Incentives, Information, and Investments in Chapter 11 Bankruptcies

By

Yan Yang

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Abstract

As business cycles generate ebb and flow in economic activities, the recurring corporate failures have highlighted how critical bankruptcy regimes are in reviving and stabilizing the economy. The Chapter 11 bankruptcy protection offers a court-supervised venue for defaulting companies to shed debt burdens, reallocate resources to potentially more productive uses, and obtain new capital. Bankruptcy affects not only distressed firms but also healthy firms. The rules of bankruptcy influence the capital structure and investment activities of firms distant from financial distress ex-ante. Therefore, it is crucial to understand the evolution of bankruptcy regimes and their implications for financial market participants. Exploring rich institutional details in Chapter 11 bankruptcies, this dissertation consists of three essays that investigate incentives, information, and investments within this context.

The first essay is related to ”incentives”. It examines why managers of bankrupt companies retain top-tier investment banks as financial advisors during Chapter 11 bankruptcies. While these advisors facilitate faster resolutions, they also support incumbent management's control. The second essay is about ”information”. It analyzes the stock trading activities of hedge funds serving on the Unsecured Creditors' Committee (UCC) of a bankrupt firm. It shows that these hedge funds have higher portfolio turnover and make large trades in the few quarters after accessing material nonpublic information from the UCCs. The third essay, focusing on ”investments”, examines the performance of equity issued by public companies that emerged from Chapter 11 bankruptcy, namely, post-reorg equity. Although there was significant initial outperformance, it has diminished in recent years due to market expectation corrections and increased participation of institutional investors. Collectively, these essays offer a comprehensive understanding of the dynamics in Chapter 11 bankruptcies, shedding light on their broader implications for financial markets and economic recovery strategies.

Declaration of Co-authorship

I declare that this Ph.D. thesis titled 'Incentives, Information, and Investments in Chapter 11 Bankruptcies' represents original work conducted during the course of my Ph.D. program at Queen's University.

I further declare that this work was conducted in collaboration with the following co-authors:

Chapter 3 was co-authored with Wei Wang, a professor at the Smith School of Business at Queen's University, and Jingyu Zhang, a professor at the Smith School of Business at Queen's University.

Chapter 4 was co-authored with Wei Jiang, a professor at the Goizueta Business School at Emory University, and Wei Wang, a professor at the Smith School of Business at Queen's University.

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To my grandparents: Yongdong Deng and Gangju Zeng.

List of Publications

Chapter 4 ”The Disappeared Outperformance of Post-Reorg Equity” of this thesis has been published in the Journal of Alternative Investments. This chapter has been removed due to copyright restrictions. Interested readers can access the full chapter online through Portfolio Management Research’s the Journal of Alternative Investments. Original source: Jiang, W., Wang, W. and Yang, Y., 2022. The Disappeared Outperformance of Post-Reorg Equity. The Journal of Alternative Investments.

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Chapter 1

Thesis Introduction

According to the National Bureau of Economic Research, there have been 12 episodes of dated recessions since 1948. Economic downturns can result in increased corporate bankruptcies and permanent business closures, which affect employment, investment, and consumer expenditure, leading to a far-reaching impact on aggregate social welfare.

Chapter 11 of the U.S. Bankruptcy Code establishes a legal framework for failing corporations to rehabilitate and restructure. Successful reorganizations maximize the ex post value of the firm and enable recovery from crippling debt, while misguided restructurings result in fire sales, value-destroying liquidations, or recidivism. In addition to these significant effects on firm value, quality restructurings are also of great importance to stabilize the whole economy. Given the significant impact of corporate bankruptcies on the economy and society, this thesis aims to expand our understanding of how diverse constituencies interact under the current corporate bankruptcy landscape. By examining these interactions, the research seeks to shed light on incentives, information, and investments in Chapter 11 bankruptcy processes.

The first essay centers on "incentives", specifically examining why managers of bankrupt companies choose top-tier investment banks as financial advisors in Chapter 11. This essay shows that top-tier advisors not only facilitate quicker resolutions but also play a crucial role in supporting the existing management's efforts to retain control over the company. By doing so, the essay provides insights into the complex motivations and strategic decisions made by managers during bankruptcy.

The second essay addresses the theme of "information" and studies the stock trading activities of hedge funds that are members of the Unsecured Creditors' Committee (UCC) of a bankrupt firm. This analysis reveals that hedge funds exhibit higher portfolio turnover and engage in large trading activities in the quarters following their access to material nonpublic information. The essay underscores the significant influence of material nonpublic information on the trading behavior and portfolio management strategies of hedge funds involved in bankruptcy proceedings, highlighting the potential regulatory implications.

The third essay centers on "investments" and evaluates the performance of equity issued by public companies that have emerged from Chapter 11 bankruptcy, commonly referred to as post-reorg equity. This essay documents that the outperformance of post-reorg equity concentrates in the 2000s and has disappeared in the most recent decade. The evidence indicates that the previously documented outperformance of post-reorganization equity is likely due to market expectation errors regarding future earnings, resulting in initial undervaluation. This undervaluation has been corrected in recent periods by sophisticated institutional investors.

Collectively, these three essays provide a thorough examination of the multifaceted dynamics present in Chapter 11 bankruptcies. They illuminate the broader implications for financial markets, including the strategic maneuvers of managers, the impact of material nonpublic information on hedge fund trading, and the evolving performance of post-reorg equity. Taken together, these studies contribute to a deeper understanding of the intricate processes and consequences of Chapter 11 bankruptcies, offering valuable insights for economic recovery strategies and capital market efficiency.

Chapter 2

Financial Advisors, CEO Control Benefits, and Chapter 11 Bankruptcies

This paper investigates why managers of bankrupt companies engage top-tier investment banks as financial advisors in Chapter 11 bankruptcies. The analysis reveals that larger firms with higher leverage and lower profitability are more likely to engage top-tier advisors. These advisors facilitate expeditious bankruptcy resolutions by reducing negotiation frictions, securing timely financing, and restructuring public debt. Despite these advantages, the presence of top-tier advisors does not influence post-emergence performance or recidivism rates. Firms with top-tier advisors tend to remain independent upon distress resolution and are less likely to replace incumbent CEOs, instead opting to offer retention bonuses to top management. Overall, the findings suggest that top-tier advisors not only enhance efficiency but also help maintain managerial control.

Keywords: Financial Advisor, Corporate Governance, Bankruptcy Cost, Economic Frictions

JEL classification: G24, G33, G34

2.1 Introduction

"As a CEO, it is likely that a chapter 11 will be your first foray into restructuring. Surrounding yourself with the right advisers who can navigate you through new waters will ensure that you can put your new purpose into effect."

— *CEO Considerations Before Filing Chapter 11, Bloomberg Law, May 2020*

When a company files for Chapter 11 bankruptcy, it enters a crucial phase due to the debtor-oriented nature of the U.S. Bankruptcy Code. The Code not only allows the incumbent management to stay in control and continue operating the business without direct interference from creditors during reorganization, but also gives them an exclusivity period of 120 days after the bankruptcy petition to propose a plan of reorganization (Altman et al., 2019).[1] Meanwhile, there are two fundamental objectives to achieve under Chapter 11: first, the valuation of the reorganized firm; second, the division of the reorganized pie among claimants (e.g., Roe (1983), Bebchuk (1988), Hart (1995)). However, attaining these objectives can be costly and complex due to economic frictions, including asymmetric information and conflicts of interest among creditors (Dou et al., 2021). Importantly, these economic frictions can significantly amplify both direct costs, such as legal costs, and indirect costs incurred by the loss of profitable investment opportunities, diversion of managerial focus, and disruption of supply chains during the bankruptcy procedure (e.g., Altman (1984), Wang (2022)). To address challenges in the reorganization process, the management of a bankrupt company enlists the help of financial advisors.

This paper examines why managers of bankrupt firms retain top-tier investment banks as financial advisors in Chapter 11. The value-enhancing hypothesis postulates that managers may seek counsel from top-tier advisors to maximize the ex-post value of bankrupt companies. A large strand of literature on intermediary reputation suggests that a high reputation proxies for a high quality of service (e.g., Beatty and Ritter (1986), Fang (2005),

[1]The exclusivity period can be extended up to a maximum of 18 months.

Golubov et al. (2012)). Since a good reputation is established by a history of successful performance (Chemmanur and Fulghieri, 1994), top-tier advisors are expected to be more adept at lowering costs of asymmetric information (Leland and Pyle, 1977) and transaction costs (Benston and Smith, 1976). Therefore, top-tier advisors fulfill the goal of incumbent management by mitigating negotiation frictions among multiple classes of claim holders and arranging transactions in the most cost-effective way.

I test this "value-enhancing" view on why managers of bankrupt firms employ top-tier financial advisors by examining the role and effectiveness of top-tier advisors in fulfilling the objectives of incumbent management. To achieve this goal, I manually compile a comprehensive sample of investment bank advisors retained by large bankrupt firms using information on court dockets from the Public Access to Court Electronic Records (PACER) database. This sample is augmented by information on bankruptcy case characteristics; bankrupt firms' financial performance, debt structure, and chief executive officers; and terms of debtor-in-possession (DIP) financing loan contracts.

The analysis begins with identifying top-tier advisors. In doing so, I provide the first large-sample evidence on the composition of the investment banking market for distressed firms. Different from the traditional full-service investment banking industry, the investment banking market for distressed firms is dominated by a few boutique banks that focus on restructuring advisory. The top 9 banks account for more than 90% of all deals.[2] Following previous literature (e.g., Carter et al. (1998), Fang (2005)), I classify an investment bank advisor as a top-tier advisor, also known as an 'elite boutique' in the financial press, based on its market share.

To determine whether managers of bankrupt firms rely on top-tier advisors to enhance firm value, I study three questions central to the role of top-tier advisors in bankruptcy restructuring. First, I investigate the ex ante determinants of advisor choice. Second, I

[2] I combine the Blackstone Group (Advisory arm) with the PJT Partners in the league tables from the New Generation Research BankruptcyData.com (NGR) database since the former was rebranded as PJT Partners through a corporate spin-off on October 1, 2015, resulting in top 9 investment bank advisors. See Section 2.3 for details.

examine the relationship between bankruptcy case duration and the decision to retain top-tier advisors. Third, I explore the mechanisms through which top-tier advisors influence bankruptcy restructurings.

I document that the probability of incumbent management retaining a top-tier advisor is positively related to firm size, leverage, and the proportion of unsecured bonds and notes. In addition, the probability of using top-tier advisors decreases as profitability rises and the share of secured debt increases. These findings suggest that managers choose top-tier investment banks because they are better at reducing negotiation frictions and costs arising from complex claim structures. When operating performance declines and the pressure to deleverage intensifies, especially the urgency to restructure unsecured public debt, which is more prone to holdout problems, managers are more inclined to engage top-tier advisors.

Using a linear probability model to analyze cases filed in the same year within the same industry after controlling for firm-level observables that affect the decision of hiring top-tier advisors and bankruptcy process characteristics that influence case duration, I find that cases advised by top-tier advisors are significantly more likely to have a shorter bankruptcy duration. Compared with cases advised by non-top-tier advisors, cases advised by top-tier advisors experience a 9.6% decrease in time spent in bankruptcy. This translates into a decline of one month relative to the unconditional average of case duration in my sample. Moreover, cases under the guidance of top-tier advisors are significantly more likely to be resolved within nine months. Given that case duration is a proxy for the overall bankruptcy cost (Iverson et al., 2023), the findings imply that top-tier advisors contribute to enhanced firm value.

To explore how top-tier advisors accelerate the bankruptcy process, I examine the relationship between top-tier advisors and key Chapter 11 aspects, including filing strategies, debtor-in-possession (DIP) financing, and changes in the debt structures of bankrupt firms. Specifically, I find that the presence of top-tier advisors is significantly positively related to the probability that the case is being prepackaged, in which various classes of creditors have reached consensus on a plan of reorganization before the bankruptcy filing. This finding indicates that top-tier advisors help mitigate negotiation frictions before filings and thus reduce case processing time in court. In addition, I find that the involvement of top-tier advisors is related to a higher probability of obtaining DIP financing, a larger amount of DIP loans, and a faster speed to the approval of such financing by creditors and the bankruptcy judge. Since DIP financing is a superpriority secured credit for firms in Chapter 11 to fund the restructuring process and ensure continued operations, the results suggest that top-tier advisors help the debtor obtain sufficient liquidity expediently and thereby facilitate the restructuring process. With regard to changes in debt compositions, the involvement of top-tier advisors is positively related to the reduction of unsecured bonds and notes for firms that continue operating as public firms after Chapter 11 reorganization. Top-tier advisors play a pivotal role in debt reduction when creditors have strong incentives to hold out.

