]	[4.4014]	[0.4469]	[0.5338]	[0.5632]	[2.9615]	[0.1568]
# cases	418	338	223	349	320	266	415
R^2	0.069	0.045	0.293	0.184	0.191	0.091	0.063

Table 11: Event studies

Definitions of all variables are provided in Table 1 Panel A. Panel A presents the regression result where the dependent variable is CAR, cumulative abnormal announcement period return, measured over different event windows. Day 0 is the date of a Chapter 11 filing. Panel B presents the regression result where the dependent variable is the standardized abnormal monthly return from the day before a Chapter 11 filing to the date of plan confirmation. Standard errors are in brackets. Superscripts ***, **, * correspond to statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Cumulative abnormal returns around Chapter 11 filing

	(1)	(2)	(3)	(4)	(5)
	CAR[-10, +10]	CAR[-5, +5]	CAR[-1, +1]	CAR[-1, +5]	CAR[-1, +10]
HFLargestCreditors	0.2120**	0.1392	0.0776	0.1592**	0.1926**
	[0.0964]	[0.0910]	[0.0616]	[0.0792]	[0.0838]
Ln(Assets)	-0.0638	-0.0347	0.0277	0.0150	-0.0115
	[0.0389]	[0.0355]	[0.0269]	[0.0343]	[0.0367]
Leverage	-0.0016	-0.0962	-0.0919	-0.0683	-0.0574
	[0.1334]	[0.1092]	[0.0759]	[0.0947]	[0.0977]
Cash	0.5742	0.4316	0.0402	0.1890	0.2290
	[0.6742]	[0.7001]	[0.3995]	[0.5648]	[0.5630]
Tangibility	-0.0235	-0.1976	-0.0769	-0.2796**	-0.2296
	[0.1965]	[0.1647]	[0.0983]	[0.1395]	[0.1656]
ROA	0.6259	0.3979	0.1666	0.5387	0.6700
	[0.5243]	[0.4868]	[0.3147]	[0.4296]	[0.4801]
SecuredDebt	-0.0872	0.0034	0.0647	0.0724	0.0422
	[0.1651]	[0.1463]	[0.0834]	[0.1094]	[0.1156]
Institution	-0.1418	0.0078	-0.0683	0.0237	-0.0321
	[0.1713]	[0.1804]	[0.1038]	[0.1489]	[0.1503]
NumClasses	0.0079	0.0127	-0.0064	0.0036	0.0066
	[0.0139]	[0.0115]	[0.0082]	[0.0103]	[0.0108]
Prepack	0.1045	0.1098	0.0166	-0.0508	0.0109
	[0.1029]	[0.0936]	[0.0496]	[0.0740]	[0.0858]
Intercept	0.0776	0.0435	-0.1868	-0.1334	-0.0253
	[0.3071]	[0.2460]	[0.1919]	[0.2393]	[0.2562]
# cases	276	273	258	265	267
R^2	0.052	0.042	0.028	0.053	0.048

Panel B: Abnormal monthly returns in Chapter 11

	(1)	(2)	(3)	(4)
HF13D	0.1749***			
	[0.0500]			
HF13D_Ownership		1.2855***		
		[0.1640]		
HF13D_Reorganize			0.2442***	
			[0.0594]	
HFEquityCommittee				0.1548***
				[0.0432]
Ln(Assets)	-0.0080	-0.0099	-0.0072	-0.0115
	[0.0100]	[0.0093]	[0.0099]	[0.0102]
Leverage	0.0061	0.0039	0.0057	0.0092
	[0.0328]	[0.0306]	[0.0325]	[0.0338]
Cash	0.0111	0.0574	-0.0111	0.0362
	[0.1203]	[0.1127]	[0.1196]	[0.1269]
Tangibility	0.0244	0.0387	0.0216	0.0155
	[0.0460]	[0.0428]	[0.0455]	[0.0463]
ROA	0.0341	0.0605	0.0229	0.0416
	[0.0851]	[0.0796]	[0.0846]	[0.0870]
SecuredDebt	-0.0095	-0.0054	-0.0116	-0.0059
	[0.0435]	[0.0407]	[0.0433]	[0.0442]
Institution	0.0348	0.0382	0.0204	0.0339
	[0.0485]	[0.0445]	[0.0486]	[0.0501]
NumClasses	0.0002	-0.0000	0.0010	0.0013
	[0.0037]	[0.0035]	[0.0037]	[0.0038]
Prepack	0.0370	0.0256	0.0328	0.0282
	[0.0256]	[0.0239]	[0.0254]	[0.0260]
Intercept	-0.0464	-0.0410	-0.0483	-0.0346
	[0.0764]	[0.0714]	[0.0759]	[0.0779]
# cases	341	341	341	334
R^2	0.050	0.170	0.063	0.052