While top-tier advisors are associated with shorter case duration, there are other factors that determine the success of bankruptcy restructurings. To provide a comprehensive analysis of the economic implications of top-tier advisors in Chapter 11, I investigate how top-tier advisors are related to other bankruptcy outcomes. I find that firms advised by top-tier bankers show higher chances of emergence and lower chances of acquisition. Moreover, there are no differences between firms retaining top-tier advisors and other firms for post-emergence performance and the probability of refiling bankruptcies within three years after emergence. Even though top-tier advisors facilitate the bankruptcy process, their impact on long-term firm success remains unclear. These findings raise questions about whether the quicker resolutions and higher independence rates under top-tier advisors may be influenced by managerial continuation biases.

To provide direct evidence on the interactions between advisor hiring decisions and managerial incentives, I investigate the career changes of chief executive officers (CEOs) in Chapter 11 bankruptcies. Incumbent managers experience large personal costs when they lose their jobs in corporate bankruptcies (Gilson (1989), Eckbo et al. (2016)). On the flip side, managers can derive private control benefits, including various forms of wealth expropriation in general and more specific to a state of insolvency: the power to hide incompetence and low effort, if they stay in control (Eckbo and Thorburn, 2003). Besides, incumbent management has exclusive rights to shape the trajectory of the restructuring process according to the legal framework of Chapter 11. As a result, managers may prioritize their personal benefits over stakeholders'. Top-tier advisors with experienced teams that have superior skills in corporate restructurings may help managers maintain control during the restructuring process.

Supporting this argument, I find that cases with top-tier banks as advisors are significantly less likely to replace incumbent CEOs at the end of bankruptcy restructurings. And the effect is mainly from post-filing periods, when presumably creditors' and blockholders' concerns are adequately addressed with top-tier advisors' expertise in dealing with legal and financial aspects in Chapter 11.[3] Importantly, CEOs who recruit top-tier advisors are significantly less likely to be replaced. Moreover, the probability of adopting key employee retention and incentive plans (KERPs) significantly increases with the presence of top-tier advisors. These "pay-to-stay" bonuses arguably reward incumbent managers, but at the cost of other stakeholders (Skeel Jr, 2003).[4]

Collectively, the results suggest that top-tier financial advisors play a complex role in Chapter 11 bankruptcies. In support of the "value-enhancing" hypothesis, cases advised by top-tier advisors spend less time in bankruptcy court. These advisors enhance efficiency by reducing negotiation frictions, securing timely liquidity, and restructuring

[3]Gilson (1990) document a substitution effect of monitoring by bank lenders and blockholders for monitoring by directors in financial distressed firms.

[4]Alternatively, as pointed out in Goyal et al. (2017), KERPs can serve as an efficient contracting solution to incentivize key employees in bankruptcy restructurings. The authors document that the objectives set forth in these retention plans are significantly related to case outcomes. The tests cannot distinguish between these two opposing interpretations. In the spirit of Goyal et al. (2017), my results can be interpreted as follows: the incumbent management retains top-tier advisors and the firm adopts KERPs to facilitate bankruptcy restructurings and achieve objectives set forth in these retention plans.

unsecured public debt. At the same time, incumbent managers leverage the expertise of top-tier advisors to quickly overcome significant challenges in corporate financial distress, thereby preserving their control benefits.

This paper contributes to prior literature examining whether intermediary reputation matters for their clients' firm value. On the one hand, a large strand of literature documents that reputable investment banks create net gains for their corporate clients around significant corporate events, including initial public offerings (Carter et al., 1998), bond issurances (Fang, 2005), and mergers and acquisitions (Kale et al. (2003), Bao and Edmans (2011), Golubov et al. (2012)). On the other hand, considerable empirical works show certain features of the compensation contracts, such as higher contingent fees paid to top-tier advisors, create motives for reputable banks to focus on deal completion rather than value maximization (e.g., McLaughlin (1990), McLaughlin (1992), Rau (2000)). In line with this argument, a few studies find no links or negative associations between advisor reputation and client performance (Bowers and Miller (1990), Michel et al. (1991), Servaes and Zenner (1996)). This paper adds to our understanding of financial advisor reputation in the context of corporate bankruptcies and presents mixed evidence with regard to the role of reputable advisors in bankruptcies.

The strategic role of top-tier financial advisors in corporate bankruptcies sheds light on discussions over managerial incentives in financially distressed firms. Chapter 11 has long been criticized for being biased in favor of incumbent management (Bradley and Rosenzweig (1991), Aghion et al. (1992)). Previous studies show conflicts of interest between managers and claim holders, including both creditors and shareholders[5], can be severe once a firm is in financial distress. The turnover rate of incumbent executives and the board of directors is high compared to other firms, these top management experience significant economic losses, and the forced turnover increases with creditor control rights (Gilson (1989, 1990), Gilson and Vetsuypens (1993), Eckbo et al. (2016)). Betker (1995)

[5]According to the U.S. Bankruptcy Code, the fiduciary duties of incumbent management shift from shareholders to both shareholders and creditors in Chapter 11.

analyze the determinants of absolute priority deviations in Chapter 11 and show that shareholders' bargaining power depends on both the degree of agency problem between shareholders and managers and creditors' control over managers. Eckbo and Thorburn (2003) exploit an unique setting in Swedish where a bankruptcy filing automatically triggers the dismissal of the CEO and an auction of the firm. They show that career concerns create conservatism in managers' investment policy that counteracts the risk-shifting incentive prior to bankruptcy filing. This paper shows that managers of bankrupt firms engage top-tier financial advisors as a strategy to stay in control and expands our insight into managerial incentives in corporate bankruptcies.

2.2 Institutional Details

2.2.1 The Process of Retaining Investment Banks as Financial Advisors

Most financial restructurings occur when a debtor struggles to meet its debt obligations due to broad industry disruptions, external shocks, and/or poor management decisions. Restructurings become imminent when a forthcoming liquidity event forces the debtor to begin discussions with creditors. For instance, a travel company issues a large quantity of high-yield corporate bonds while its business is booming. One year later, the COVID-19 pandemic hits, and people stop traveling. As a consequence, the company's future revenue may no longer be sufficient to service the debt it has accumulated during its peak business periods. The company's bonds start to decline in value. When the bond maturity approaches, refinancing may no longer be a viable option. The company starts to consider retaining investment bank advisors under the pressure of the forthcoming debt maturity.

Depending on the urgency of financial restructurings, distressed companies often start to engage investment bank advisors several months, usually within one year, before filing for Chapter 11 bankruptcy (LoPucki and Doherty, 2008).[6] Initially, managers of distressed firms identify the need for specialized financial advisory services. This need arises from the complexity of restructuring debt, negotiating with creditors, and exploring strategic alternatives such as securing liquidity, asset sales, or M&A. Managers then solicit proposals from several investment banks with expertise in bankruptcy and restructuring. These proposals provide details on the their experience, strategic approach, and fee structure. After reviewing the proposals and conducting interviews, the management selects the investment bank that best aligns with its objectives and has a proven track record of managing similar cases. Usually within the first few days after filing for Chapter 11 bankruptcy, the debtor submits a motion to retain the chosen investment bank as a financial advisor, in accordance with bankruptcy law. The chosen investment bank is formally retained through a court order approving an engagement letter, which specifies the scope of services, fee structures, and legal compliance declarations.[7]

2.2.2 The Bankruptcy Law on the Employment of Professionals

Sections 327(a) (11 U.S.C §327(a)) and 328(a) (11 U.S.C §328(a)) of the U.S. Bankruptcy Code, along with Rules 2014 and 2016 of the Federal Rules of Bankruptcy Procedure, establish regulations for retaining professional persons including financial advisors in Chapter 11.

In particular, §327(a) allows bankrupt firms to employ professional persons that do not hold or represent an interest adverse to the bankrupt estate and that are disinterested

[6] See Table 13 in LoPucki and Doherty (2008) for the number of months worked pre-petition by several investment banks, such as Lazard, Miller Buckfire, and Rothschild, which are also included in my sample.

[7] The contract terms on this engagement letter replace all earlier versions of engagement letters between the debtor and the investment bank before bankruptcy filing. For example, on the engagement letter between Windstream Holdings, Inc. and PJT Partners on February 25, 2019, it says, *"This letter confirms that understanding and agreement between PJT Partners LP ("PJT Partners") and Windstream Holdings, Inc. (the "Company"), regarding the retention of PJT Partners on an exclusive basis by the Company effective as of February 25, 2019 (the "Effective Date") as its investment banker for the purposes set forth herein. References is hereby made to that certain engagement letter, dated March 8, 2018, by and between the Company and PJT Partners. The Prior letter is hereby terminated effective as of the Effective Date."*

persons to represent or assist the bankrupt company. A disinterested person[8], as defined in §101(14) of the U.S. Bankruptcy Code, must meet three criteria: first, a person that is not a creditor, a shareholder, or an insider; second, a person that is not and was not a director, an officer, or an employee of the bankrupt firm within two years before the bankruptcy filing; third, a person that does not have an interest materially adverse to the bankrupt firm, creditors, or equity holders due to any connection with the debtor or any other reasons. In the motion to retain financial advisors submitted by the debtor to the bankruptcy court, it is not uncommon to find a section named "Disinterestedness" that specifies the disinterestedness status of an investment bank advisor among the aforementioned three dimensions.

It is worth mentioning that investment bank advisors who had been an underwriter of the debtor's outstanding securities or that had been an underwriter of the debtor's security within three years of the bankruptcy petition are prohibited from advising the same debtor in Chapter 11 before the Bankruptcy Abuse Prevention and Consumer Protection Act (BAPCPA) of 2005. The BAPCPA relaxed the definition of "disinterested persons". Under the current Bankruptcy Code, investment banks can be retained as long as they are not found to be conflicted based on §101(14) of the U.S. Bankruptcy Code.[9]

Given that professional fees, including compensation for investment bank advisors incurred after the bankruptcy filing, are granted the legal status of administrative expenses that have priority in payment over unsecured claims, it is important to regulate these expenses. §328(a) sets limitations on the compensation of professional persons. It emphasizes that the compensation terms for professionals should be reasonable. The bankruptcy court can approve different compensation if unforeseen developments make the initial terms unreasonable after employment ends.

[8] The term "person" in this section includes individuals, partnerships, and corporations.

[9] Several legal scholars have expressed dissent regarding the amendment on the relaxation of the definition of "disinterested persons" (e.g., Miquelon-Weismann (2005), Rapoport (2005)). They argue that the continuous employment of pre-petition investment bankers will result in conflicts of interest, such as preferential treatment of their own claims.

Rules 2014 and 2016 of the Federal Rules of Bankruptcy Procedure set forth the legal procedures for the employment and compensation of professional persons in the U.S. bankruptcy courts. In general, an application (or a motion) with the necessity of services and the specific facts about the bankrupt estate and professional persons must be made and filed with the bankruptcy court in order to obtain an order from the bankruptcy judge. For the employment of an investment bank advisor, the application must include specific facts justifying the hiring, the investment bank's name, reasons for selection, services to be rendered, proposed compensation, and any connections with relevant parties[10] associated with the bankruptcy case. To seek court permission for compensation for an investment bank advisor, the application should include a detailed breakdown of the services, time, and expenses incurred and the requested amounts.[11]

2.2.3 Overview of Services Offered by Investment Bank Advisors in Chapter 11

Traditional full-service investment banking (e.g., "bulge bracket" banks) provides a broad range of services, including underwriting, mergers and acquisitions, market making, trading execution, asset management, research, and advisory. By contrast, the investment banking sector for distressed firms is dominated by boutique investment banks (Table 1.2) due to the "disinterested persons" restriction.[12] Unlike full-service banks, boutique banks are smaller and usually operate in a specific region or country (Gao et al., 2024). In addition, investment bank advisors retained in Chapter 11 rarely underwrite security offerings (Lubben, 2011). One prominent feature of boutique bank advisors is that they often focus on a specific aspect of investment banking services. For instance, Miller Buck-

[10] The relevant parties consist of the debtor, the creditors, and any other party in interest, their respective attorneys and accountants, the United States trustee, or any person employed in the office of the United States trustee.

[11] Rule 2016 also mandates that investment bank advisors working for the debtor must provide full disclosure of any fees and their sources, fees received from or on behalf of the debtor within 12 months before the case filing, and any outstanding unpaid fees charged to the debtor.

[12] see a detailed discussion in Section 2.2.2

fire & Co. is a boutique investment bank that provides various advisory services with a focus on corporate restructurings.

When a debtor engages an investment bank advisor, their agreement, typically outlined in an engagement letter, focuses on three main areas of services: First, transaction advisory. Investment bank advisors provide expert guidance on specific strategies of restructuring and recapitalization following an in-depth research of available options. Specifically, they advise on the timing, the terms, and the nature of various transactions, which include debtor-in-possession (DIP) financing, exchange offers, asset sales, distressed M&A, exit financing (usually through rights offerings or private placements), and "amend and extend" transactions. Importantly, investment banks help the debtor contact potential sources of capital and evaluate candidates to structure and facilitate transactions. Second, valuation analysis. Services such as analyzing the debtor's and industry-wide financial conditions, examining the debtor's liquidity and going-concern value, and evaluating capital structure alternatives are essential in developing a strategic plan of reorganization. Lastly, representation and negotiation. As financial representatives of the debtor, investment bank advisors participate in court testimonies, and meet with the board of directors, creditors, suppliers, shareholders, and other stakeholders. In addition, investment bank advisors assist the debtor with negotiations on transactions and restructurings with various classes of claim holders, new capital providers, and asset buyers in order to form a plan of reorganization that achieves the best possible outcome for the debtor. Notably, investment bank advisors play crucial roles in developing a reorganization plan that considers the divergent motivations of various claim holders, such as secured and unsecured creditors.[13] This helps reduce friction and preserve more going-concern value, leading to a plan that can be accepted with less resistance.

Table 1.2 presents the top 9 investment bank advisors in Chapter 11 according to mar-

[13] See Gilson et al. (2000) for a detailed discussion of contrasting incentives of secured and unsecured creditors in valuing firms in Chapter 11.

ket share. Practitioners often refer to these banks as "elite boutiques".[14] In particular, these "elite boutiques" are larger than a typical boutique bank. In addition, they usually engage in not only financial advisory but also asset management. For instance, Lazard, the number one investment bank in terms of restructuring deal value in my sample, has $193.6 billion in assets under management (AUM) as of September 2023 and offers advisory services in "restructuring & liability management". The investment bank's private capital groups can facilitate the acquisition of financing that is necessary for restructurings.[15]

2.3 Data

2.3.1 Sample Construction and Data Sources

This study examines a sample of large Chapter 11 bankruptcy cases filed by U.S. public firms from 2002 to 2019. To construct my sample, I start with all Chapter 11 filings by U.S. industrial firms (excluding financial and utility firms) from either the Florida-UCLA-LoPucki Bankruptcy Research (BRD) database or the New Generation Research BankruptcyData.com (NGR) database.[16]

Based on this initial list, I remove firms without Compustat coverage within two years before bankruptcy filing and firms with less than 10 million dollars in total liabilities. In addition, I remove cases transferred venue, dismissed by the bankruptcy court, or still pending outcomes as of December 2022. Next, I download the court docket of each case from the Public Access to Court Electronic Records (PACER) database. Based on the mo-

[14]See a discussion on elite boutique banks on Wall Street Oasis (WSO), which is a leading job search forum for positions in the financial services industry such as investment banks, private equities, and hedge funds: `https://www.wallstreetoasis.com/forum/investment-banking/elite-boutique-investment-banks`

[15]In fact, Lazard, Jefferies, Evercore, Rothschild, and Blackstone Advisory Partners LP (the formerly advisory arm of Blackstone, which was rebranded as PJT Partners through a corporate spin-off on October 1, 2015.) all have asset management practice along with advisory division.

[16]See Appendix A.1 for details of data construction process that combines the BRD database and the NGR database.

tions and the final orders associated with retaining an investment bank advisor on the corresponding court docket, I identify whether a bankrupt debtor retained an investment bank advisor. Specifically, there are three types of financial professionals that can be hired as a financial advisor to assist the debtor in Chapter 11: accountants, consultants, and investment bankers. Since this study focuses on the role of investment bank advisor, I differentiate the investment bank-type financial advisors from consultants and accountants by searching for the key words including ”investment bank(s)”, ”investment banker(s)”, ”investment banking firm(s)” on court dockets.[17] After these steps, my final sample includes 861 firms, of which 602 retained at least one investment bank advisor.

For each sample case, I obtain information on the court division where the case was filed, the judge who oversaw the case, whether it was pre-negotiated or prepackaged, whether the firm obtained debtor-in-possession (DIP) financing, whether the firm adopted the key employee retention or incentive plans (KERPs), time spent in court, and resolution outcomes, by going through the case's court docket and its associated motions and orders with these events, supplemented by the BRD and the NGR databases. I merge the sample cases with the Compustat and Capital IQ databases to retrieve basic firm-level financial information and debt structure information. The information on CEO career change is from 10-K filings, DEF 14A filings, and Factiva.[18]

2.3.2 Measure Financial Advisor Reputation in Chapter 11

To assess the reputation of an investment bank advisor, I consider two key factors: its market share and its standing on league tables, following previous studies (e.g., Carter

[17]In a few cases (mostly before 2004), several court dockets deliberately list investment banks as the ”advisor”, the “financial advisor”, or the ”sales agent”, etc. I further investigate whether the advisory firm is an investment bank by searching its official website or checking well-known industry outlets. For instance, the bankruptcy firm Kasper A.S.L., Ltd. received an order from the U.S. Bankruptcy Court at the Southern District of New York to hire the Benedetto, Gartland & Company, Inc. as a financial advisor. I confirm that this firm is a boutique investment banking firm on its official website: https://bgg.com/.

[18]I am indebted to my supervisor, Wei Wang, for generously sharing datasets on DIP financing and CEO career changes in Chapter 11 bankruptcies. In particular, the information on CEO career changes is from Eckbo et al. (2016), which only corresponds to my sample from 2002 to 2007 for cases in the BRD database.

and Manaster (1990), Golubov et al. (2012)). I obtain league tables of investment bank advisors in Chapter 11, which consists of the top 9 investment bank advisors in terms of total retention of an investment bank advisor and final fees granted to an investment bank advisor in corporate bankruptcies, from the NGR during my sample period.[19] Table 1.2 presents the top 9 investment bank advisors in Chapter 11 after a comprehensive consideration of multiple metrics, including deal values, case counts, and rankings on league tables.[20]

[Insert Table 1.2 Here]

In the baseline analysis, I classify the investment banks in Table 1.2 as top-tier advisors and the rest as non-top-tier rivals. The basic idea of this classification is similar to the method used by Fang (2005). Intuitively, this categorization distinguishes ”elite boutique banks” from other boutique investment banks in both the financial market and the financial press. From an econometric perspective, a binary classification avoids the assumptions necessary for a continuous measure, such as the need for a precise continuous ranking of an investment bank's reputation and the assumption that the impact of reputation on the variables of interest remains constant. The top 9 banks are: Lazard, Houlihan Lockey, Rothschild, PJT Partners, Jefferies, Miller Buckfire, Evercore, Moelis, and Perella Weinberg Partners (PWP).[21] It is important to note that there is an invariant component associated with reputation across different metrics: the list of top 9 investment bank advisors is consistent irrespective of case counts, deal values, and rankings on league tables, which indicates that the reputation of these advisors remains remarkably stable over the years.

[19] I combine the Blackstone Group (Advisory arm) with the PJT Partners in the league tables since the former was rebranded as PJT Partners through a corporate spin-off on October 1, 2015.

[20] Since investment banks in Chapter 11 rarely underwrite securities, I follow *The Deal*, one leading provider of league tables on financial advisors of corporate bankruptcy, to use pre-petition total liabilities as deal value.

[21] As noted by Fang (2005), there is an arbitrary element to this binary classification. Therefore, I ensure that the main findings of this study do not depend solely on this classification by conducting further analyses using different cutoffs in unreported results.

2.3.3 Summary Statistics

Chapter 11 Investment Bank Advisors

In recent years, it has become increasingly common for investment banks to serve as financial advisors in Chapter 11. Figure 1.1 shows that around 70% of large Chapter 11 filing firms have adopted investment banking services. Therefore, it is important to understand the role of investment bank advisors in corporate bankruptcies given their wide presence in Chapter 11 restructurings.

[Insert Figure 1.1 Here]

Panel A of Figure 1.2 presents a histogram of the number of Chapter 11 cases advised by each investment bank from 2002 to 2019. There are 175 unique investment bank advisors involved in 861 sample cases. Panel B of Figure 1.2 zooms in to present the top 15 investment banks with regard to the number of cases advised. Table 1.2 provides information on ranking metrics, including deal values, case counts, and standings on the league tables, on these top banks over the sample period. A pronounced feature of the data in both Figure 1.2 and Table 1.2 is that the Chapter 11 investment banking market is highly concentrated: the top 9 banks advise approximately 90% of all deals.

[Insert Figure 1.2 Here]

Filings with Top-tier Advisors

The goal of my analysis is to compare cases involving top-tier advisors with other cases. Therefore, I next examine the differences in my sample cases based on advisor involvement. Figure 1.3 plots the distribution of Chapter 11 filings by filing year. I show that managers of bankrupt firms retain top-tier advisors in every year of my sample. In addition, I document a greater number of filings with top-tier advisors from 2009 to 2019 in Panel A, and a general increasing trend in the proportion of cases with top-tier advisors over my sample period in Panel B. The increasing presence of top-tier advisors in Chapter 11 can be attributed to a few factors: first, the financial market becomes more complex with new instruments and regulations, such as the Dodd-Frank Wall Street Reform and Consumer Protection Act, post-financial crisis, which requires deep expertise to handle these complexities; second, restoring stakeholder confidence is crucial in the wake of a financial crisis in order to survive in restructurings, and hiring top-tier advisors can lend credibility and reassurance to stakeholders; lastly, top-tier advisors build their reputation through a proven track record of capabilities in navigating complex restructurings post-crisis. Therefore, firms are more inclined to turn to top-tier advisors who have demonstrated success.

[Insert Figure 1.3 Here]

Figure 1.4 presents the composition of court districts and industries among Chapter 11 filings by advisor presence. There are two prominent findings in Panel A: first, the sample bankruptcy filings cluster in a few courts: the District of Delaware, the Southern District of New York, the Southern District of Texas, and the Northern District of Texas; second, the proportion of filings with top-tier advisors is visibly higher in these courts than other courts. Therefore, it is important to consider this court clustering in my empirical specification. Ideally, the specification should compare cases by advisor involvement within each court district. However, not every court district has filings with top-tier advisors and non-top-tier advisors. In other words, there is simply not enough variation to include fixed effects at the court-year level. I thus add indicator variables for these clustering courts to control for potential biases in my main specification. I also cluster standard errors at the district court level to account for the impact of serial correlation on variables of interest within each court. As shown in Panel B, there are no significant differences in industries of bankruptcy filings by advisor presence, except for the oil and gas industry, where filings with top-advisors dominate other filings, perhaps due to the large-scale of these firms demanding top talent.

[Insert Figure 1.4 Here]

Table 1.3 presents an overview of the final sample. Chapter 11 filing firms in my sample are large firms. On average, a sample firm has $1.1 billion in total assets (median is $228 million). These sample firms are, on average, in severe financial troubles, as shown by high leverage and low levels of cash and return on assets. As for debt compositions before bankruptcy filing, the average fraction of secured debt in total debt is 0.61 (median is 0.69), which is slightly higher than Gilson et al. (2016) (mean is 0.55 and median is 0.53 in their paper).[22] It is important to consider the impact of secured creditors, as previous literature documents an increasing control by secured creditors in Chapter 11 restructurings (e.g., Ayotte and Morrison (2009), Ma et al. (2022)). Sample firms have an average of three bonds outstanding, of which two are unsecured. Besides, the proportion of unsecured bonds and notes in total debt is higher than secured bonds and notes' (0.26 versus 0.19). With regard to Chapter 11 case-level characteristics, more than half of sample cases are filed either in the District of Delaware or the Southern District of New York; around 30% of sample cases are pre-negotiated or prepackaged; the bankruptcy judge has a tenure of 127 months on average; and it takes 12 months from filing to case resolution (median is 9 months). Overall, these descriptive statistics are comparable to previous studies.

[Insert Table 1.3 Here]

Table 1.4 compares the means and medians of pre-filing firm characteristics and debt structures, bankruptcy case-level characteristics, and bankruptcy outcomes for three groups of firms: firms with top-tier advisors; firms with non-top-tier advisors; and firms without any advisors. Among the 861 sample firms, 331 engage top-tier advisors, 271 engage

[22] Specifically, I follow the sample screening process in Gilson et al. (2016), but their study covers an earlier sample from 2002 to 2011.

non-top-tier advisors, and the rest includes 259 firms. First, as for pre-petition firm-level characteristics, top-tier banks tend to assist bankrupt firms that are significantly larger, possess more tangible assets, and incur lower losses. On average, firms with top-tier advisors have $2.4 billion in book assets, whereas firms with non-top-tier advisors have less than $0.4 billion in book assets. The average tangibility ratio of firms advised by top-tier banks is 0.422, which is significantly higher than that of firms with non-top-tier rivals and firms without advisors. Firms are losing money on average before Chapter 11 bankruptcy filings. The average profitability (measured by return on assets) of firms with top-tier advisors, which is -0.071, is significantly higher than the average profitability of -0.178 for firms advised by other banks. Second, when it comes to debt structures, firms retaining top-tier advisors are significantly different from other firms in terms of unsecured debt. Specifically, firms advised by top-tier banks have significantly higher unsecured debt, higher proportion of unsecured bonds and notes in total debt, and higher number of unsecured bonds and notes than other firms. This finding may have important implications for why management retains top-tier advisors since the holdout problem can be severe on unsecured public debt.

[Insert Table 1.4 Here]

Lastly, I summarize the case-level characteristics of sample cases for the three groups of firms. One prominent observation is that cases with top-tier advisors are significantly more likely to be filed in the District of Delaware and the Southern District of New York than other cases. Firms under the guidance of top-tier advisors may strategically choose courts that are more efficient in handling cases to ensure an expeditious resolution of financial distress. In addition, cases advised by top-tier banks are more likely to be pre-negotiated or prepackaged. Speaking of economic magnitude, the average of prepackaged or pre-negotiated cases advised by top-tier banks (i.e., 0.426) is more than two times higher than that of cases advised by non-top-tier banks (i.e., 0.185). This suggests that top-tier advisors may be better at reducing negotiation frictions than other banks by assisting the debtor obtain consensus among various classes of creditors before bankruptcy filing. Moreover, the probability of obtaining debtor-in-possession (DIP) financing and adopting key employee retention and incentive plans increases with advisor reputation. With respect to bankruptcy outcomes, cases with top-tier advisors have slightly shorter duration than cases with non-top-tier advisors. Compared to other firms, firms with top-tier advisors are less likely to be liquidated or converted to Chapter 7 liquidation but are more likely to emerge from Chapter 11 and continue operations. I conduct multivariate analysis in the next section to test the associations between firm characteristics and the selection into retaining top-tier investment bank advisors.

2.4 Empirical Results

In this section, I test the two contrasting hypotheses, the "value-enhancing" view versus the "self-serving" view, by investigating the role of top-tier investment bank advisors in Chapter 11 bankruptcies in multivariate regression models. To begin, I look into the pre-existing firm characteristics that lead to hiring top-tier advisors. Next, I investigate the relationship between the duration of bankruptcy cases and the employment of top-tier advisors. Finally, I explore how top-tier advisors influence Chapter 11 restructurings.

2.4.1 Determinants of Retaining Top-tier Advisors

The univariate comparisons in Table 1.4 suggest that larger firms with a higher fraction of tangible assets in their total assets and a higher fraction of unsecured debt in their total debt are more likely to retain top-tier advisors in Chapter 11. To gain better insight on firm-level characteristics contributing to the use of top-tier advisors in Chapter 11 bankruptcies, I examine the relation between ex ante firm characteristics and the likelihood of retaining top-tier advisors using the following specification:

$$Top\ IB_i = \Phi' X_i + \delta_k + \theta_t + \epsilon_i \tag{2.1}$$

The dependent variable *Top IB* is an indicator variable taking the value of one if a top-tier investment bank is retained by the Chapter 11 filing firm i, and zero otherwise. X_i are firm-level characteristics measured at the last fiscal year before bankruptcy filing. In particular, I consider firm size[23] as a proxy for the complexity of the bankrupt firm. More complex restructurings often entail higher transaction costs, which may necessitate the expertise of top-tier advisors to help mitigate these expenses. In addition, I include the leverage of the firm to represent the relative importance and the difficulties in reducing debt. Besides, I use cash over assets and return on assets to control the financial condition and operating performance. I also include tangibility to approximate the value of collateral that may influence firm value and thus the necessity of hiring top-tier advisors to preserve value. Lastly, I take different components of total debt into account since the comparative levels of various classes of creditors may influence the advisor hiring decisions. Notably, previous literature documents an increasingly important role of senior creditors in Chapter 11 (e.g., Ayotte and Morrison (2009), Ma et al. (2022)).

Across all specifications, industry fixed effects are included to control for unobservable industry-specific characteristics that may affect hiring decisions, and the year of filing fixed effects are also included to account for macroeconomic trends influencing the choice of advisors. The standard errors are clustered at the court district level to control for any correlation in hiring decisions between cases filed in the same bankruptcy court.

Table 1.5 presents the results on advisor choice. In columns (1)-(4), I conduct regression analysis using the sample with investment bank advisors, whereas in columns (5)-(8), I consider the full sample. In all specifications, I find consistent results that larger firms with higher leverage and lower profitability are significantly more likely to engage

[23] Here I use the natural logarithm of assets to measure firm size. In Table 1.12, I also consider various measures of firm size, including the logarithm of total liabilities, the logarithm of sales, the logarithm of employees, and the number of outstanding bonds and notes.

top-tier advisors. The findings suggest that the probability of retaining top-tier advisors increases with the complexity of financial restructurings and the difficulty of attaining debt reduction, but decreases with operating performance.[24] The coefficient for leverage of 0.078 is significant at 1% level in column (2), meaning that a one-standard-deviation increase in leverage translates into a 14.3% increase from the unconditional probability of hiring top-tier advisors, compared to firms hiring non-top-tier advisors.[25]

The investigation on the influence of debt structure over advisor choice reveals an interesting pattern. In column (4) and column (8), the results show that firms with a higher fraction of unsecured bonds and notes in their debt structure are more likely to use the help of top-tier advisors. By contrast, column (2) and column (6) present that the use of top-tier advisors decreases with the proportion of secured debt. The tension between secured and unsecured creditors, and its implication on troubled debt restructurings in corporate financial distress are well documented in the previous literature (e.g., Gilson et al. (1990), Ayotte and Morrison (2009), Demiroglu and James (2015)). In particular, private workouts are less likely to succeed when there is more dispersed unsecured debt. Consistent with this strand of literature, I show that top financial experts are engaged to assist firms that have trouble reducing unsecured public debt in Chapter 11.

[Insert Table 1.5 Here]

2.4.2 Top-tier Advisors and Case Duration

Previous literature documents that prolonged periods spent in Chapter 11 bankruptcies typically lead to increased costs, significant reductions in firm value, and diminished debt recoveries (e.g., LoPucki and Doherty (2004), Dou et al. (2021), Müller (2022)). For instance, LoPucki and Doherty (2004) show that fees and expenses, which average about 1.4% of assets in their study of large bankruptcies, are influenced by the duration of

[24] In Table 1.12, I use alternative measures for the complexity of a bankruptcy case and find consistent results: Top-advisors are retained to serve more complex firms.

[25] This number is calculated as follows: 0.704*0.078/0.384

the bankruptcy. They calculated that for every 1% increase in the duration, fees and expenses rise by around 0.6%. Therefore, strategies that effectively reduce the duration of bankruptcy proceedings can significantly enhance value. To minimize the costs accumulated in the lengthy restructuring process, managers of bankrupt firms may retain top-tier advisors to facilitate a fast resolution. In this section, I examine the association between top-tier advisors and case duration using the specification as follows:

$$Duration_i = \beta\, Top\, IB_i + \Phi' X_i + \delta_k + \theta_t + \epsilon_i \tag{2.2}$$

Where dependent variable *Duration* are two different measures of case duration. The case duration is defined as the number of months firm *i* spent in Chapter 11, from the date of bankruptcy filing to the date of plan confirmation. Since case duration is highly skewed, as shown in Table 1.3, I use the logarithm of case duration (*Log Duration*) and an indicator variable taking the value of one if the case duration is above the sample median (i.e., nine months), and zero otherwise (*High Duration*) to estimate the impact of top-tier advisors on case duration. I control for variables that affect bankruptcy duration in the previous literature: judge experience, whether the case is prepackaged, and whether the filing court is in the District of Delaware or the Southern District of New York. Besides, I account for other firm-level characteristics that influence the decision to retain top-tier advisors, including firm size, leverage, cash over assets, profitability, secured debt share, and year-and-industry invariant unobservables as well. Standard errors are clustered by court district to account for any correlation in case duration between cases filed in the same bankruptcy court.

In Table 1.6, I find that cases with top-tier advisors spend less time in court compared to other cases. In column (1), the coefficient -0.092 on *Top IB* is negative and significant, which implies that being advised by a top-tier bank is associated with a 9.6% decrease in case duration in the sample of hiring investment bankers.[26] This translates into a decline

[26]The estimated impact of retaining a top-tier investment bank advisor compared to retaining a non-top-

of one month relative to the unconditional mean of case duration (12*0.096). In addition, retaining top-tier advisors significantly reduces the probability of having a duration of more than nine months by 8.2% in the full sample, and by 11.9% in the sample of cases with investment bank advisors (as shown in column (4) and column (2), respectively.). These findings suggest that top-tier advisors mitigate bankruptcy costs by shortening the time a firm spends in court.

[Insert Table 1.6 Here]

2.4.3 Mechanisms to Shorten Case Duration

Conforming to the "value-enhancing" view, I have shown that cases advised by top-tier advisors are associated with significantly shorter time in bankruptcy court compared to other cases. The question naturally arises: How do top-tier investment bankers help the debtor reduce time in court? In this section, I answer this question by exploring three significant events closely related to investment bank advisors in Chapter 11 bankruptcies: filing strategies, debtor-in-possession (DIP) financing, and debt structure changes.

Strategic Prepackaged Filings with Top-tier Advisors

A pre-negotiated or prepackaged bankruptcy case typically moves through the bankruptcy court more quickly, as the debtor and creditors have either agreed on a plan or reached partial consensus on how to reorganize financial obligations prior to the bankruptcy filing (Tashjian et al., 1996). Besides, incumbent management of financially distressed firms often begins in contact with investment bank advisors a few months before filing for bankruptcy. According to Owsley and Kaufman (2005), *"the successful resolution of a financially challenged situation requires a careful balancing of a host of competing objectives and interests"*, and they emphasize the importance of being strategic in advising distressed

tier advisor on case duration is calculated as follows: (exp(0.092)-1)*100%

firms. If cases under the guidance of top-tier advisors are more likely to be pre-negotiated or prepackaged, then the time spent in court can be reduced. In Table 1.4, I find that the proportion of pre-negotiated or prepackaged bankruptcy cases under top-tier advisors is two times higher than that of non-top-tier rivals. Now, I test the relationship between prepackaged bankruptcy filings and top-tier advisors in the following multivariate model after controlling for firm-level characteristics, including firm size, leverage, cash over assets, profitability, and secured debt share, that influence hiring decisions:

$$Prepack\ Filings_i = \beta\ Top\ IB_i + \Phi' X_i + \delta_k + \theta_t + \epsilon_i \tag{2.3}$$

The dependent variables are measures of prepackaged filings. *Prepackaged* is an indicator variable that equals one if the bankruptcy case is prepackaged, and zero otherwise; *Prepack* is an indicator variable that equals one if the bankruptcy case is pre-negotiated or prepackaged, and zero otherwise. I also consider year-and-industry invariant unobservables that affect filing strategies. Standard errors are clustered by court district to account for any correlation in prepackaged filings between cases filed in the same bankruptcy court.

[Insert Table 1.7 Here]

Table 1.7 presents the results of the estimation. Consistent with my conjecture, cases guided by top-tier advisors are significantly more likely to be pre-negotiated or prepackaged compared to other cases. For instance, column (1) shows that cases with top-tier advisors are associated with a 9.4% increase in the probability of being prepackaged compared to cases advised by other advisors, and the increment is statistically significant at the 1% level. As long as top-tier advisors manage strategic prepackaged filings by reducing bargaining frictions among various classes of creditors and other stakeholders, the duration of court proceedings is shortened with their assistance.

Debtor-in-possession Financing with Top-tier Advisors

Debtor-in-possession (DIP) financing is a specific type of funding that firms in Chapter 11 can access to support operations during the restructuring process. This kind of short-term secured credit usually has a super-priority status over existing debt. Previous literature shows that DIP loans are instrumental for an expedited restructuring process and the continuity of the business (Dahiya et al., 2003). Importantly, one of the main services offered by investment bank advisors is to assist with obtaining DIP financing. If top-tier advisors can secure DIP liquidity for the firm in the most efficient way, they are expected to expedite court procedures and enhance firm value for bankrupt firms. To test this hypothesis, I study how the participation of top-tier banks in the case is related to the viability of DIP loans and the DIP loan approval process.

Table 1.8 reports the results for loan viability and the approval process. Applying the same regression specifications as in Equation (2.2), replacing the dependent variables with variables depicting DIP loan approval characteristics, I find that firms with top-tier advisors are significantly more likely to receive DIP financing, obtain a higher amount of DIP credit, and win court approval with less time, compared to other firms across different samples. The findings suggest that top-tier advisors are efficient at acquiring much-needed credit to fund the reorganization process for the debtor. As a result, firms that retain top-tier advisors can swiftly go through bankruptcy court proceedings.

[Insert Table 1.8 Here]

Debt Structure Changes with Top-tier Advisors

As discussed in Section 2.2.3, one of the most critical services offered by investment bank advisors is transaction advisory. Although I cannot observe all transactions that take place during Chapter 11 restructurings due to data limitations, I can observe the results of numerous financial transactions by examining the debt structure changes of bankrupt firms that emerge from Chapter 11 and continue to report information on debt composition. To the degree that top-tier advisors are better at arranging financial transactions aiming to reduce junior debt, which is prone to holdout problems that can prolong the restructuring process, emerged firms are expected to experience a larger reduction with these financial experts' assistance. I examine this conjecture for my sample firms that have emerged from Chapter 11 and continue to report financial information in Compustat (debt structure information in Capital IQ database) using the same specification as in Equation (2.3), but replace the dependent variables with measures of changes in debt structures.

As Table 1.9 indicates, top-tier advisors are instrumental in altering the compositions of public debt for firms that emerge from Chapter 11. The assistance of top-tier advisors in a case is significantly positively related to the reduction of unsecured bonds and notes (both in terms of numbers and shares, see columns (5) amd (8)), and the increment of secured bonds and notes. On average, firms with top-tier advisors reduce one bond and note after emergence compared to other firms. This reduction is primarily attributed to a decrease in the number of unsecured bonds and notes. Overall, top-tier advisors are successful in reducing unsecured public debt for bankrupt firms.[27] Given that public debt is dispersedly held by creditors with incentives to hold out as opposed to private debt (e.g., Gilson et al. (1990), Hege (2003), Demiroglu and James (2015)), top-tier advisors facilitate the restructuring process by offering effective assistance in reducing public debt in Chapter 11.[28]

[27]However, the reduction in unsecured public debt is offset by a corresponding increase in secured public debt (column (4)), resulting in no net reduction in total debt levels. Table 1.13 shows that top-tier advisors do not make a difference on the level of debt reduction for emerged firms. Both column (1) (using changes in leverage as the dependent variable) and column (2) (using leverage after emergence as the dependent variable) show that the coefficients on *Top IB* are not statistically significant. In line with earlier results as in Gilson (1997), I find that there is no statistically significant relationship between pre-filing and post-filing leverage for firms restructure debt in Chapter 11.

[28]Incumbent management often hires investment bank advisors a few months prior to filing a bankruptcy petition. In such cases, top-tier advisors may strategically advise the debtor to file for Chapter 11 to leverage the "cram-down" legal mechanism. This allows a bankruptcy judge to approve a plan that reduces unsecured public debt even without the majority creditors' approval, effectively forcing the plan on dissenting creditors and solving holdout problems. Alternatively, the expertise of top-tier advisors in easing nego-

[Insert Table 1.9 Here]

2.4.4 Top-tier Advisors and Other Bankruptcy Outcomes

While longer bankruptcies incur more costs, it is unclear whether an expeditious resolution of bankruptcy proceedings increases efficiencies (Iverson et al., 2023). A shorter restructuring period can effectively meet the incumbent management's goal of both leveraging court protections to manage debts that are difficult to restructure out-of-court and minimizing costs through expedited proceedings. However, it does not necessarily enhance overall efficiencies. Therefore, I investigate how top-tier advisors influence other bankruptcy outcomes to better understand overall economic impact of these advisors in Chapter 11 restructurings.

To provide a more comprehensive understanding of the role of top-tier advisors in Chapter 11, I examine the relationship between top-tier advisors and other bankruptcy outcomes. This analysis adopts the same specification as in Equation (2.2), but changes the dependent variables to those depicting other bankruptcy outcomes.

Table 1.10 presents the estimation results for the full sample and for the sample with advisors, respectively. Compared to other cases, the probability of being acquired significantly decreases, while the probability of emergence significantly increases, for cases with top-tier advisors(see column (1) and columns (5)-(6)). With regard to economic magnitude, for instance, the coefficient on *Acquired* in column (1) suggests that the probability of being acquired for firms with top-tier advisors is 3.7% lower than firms with non-top-advisors, whereas the coefficient on *Emerged* in column (6) suggests that the probability of emerging from Chapter 11 and continuing operation is 5.9% higher if the firm is advised by top-tier advisors. The evidence indicates that firms with the assistance of top-tier advisors are more likely to remain independent and continue business.

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tiation frictions among dispersed unsecured creditors can lead to a reduction in unsecured debt. In both scenarios, these advisors play a crucial role in reducing unsecured public debt and lowering case duration.

[Insert Table 1.10 Here]

However, I do not find the involvement of top-tier advisors is associated with recidivism rates or post-emergence operating performance (see columns (3)-(4) and columns (7)-(8)). The fact that firms advised by top-tier banks are more likely to continue operations and experience speedy restructurings, but exhibit no improvement in operating performance and the likelihood of refiling for bankruptcy, may imply the decision to retain top-tier advisors is related to management continuation biases.

2.4.5 Top-tier Advisors and Managerial Incentives

In this section, I examine how the presence of top-tier advisors interacts with chief executive officer (CEO) career changes around Chapter 11 bankruptcies. I postulate that incumbent management possesses strong motivations to stay in control for the following two reasons: On the one hand, corporate financial distress can impose significant personal costs on incumbent management (e.g., Gilson (1989)). For instance, Eckbo et al. (2016) find that incumbent CEOs experience a significant reduction in compensation when they exit the executive labor market, with the median present value of their earnings until the age of 65 estimated to be a loss of $7 million. On the other hand, maintaining control can enable managers to derive private benefits, including various forms of wealth expropriation. More specifically to the situation of insolvency, it gives them the power to conceal incompetence and a lack of effort (Eckbo and Thorburn, 2003). Driven by a high determination to stay in control, incumbent management enlist the help of top-tier advisors.

Given the empirical findings presented in previous sections that top-tier advisors are related to fast restructurings and high continuities, it is plausible that these advisors strategically arrange restructurings in a way catering to managers' self-serving motives. If this is the case, cases advised by top-tier banks are expected to be associated with a lower likelihood of replacing incumbent management. I test this hypothesis using the same specification as Equation (2.2), but replace the dependent variables with proxies for

CEO turnover. In particular, I adopt the same idea from previous literature to identify incumbent CEOs as those who are in place at the end of the fiscal year, three years before the company files for bankruptcy (Gilson (1989), Hotchkiss (1995)).

Table 1.11 shows that firms with top-tier advisors are significantly less likely to replace their incumbent CEOs relative to other firms.[29] As column (1) shows, retaining top-tier advisors lowers the probability of being replaced by 19.7%. Moreover, as columns (2) and (3) present, this impact largely stems from the periods after filing, when presumably the concerns of creditors and blockholders are effectively addressed by top-tier advisors during Chapter 11 proceedings. Considering that incumbent management usually engages with investment bank advisors within one year before bankruptcy filing, I categorize the CEO in place one year before bankruptcy filing as the CEO who retained advisors (*IB-engaged CEO*). Interestingly and importantly, the analysis reveals that CEOs who engage top-tier advisors experience a substantial benefit: the likelihood of their replacement decreases by 25.5%.

[Insert Table 1.11 Here]

As a compliment analysis to CEO career changes, I examine how the use of key employee retention and incentive plans (KERPs) is related to top-tier advisors for firms in Chapter 11. Specifically, KERPs are incentive plans that include compensation and bonuses offered to key employees of bankrupt firms in exchange for their commitment to stay for a specific period and help the debtor achieve certain goals. While proponents argue that KERPs are necessary to maintain the stability and operational continuity of a company (i.e., ”efficient contracting” view), critics see KERPs as a way for top executives and other key personnel to enrich themselves at the expense of other stakeholders (i.e., ”rent extraction” view) (Skeel Jr (2003), Goyal et al. (2017)). Column (5) shows that the likelihood of adopting KERPs significantly increases with the participation of top-tier

[29] The results on the sample with investment bank advisors are similar to the results for the full sample in Table 1.11.

advisors. This finding can be interpreted either as an efficient contracting arrangement to preserve firm-specific human capital to ensure a successful restructuring, or as a way for incumbent management to exploit personal benefits. Nonetheless, it aligns with the narrative that KERPs serve to maintain incumbent management and promote a swift restructuring process.

2.5 Conclusion and Future Work

This study investigates the reasons managers of bankrupt companies retain top-tier investment banks as financial advisors in Chapter 11 bankruptcies. The findings reveal the multifaceted role of top-tier financial advisors in bankruptcy proceedings. From one perspective, employing top-tier advisors is associated with expedited restructurings. Managers engage top-tier advisors when there are significant impediments to resolving financial distress, evident in more complex claim structures, higher leverage, and poor operating performance. With their expertise and experience in the distressed restructuring market, top-tier advisors facilitate the restructuring process and enhance firm value by mitigating negotiation frictions, securing timely financing, and restructuring public debt. Yet from another perspective, the study shows that firms advised by top-tier advisors are more likely to remain independent upon distress resolution. But these outcomes do not translate into improved post-emergence performance or lower recidivism rates. Further investigation into managerial career changes shows that the presence of top-tier advisors decreases the likelihood of incumbent management being replaced. In summary, while top-tier advisors enable quicker resolutions, their engagement also meets managers' demand for maintaining control and securing their positions.

In interpreting the findings of this study, it is important to acknowledge potential selection issues that may affect the results. While I document a strong association between top-tier advisors and bankruptcy outcomes, these relationships should not be interpreted as causal. Firms that choose to engage top-tier advisors may inherently differ from those that do not, due to unobserved characteristics. These differences could drive the associations I observe rather than the variables under study. Ideally, I need exogenous variations in the employment of top-tier advisors. Further research incorporating a broader set of controls and addressing potential endogeneity issues is needed to robustly establish causal links.

As investment bank financial advisors become increasingly important in Chapter 11 bankruptcies, further understanding of the strategic value and implications of retaining top-tier advisors is an important and ongoing research agenda. First, future work could focus on identifying an instrumental variable that is both relevant and exogenous to establish the causal relationship between top-tier advisors and bankruptcy outcomes. Second, collecting detailed data on debt recovery rates post-bankruptcy and the fee structures associated with financial advisors could provide insights into the cost-effectiveness of hiring such advisors. Last but not least, future research could investigate how the involvement of top-tier advisors interacts with CEO compensation.

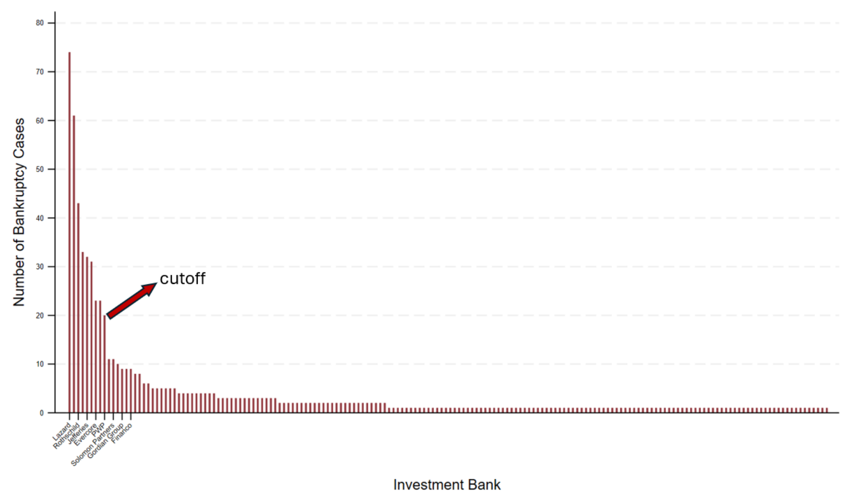
Figure 1.1: **Investment Bank Advisors in Bankruptcy Cases**

This figure presents the percentage of large Chapter 11 bankruptcy cases with an investment bank acting as a financial advisor to the debtor from 2002 to 2019. I consider Chapter 11 filings by US industrial firms from either the Florida-UCLA-LoPucki Bankruptcy Research (BRD) database or the New Generation Research BankruptcyData.com (NGR) database. Cases without Compustat coverage within two years before bankruptcy filing, with less than 10 million dollars in total liabilities, transferred venue, dismissed by the bankruptcy court, or still pending outcomes, are removed.

Figure 1.2: **Market Concentration of Investment Bank Advisors in Bankruptcy Cases**

This figure plots the number of bankruptcy cases advised by each investment bank in the sample from 2002 to 2019. Panel A presents all investment banks included in the study, with the banks ranked by the number of cases they advised in descending order on the X-axis. Panel B focuses on the top 15 investment banks by case counts. If a case has more than one investment bank acting as an "investment banker", each bank is given equal credit for that case in this tabulation.

Panel A. All Investment Banks



Panel B. Top 15 Investment Banks

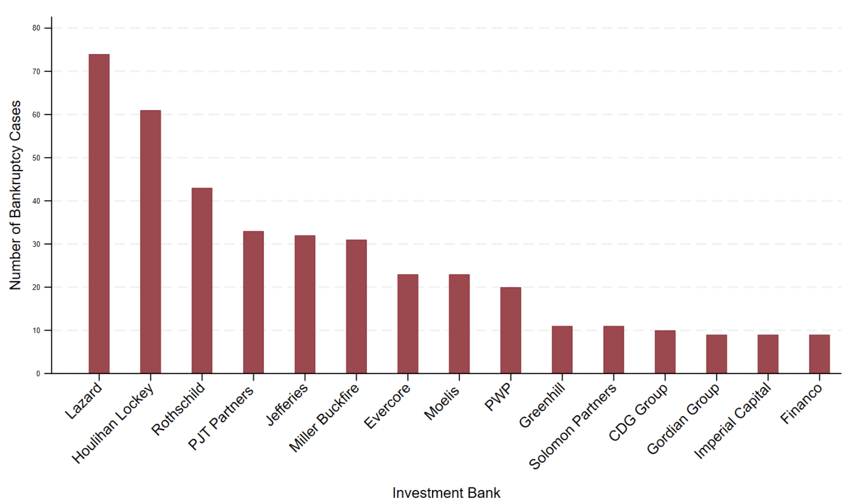
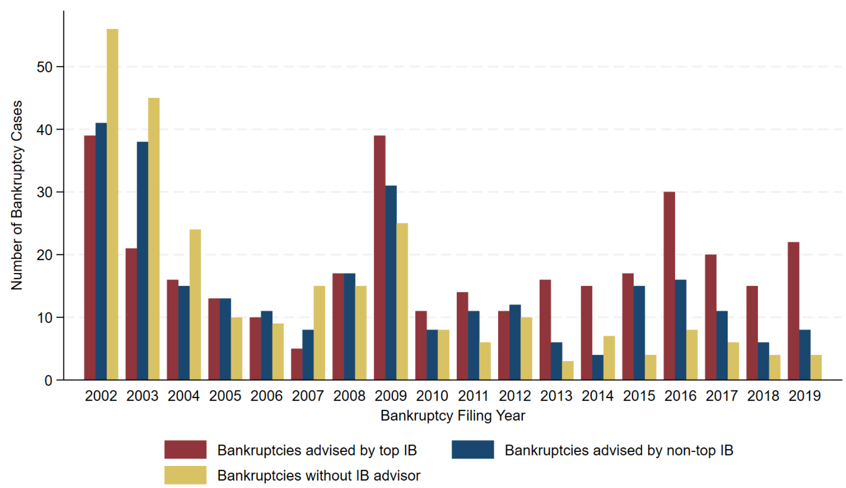


Figure 1.3: **Investment Bank Advisors in Bankruptcy Cases by Year**

This figure shows the presence of investment bank advisors in Chapter 11 bankruptcies by year from 2002 to 2019. Panel A lists the number of cases. Panel B displays the percentage breakdown of cases each year.

Panel A. Bankruptcy Case Distribution as Numbers



Panel B. Bankruptcy Case Distribution as Percentages

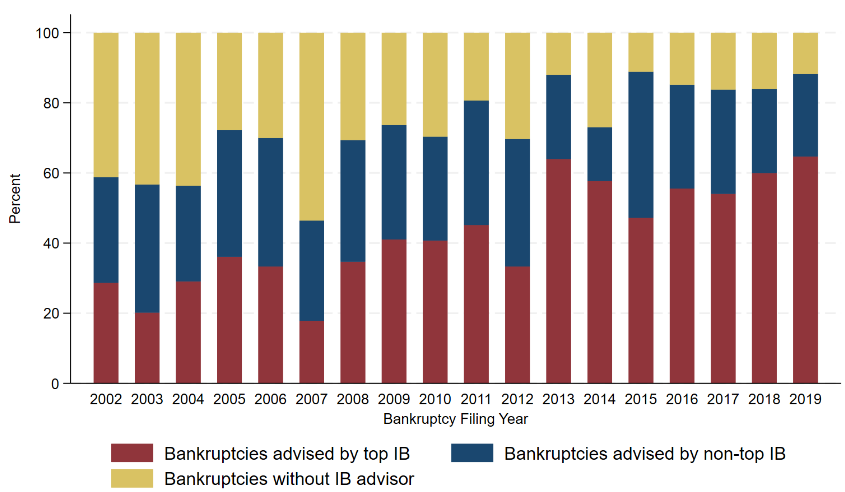
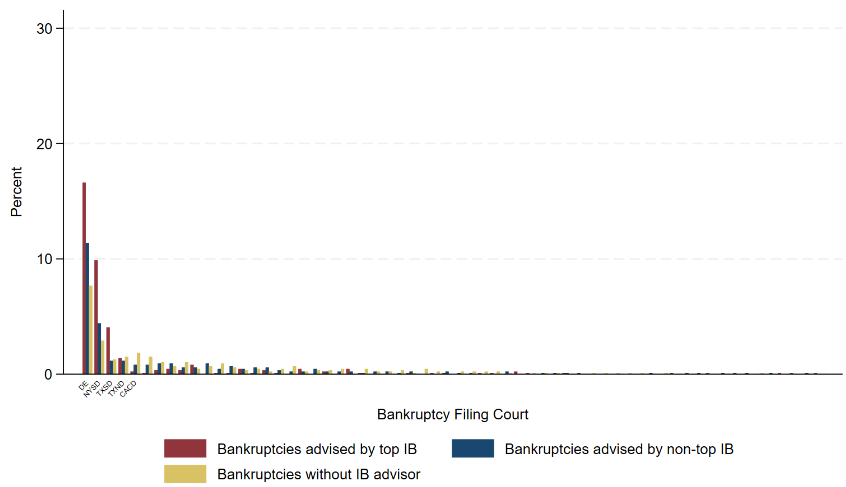


Figure 1.4: **Characteristics of Bankruptcies and Investment Bank Advisors**

This figure presents the involvement of investment bank advisors in Chapter 11 bankruptcies by bankruptcy characteristics from 2002 to 2019. Panel A lists the percentage breakdown of sample cases by court districts. Panel B displays the percentage breakdown of sample cases based on the Fama-French 12 industries.

Panel A. Bankruptcy Filing Courts



Panel B. Fama-French 12 Industries

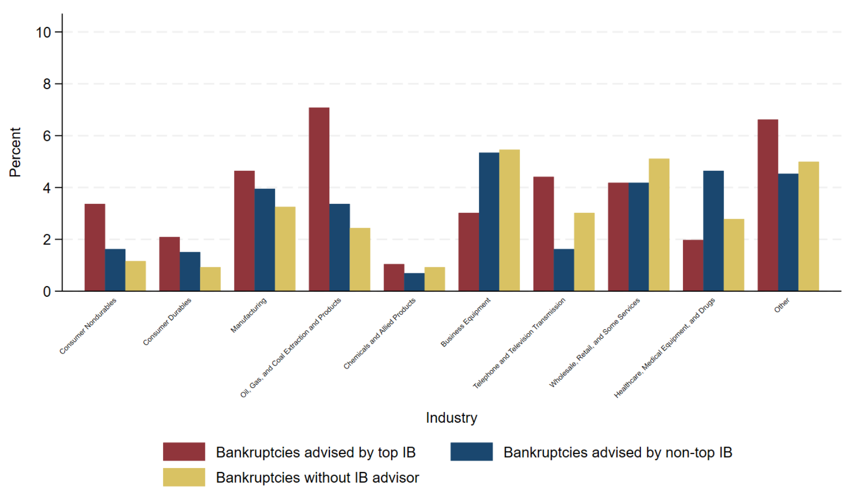


Table 1.1: **Key Variable Definitions**

This table presents definitions for key variables. Data sources for bankruptcy cases and case characteristics are from the Florida-UCLA-LoPucki Bankruptcy Research Database (BRD), the New Generation Research BankruptcyData.com (NGR) database, and the Public Access to Court Electronic Records (PACER) database. Firm financial information is from Compustat and Capital IQ. Information on whether a bankruptcy case involves an investment bank as a financial advisor is obtained from court dockets in PACER; Data on CEO turnover is from Eckbo et al. (2016).

Variable	**Definition**
A. Firm Charasteristics	
Assets	Total assets from the last 10-K filed before bankruptcy, in millions of constant 2002 dollars.
Liabilities	Total liabilities from the last 10-K filed before bankruptcy, in millions of constant 2002 dollars.
Sales	Sales from the last 10-K filed before bankruptcy, in millions of constant 2002 dollars.
Employees	The number of persons employed by the firm as of the last 10-K before bankruptcy filing.
Tangibility	Ratio of total property, plant, and equity over total assets as of the last 10-K before bankruptcy filing.
Leverage	Ratio of total debt over total assets as of the last 10-K before bankruptcy filing.
Cash/Assets	Ratio of cash and all securities readily transferable to cash over total assets as of the last 10-K before bankruptcy filing.
ROA	Ratio of the earnings before interest, taxes, depreciation, and amortization over total assets as of the last 10-K before bankruptcy filing.

Variable	Definition
Bank Loans Share	The fraction of bank loans in total debt.
Secured Debt Share	The fraction of secured debt in total debt.
Unsecured Debt Share	The fraction of unsecured debt in total debt.
Secured B&N Share	The fraction of secured bonds and notes in total debt.
Unsecured B&N Share	The fraction of unsecured bonds and notes in total debt.
Num. B&N	The number of bonds and notes.
Num. Secured B&N	The number of secured bonds and notes.
Num. Unsecured B&N	The number of unsecured bonds and notes.
B. Chapter 11 Characteristics	
Top IB	Dummy variable indicating whether the firm is advised by a top-tier investment bank financial advisor.
Delaware/NY SD	Dummy variable indicating whether the firm files bankruptcy in the district of Delaware or the southern district of New York.
Prepack	Dummy variable indicating whether the bankruptcy filing is pre-negotiated or prepackaged. Pre-negotiated means that the debtor negotiates the plan of organization with at least one major creditor constituency or obtains the acceptance of at least one such constituency; Prepackaged means that the debtor drafts the plan, submits it to a vote of the impaired classes, and claims to have obtained the acceptances necessary for consensual confirmation before filing the case.
Judge Experience	The number of months from a judge's appointment date to the case filing date.
Duration	The number of months between bankruptcy filing date and the date on which the bankruptcy court entered its order approving the plan of reorganization or the conversion of the case to Chapter 7.
Liquidation/Conversion	Dummy variable indicating whether the firm is liquidated in Chapter 11 or the case is converted to Chapter 7 upon exit.
Acquired	Dummy variable indicating whether the firm is acquired upon exit.

Variable	Definition
Emerged	Dummy variable indicating whether the firm emerges from Chapter 11 upon exit.
Refile	Dummy variable indicating whether the firm refiles for bankruptcy within 3 years after emergence.
C. DIP Financing	
DIP	Dummy variable indicating whether the firm obtains debtor-in-possession financing.
High DIP Amount	Dummy variable equals 1 if the total DIP loan amount to the firm is above the sample median, and 0 otherwise.
High DIP Approval Time	Dummy variable equals 1 if the time between the bankruptcy filing and the order approving the debtor's motion to obtain DIP financing is above the sample median, and 0 otherwise.
D. Governance Characteristics	
KERP	Dummy variable indicating whether the firm adopts any key employee retention or incentive programs during Chapter 11.
Incumbent CEO Turnover	Dummy variable indicating whether the CEO in office at the end of fiscal year -3 relative to the year of bankruptcy filing leaves the position and is replaced by another individual at any point during the bankruptcy process, up until case resolution.
Incumbent CEO Turnover (Before Filing)	Dummy variable indicating whether the CEO in office at the end of fiscal year -3 relative to the year of bankruptcy filing leaves the position and is replaced by another individual before bankruptcy filing.
Incumbent CEO Turnover (After Filing)	Dummy variable indicating whether the CEO in office at the end of fiscal year -3 relative to the year of bankruptcy filing leaves the position and is replaced by another individual after bankruptcy filing, up until case resolution.
IB-Engaged CEO Turnover	Dummy variable indicating whether the CEO in office at the end of fiscal year -1 relative to the year of bankruptcy filing leaves the position and is replaced by another individual at any point during the bankruptcy process, up until case resolution.

Table 1.2: **Top-tier Investment Bank Advisors by Market Share**

This table presents the top 9 investment bank advisors in Chapter 11 bankruptcy cases from 2002 to 2019. The rankings are based on their market share and standings in league tables. $Total\ Amount$ is the total deal value of bankruptcy cases advised by an investment bank. This study uses the pre-filing total liabilities of bankrupt firms to measure deal value (from the most recent 10-K filing before bankruptcy petition, in 2002 dollars). $Total\ Cases$ is the total number of bankruptcy cases advised by an investment bank. Each investment bank is given the same credit if there is more than one bank working as an investment banker for the same bankruptcy case. $Market\ Share\ in\ Amount$ ($Market\ Share\ in\ Cases$) is defined as each investment bank's total deal amount (total cases) divided by the corresponding market total over the sample period. The last three columns display the rankings of investment banks based on three metrics: the total number of bankruptcy cases advised, the frequency of retentions (i.e., The NGR League Table), and the total fees paid to each investment bank (i.e., The NGR League Table).

Investment Bank	Total Amount($B)	Total Cases	Market Share in Amount	Market Share in Cases	Rank Cases Involved	Rank Retention (NGR)	Rank Final Fees (NGR)
Lazard	264.224	74	27.54%	12.29%	1	2	1
Houlihan Lockey	60.803	61	6.34%	10.13%	2	1	2
Rothschild	122.429	43	12.76%	7.14%	3	6	4
PJT Partners (prev.Blackstone Advisory)	122.18	33	12.73%	5.48%	4	4	3
Jefferies	35.352	32	3.68%	5.32%	5	3	6
Miller Buckfire	42.666	31	4.45%	5.15%	6	7	7
Evercore	177.521	23	18.50%	3.82%	7	8	8
Moelis	45.735	23	4.77%	3.82%	7	5	5
Perella Weinberg Partners	57.819	20	6.03%	3.32%	8	9	9

Table 1.3: **Summary Statistics**

This table presents descriptive statistics of sample firms. Firm-level financial characteristics are from the last 10-K filings and Compustat before bankruptcy petitions; detailed debt structure data is from Capital IQ, supplemented by 10-K footnotes; bankruptcy case characteristics are from the Florida-UCLA-LoPucki Bankruptcy Research Database (BRD), the New Generation Research BankruptcyData.com (NGR) database, and the Public Access to Court Electronic Records (PACER) database. Financial ratio variables are winsorized at the 1% level at both the upper and lower ends of the distribution. For each variable, I report the mean, standard deviation, 10th percentile, median, and 90th percentile. Detailed variable definitions can be found in Table 1.1.

	N	Mean	SD	P10	Median	P90
Firm Characteristics (Pre-petition)						
Assets	861	1,126	4,986	17	228	2,115
Liabilties	861	1,162	5,743	17	226	2,167
Sales	861	950	4,946	11	212	1,555
Employees	861	4,575	16,223	49	921	8,600
Tangibility	861	0.366	0.279	0.041	0.311	0.787
Leverage	861	0.819	0.810	0.171	0.629	1.566
Cash/Assets	861	0.108	0.161	0.004	0.048	0.293
ROA	861	-0.170	0.544	-0.671	0.002	0.138
Debt Structure (Pre-petition)						
Bank Loans Share	861	0.420	0.369	0.000	0.344	0.992
Secured Debt Share	861	0.613	0.356	0.025	0.686	1.000
Unsecured Debt Share	861	0.387	0.356	0.000	0.314	0.975
Secured B&N Share	861	0.189	0.309	0.000	0.000	0.744
Unsecured B&N Share	861	0.255	0.324	0.000	0.072	0.807
Num. B&N	861	2.792	3.445	0	2	6
Num. Secured B&N	861	0.940	1.589	0	0	3
Num. Unsecured B&N	861	1.852	2.728	0	1	4
Chapter 11 Characteristics						
Delaware/NY SD	861	0.528	0.499	0	1	1
Prepack	861	0.281	0.450	0	0	1
Judge Experience (month)	861	127	87	27	117	244
DIP	861	0.604	0.489	0	1	1
KERP	861	0.398	0.490	0	0	1
Bankruptcy Outcomes						
Duration (month)	861	12	11	2	9	23
Liquidation/Conversion	861	0.374	0.484	0	0	1
Acquired	861	0.111	0.315	0	0	1
Emerged	861	0.515	0.500	0	1	1

Table 1.4: **Firm and Bankruptcy Characteristics by Advisor Involvement**

This table presents comparisons for three groups with regard to firm characteristics and bankruptcy characteristics by advisor presence in the latest fiscal year before filing bankruptcy: firms advised by top-tier advisors (Column (1)), firms advised by other advisors (Column (2)), and firms without investment bank advisors (Column (3)). For each variable, the mean and the median are reported. The last six columns present p-values from the two-sample t-tests and Wilcoxon rank-sum tests of the null hypothesis of there being no differences in firm- and case-level characteristics across the subsample firms. Financial ratio variables are winsorized at the 1% level at both the upper and lower ends of the distribution. Detailed variable definitions can be found in Table 1.1.

	Cases with Top IB (N=331) (1)		Cases with Other IB (N=271) (2)		Cases without IB Advisors (N=259) (3)		(1) vs. (2)		(1) vs. (2)+(3)		(1)+(2) vs. (3)	
	Mean	Median	Mean	Median	Mean	Median	t-test	rk-test	t-test	rk-test	t-test	rk-test
Firm Characteristics (Pre-petition)												
Assets	2,439	701	395	145	214	52	0.00	0.00	0.00	0.00	0.00	0.00
Liabilties	2,525	747	405	161	213	48	0.00	0.00	0.00	0.00	0.00	0.00
Sales	1,977	508	390	146	225	49	0.00	0.00	0.00	0.00	0.01	0.00
Employees	9,022	2,373	2,245	666	1,329	286	0.00	0.00	0.00	0.00	0.00	0.00
Tangibility	0.422	0.393	0.337	0.256	0.326	0.247	0.00	0.00	0.00	0.00	0.01	0.01
Leverage	0.831	0.689	0.774	0.590	0.850	0.585	0.33	0.00	0.73	0.00	0.46	0.02
Cash/Assets	0.085	0.052	0.122	0.041	0.123	0.049	0.00	0.97	0.00	0.50	0.08	0.20
ROA	-0.071	0.038	-0.178	0.001	-0.289	-0.072	0.01	0.00	0.00	0.00	0.00	0.00
Debt Structure (Pre-petition)												
Bank Loans Share	0.413	0.362	0.465	0.404	0.382	0.254	0.08	0.24	0.66	0.63	0.05	0.01
Secured Debt Share	0.579	0.610	0.672	0.796	0.593	0.641	0.00	0.00	0.03	0.02	0.29	0.31
Unsecured Debt Share	0.421	0.390	0.328	0.204	0.407	0.359	0.00	0.00	0.03	0.02	0.29	0.31
Secured B&N Share	0.179	0.000	0.191	0.000	0.198	0.000	0.64	0.94	0.48	0.64	0.55	0.30
Unsecured B&N Share	0.298	0.184	0.201	0.010	0.257	0.062	0.00	0.00	0.00	0.00	0.91	0.85
Num. B&N	3.202	2	2.461	2	2.614	2	0.01	0.01	0.01	0.01	0.32	0.46
Num. Secured B&N	0.861	0	0.989	0	0.988	0	0.35	0.57	0.25	0.26	0.56	0.23
Num. Unsecured B&N	2.341	1	1.472	1	1.625	1	0.00	0.00	0.00	0.00	0.11	0.12

	Cases with Top IB (N=331) (1)		Cases with Other IB (N=271) (2)		Cases without IB Advisors (N=259) (3)		(1) vs. (2)		(1) vs. (2)+(3)		(1)+(2) vs. (3)	
	Mean	Median	Mean	Median	Mean	Median	t-test	rk-test	t-test	rk-test	t-test	rk-test
Chapter 11 Characteristics												
Delaware/NY SD	0.689	1	0.502	1	0.351	0	0.00	0.00	0.00	0.00	0.00	0.00
Prepack	0.426	0	0.185	0	0.197	0	0.00	0.00	0.00	0.00	0.00	0.00
Judge Experience (month)	123	114	123	111	136	122	0.95	0.84	0.34	0.49	0.05	0.10
DIP	0.716	1	0.601	1	0.463	0	0.00	0.00	0.00	0.00	0.00	0.00
KERP	0.529	1	0.395	0	0.236	0	0.00	0.00	0.00	0.00	0.00	0.00
Bankruptcy Outcomes												
Duration (month)	11	8	13	10	11	9	0.03	0.00	0.11	0.00	0.59	0.71
Liquidation/Conversion	0.239	0	0.446	0	0.471	0	0.00	0.00	0.00	0.00	0.00	0.00
Acquired	0.069	0	0.140	0	0.135	0	0.00	0.00	0.00	0.00	0.15	0.15
Emerged	0.692	1	0.413	0	0.394	0	0.00	0.00	0.00	0.00	0.00	0.00

Table 1.5: **Firm Characteristics and Advisor Choice**

This table examines the determinants of advisor choice. The analysis is performed using the following specification:

$$Top\ IB_i = \Phi' X_i + \delta_k + \theta_t + \epsilon_i$$

The dependent variable *Top IB* is an indicator variable that equals one if a top-tier investment bank advisor is retained by the bankrupt firm i, and zero otherwise. *Log(Assets)* is the logarithm of assets. *Leverage* is the ratio of total debt over total assets. *Cash/Assets* is defined as the sum of cash and all securities readily transferable to cash divided by total assets. *ROA* is the ratio of earnings before interest, taxes, depreciation, and amortization (EBITDA) over total assets. *Secured Debt Share* is the ratio of secured debt over total debt. *Secured B&N Share* is the proportion of secured bonds and notes in total debt. *Unsecured B&N Share* is the proportion of unsecured bonds and notes in total debt. Columns (1) – (4) report results for the sample with investment bank advisors. Columns (5) – (8) report results for the full sample of bankruptcies. All explanatory variables use the most recent financial information before filing. Year fixed effects and industry fixed effects are included in all columns. Standard errors are clustered at the court district level, and t-statistics are reported with coefficients. ***, **, and * stand for statistical significance at the 1%, 5%, and 10% levels, respectively.

	Top IB							
	Hiring IB Sample				Full Sample			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Log(Assets)	0.168***	0.162***	0.167***	0.164***	0.161***	0.160***	0.160***	0.159***
	(11.457)	(11.385)	(11.935)	(11.584)	(19.069)	(20.263)	(19.474)	(19.383)
Leverage	0.085***	0.078***	0.088***	0.081***	0.076***	0.074***	0.076***	0.073***
	(4.183)	(4.134)	(4.349)	(3.896)	(5.567)	(5.295)	(5.595)	(5.022)
Cash/Assets	-0.087	-0.117	-0.082	-0.122	-0.057	-0.064	-0.056	-0.075
	(-0.386)	(-0.562)	(-0.364)	(-0.564)	(-0.394)	(-0.459)	(-0.388)	(-0.531)
ROA	-0.059**	-0.058**	-0.058**	-0.058**	-0.065***	-0.065***	-0.064***	-0.064***
	(-2.145)	(-2.168)	(-2.126)	(-2.224)	(-3.236)	(-3.232)	(-3.227)	(-3.247)
Tangibility	-0.056	-0.048	-0.050	-0.066	-0.073	-0.070	-0.071	-0.077
	(-1.059)	(-0.904)	(-0.912)	(-1.259)	(-1.421)	(-1.358)	(-1.382)	(-1.505)
Secured Debt Share		-0.083*				-0.025		
		(-1.692)				(-0.848)		
Secured B&N Share			-0.063				-0.012	
			(-1.205)				(-0.394)	
Unsecured B&N Share				0.082**				0.045
				(2.234)				(1.397)
Year FE	Y	Y	Y	Y	Y	Y	Y	Y
Industry FE	Y	Y	Y	Y	Y	Y	Y	Y
Observations	602	602	602	602	861	861	861	861
Adj. R^2	0.313	0.315	0.313	0.314	0.380	0.380	0.380	0.380

Table 1.6: **Top-tier Advisors and Bankruptcy Duration**

This table examines the relation between Chapter 11 case duration and top-tier advisors using the following specification:

$$Duration_i = \beta\, Top\, IB_i + \Phi' X_i + \delta_k + \theta_t + \epsilon_i$$

The dependent variables are various measures of bankruptcy duration. The raw case duration is the number of months the firm spent in Chapter 11, from the date of filing to the date of plan confirmation; *Log (Duration)* is the logarithm of case duration; *High Duration* is an indicator variable that equals one if case duration is above the sample median, and zero otherwise. *Top IB* in an indicator variable that equals one if a top-tier investment bank advisor is retained by the bankrupt firm *i*, and zero otherwise. *Log(Assets)* is the logarithm of assets. *Leverage* is the ratio of total debt over total assets. *Cash/Assets* is defined as the sum of cash and all securities readily transferable to cash divided by total assets. *ROA* is the ratio of earnings before interest, taxes, depreciation, and amortization (EBITDA) over total assets. *Secured Debt Share* is the ratio of secured debt over total debt. *Judge Experience* is the number of months from a judge's appointment date to the case filing date. *Prepackaged* is an indicator variable that equals to one if the bankruptcy case is prepackaged (i.e., the debtor drafts the plan, submits it to a vote of the impaired classes, and claims to have obtained the acceptances necessary for consensual confirmation before filing the case.), and zero otherwise. *DE/NY SD* is an indicator variable that equals to one if the bankruptcy case is filed in the District of Delaware or the Southern District of New York, and zero otherwise. Columns (1) – (2) report results for the sample with investment bank advisors. Columns (3) – (4) report results for the full sample of bankruptcies. Firm-level financial information uses the most recent information before filing. Year fixed effects and industry fixed effects are included in all columns. Standard errors are clustered at the court district level, and *t*-statistics are reported with coefficients. ***, **, and * stand for statistical significance at the 1%, 5%, and 10% levels, respectively.

	Hiring IB Sample		Full Sample	
	Log Duration	High Duration	Log Duration	High Duration
	(1)	(2)	(3)	(4)
Top IB	-0.092**	-0.119***	-0.015	-0.082***
	(-2.419)	(-3.508)	(-0.532)	(-2.788)
Log(Assets)	0.067***	0.045**	0.053**	0.038**
	(2.743)	(2.066)	(2.461)	(2.163)
Leverage	-0.165***	-0.084***	-0.083*	-0.046**
	(-3.747)	(-3.587)	(-1.849)	(-2.034)
Cash/Assets	0.104	-0.002	0.022	-0.011
	(0.330)	(-0.013)	(0.150)	(-0.119)
ROA	-0.111**	-0.099***	-0.104**	-0.081**
	(-2.194)	(-3.116)	(-2.474)	(-2.350)
Tangibility	0.060	0.093	0.002	0.048
	(0.477)	(1.619)	(0.020)	(0.868)
Secured Debt Share	0.126	0.019	0.112	0.064*
	(1.449)	(0.506)	(1.406)	(1.818)
Judge Experience	-0.029	-0.018	-0.016	-0.014
	(-1.268)	(-1.308)	(-0.921)	(-0.885)
Prepackaged	-1.276***	-0.376***	-1.404***	-0.458***
	(-12.416)	(-14.349)	(-19.467)	(-13.892)
DE/NY SD	-0.157**	-0.075*	-0.152***	-0.077**
	(-2.256)	(-1.781)	(-2.844)	(-2.479)
Year FE	Y	Y	Y	Y
Industry FE	Y	Y	Y	Y
Observations	602	602	861	861
Adj. R^2	0.403	0.187	0.387	0.173

Table 1.7: **Top-tier Advisors and Prepackaged Bankruptcy Filings**

This table examines the relation between prepackaged bankruptcy filings and top-tier advisors using the following specification:

$$Prepack\ Filings_i = \beta\ Top\ IB_i + \Phi' X_i + \delta_k + \theta_t + \epsilon_i$$

The dependent variables are measures of prepackaged filings. *Prepackaged* is an indicator variable that equals to one if the bankruptcy case is prepackaged, (i.e., the debtor drafts the plan, submits it to a vote of the impaired classes, and claims to have obtained the acceptances necessary for consensual confirmation before filing the case.), and zero otherwise; *Prepack* is an indicator variable that equals one if the bankruptcy case is pre-negotiated (i.e., the situation where consensus on a plan of reorganization has been obtained with at least one major creditor class or negotiations between the debtor and one major creditor class have occurred before bankruptcy filing.) or prepackaged, and zero otherwise. *Top IB* is an indicator variable that equals one if a top-tier investment bank advisor is retained by the bankrupt firm *i*, and zero otherwise. *Log(Assets)* is the logarithm of assets. *Leverage* is the ratio of total debt over total assets. *Cash/Assets* is defined as the sum of cash and all securities readily transferable to cash divided by total assets. *ROA* is the ratio of earnings before interest, taxes, depreciation, and amortization (EBITDA) over total assets. *Secured Debt Share* is the ratio of secured debt over total debt. Columns (1) – (2) report results for the sample with investment bank advisors. Columns (3) – (4) report results for the full sample of bankruptcies. Firm-level financial information uses the most recent information before filing. Year fixed effects and industry fixed effects are included in all columns. Standard errors are clustered at the court district level, and *t*-statistics are reported with coefficients. ***, **, and * stand for statistical significance at the 1%, 5%, and 10% levels, respectively.

	Hiring IB Sample		Full Sample	
	Prepackaged	Prepack	Prepackaged	Prepack
	(1)	(2)	(3)	(4)
Top IB	0.094***	0.102**	0.024	0.070*
	(4.397)	(2.540)	(1.536)	(1.974)
Log(Assets)	-0.024***	0.029**	-0.008	0.041***
	(-3.067)	(2.038)	(-1.205)	(2.882)
Leverage	0.073***	0.132***	0.071***	0.116***
	(5.796)	(8.915)	(7.534)	(7.723)
Cash/Assets	-0.136***	-0.291***	0.087	0.019
	(-3.108)	(-5.065)	(1.132)	(0.198)
ROA	0.067	0.024	0.108***	0.073**
	(1.270)	(0.585)	(3.492)	(2.461)
Tangibility	0.014	-0.097	0.052	-0.015
	(0.322)	(-1.355)	(1.297)	(-0.259)
Secured Debt Share	-0.002	-0.046	-0.033*	-0.057
	(-0.052)	(-0.944)	(-1.726)	(-1.544)
Year FE	Y	Y	Y	Y
Industry FE	Y	Y	Y	Y
Observations	602	602	861	861
Adj. R^2	0.104	0.161	0.071	0.153

Table 1.8: **Top-tier Advisors and Debtor-in-possession Financing**

This table investigates the relation between the approval of DIP loans and top-tier advisors using the following specification:

$$DIP\ Approval\ Outcomes_i = \beta\, Top\ IB_i + \Phi' X_i + \delta_k + \theta_t + \epsilon_i$$

The dependent variables include a range of outcomes related to the approval of DIP financing. *DIP* is an indicator variable that equals one if the bankruptcy court approves the firm's motion for DIP financing, and zero otherwise. *High DIP Amt* is an indicator variable that equals one if the amount of DIP loans is above the sample median, and zero otherwise. *Short DIP Approval Time* is an indicator variable that equals one if the time from the bankruptcy filing date to the DIP final order date is below the sample median, and zero otherwise. *Top IB* is an indicator variable that equals one if a top-tier investment bank advisor is retained by the bankrupt firm *i*, and zero otherwise. *Log(Assets)* is the logarithm of assets. *Leverage* is the ratio of total debt over total assets. *Cash/Assets* is defined as the sum of cash and all securities readily transferable to cash divided by total assets. *ROA* is the ratio of earnings before interest, taxes, depreciation, and amortization (EBITDA) over total assets. *Secured Debt Share* is the ratio of secured debt over total debt. *Judge Experience* is the number of months from a judge's appointment date to the case filing date. *Prepackaged* is an indicator variable that equals to one if the bankruptcy case is prepackaged (i.e., the debtor drafts the plan, submits it to a vote of the impaired classes, and claims to have obtained the acceptances necessary for consensual confirmation before filing the case.), and zero otherwise. *DE/NY SD* is an indicator variable that equals to one if the bankruptcy case is filed in the District of Delaware or the Southern District of New York, and zero otherwise. Columns (1) – (3) report results for the sample with investment bank advisors. Columns (4) – (6) report results for the full sample of bankruptcies. Firm-level financial information uses the most recent information before filing. Year fixed effects and industry fixed effects are included in all columns. Standard errors are clustered at the court district level, and *t*-statistics are reported with coefficients. ***, **, and * stand for statistical significance at the 1%, 5%, and 10% levels, respectively.

	Hiring IB Sample			Full Sample		
	DIP	High DIP Amt	Short DIP Approval Time	DIP	High DIP Amt	Short DIP Approval Time
	(1)	(2)	(3)	(4)	(5)	(6)
Top IB	0.065**	0.115*	0.093**	0.077**	0.121*	0.106***
	(2.033)	(1.728)	(2.270)	(2.286)	(1.803)	(3.385)
Log(Assets)	0.023	0.172***	-0.063***	0.034***	0.179***	-0.033*
	(1.358)	(21.930)	(-3.510)	(2.898)	(30.376)	(-1.923)
Leverage	-0.040**	0.044**	-0.085**	-0.003	0.059**	-0.051**
	(-2.204)	(2.057)	(-2.696)	(-0.198)	(2.457)	(-2.335)
Cash/Assets	-0.806***	-0.060	-0.601***	-0.583***	-0.027	-0.544***
	(-6.577)	(-0.369)	(-4.085)	(-5.013)	(-0.236)	(-4.180)
ROA	-0.047	-0.024	0.047	-0.060	-0.052	0.012
	(-0.632)	(-0.483)	(0.950)	(-0.906)	(-1.249)	(0.230)
Tangibility	-0.114*	-0.167***	-0.081	-0.062	-0.152***	-0.089
	(-1.924)	(-3.149)	(-0.813)	(-1.288)	(-3.539)	(-1.241)
Secured Debt Share	0.017	-0.079*	-0.156**	-0.015	-0.054*	-0.133**
	(0.529)	(-1.968)	(-2.502)	(-0.522)	(-1.767)	(-2.437)
Judge Experience	-0.010	0.033**	-0.055***	-0.026*	0.025**	-0.051***
	(-0.636)	(2.184)	(-3.042)	(-1.798)	(2.163)	(-2.941)
Prepackaged	-0.190***	-0.014	0.328***	-0.158***	0.022	0.313***
	(-3.097)	(-0.157)	(5.235)	(-3.103)	(0.369)	(4.889)
DE/NY SD	0.059	-0.035	-0.053	0.094**	-0.047*	0.029
	(1.244)	(-0.897)	(-1.308)	(2.501)	(-1.730)	(0.747)
Year FE	Y	Y	Y	Y	Y	Y
Industry FE	Y	Y	Y	Y	Y	Y
Observations	602	384	384	861	479	479
Adj. R^2	0.203	0.436	0.156	0.172	0.488	0.134

Table 1.9: **Top-tier Advisors and Debt Structure Changes**

This table examines the relation between the changes in debt composition and top-tier advisors using the following specification:

$$Debt\ Composition\ Chg_i = \beta\ Top\ IB_i + \Phi' X_i + \delta_k + \theta_t + \epsilon_i$$

The dependent variables are the changes in various components of total debt for firms that continue operations after emergence and file debt structure information in Capital IQ. To save space, see Table 1.1 for detailed definitions of these variables. *Top IB* is an indicator variable that equals one if a top-tier investment bank advisor is retained by the bankrupt firm i, and zero otherwise. *Log(Assets)* is the logarithm of assets. *Leverage* is the ratio of total debt over total assets. *Cash/Assets* is defined as the sum of cash and all securities readily transferable to cash divided by total assets. *ROA* is the ratio of earnings before interest, taxes, depreciation, and amortization (EBITDA) over total assets. *Secured Debt Share* is the ratio of secured debt over total debt. Firm-level financial information uses the most recent information before filing. Year fixed effects and industry fixed effects are included in all columns. Standard errors are clustered at the court district level, and t-statistics are reported with coefficients. ***, **, and * stand for statistical significance at the 1%, 5%, and 10% levels, respectively.

	Bank Loans (1)	Secured Debt (2)	Unsecured Debt (3)	Secured B&N (4)	Unsecured B&N (5)	Num. B&N (6)	Num. Secured B&N (7)	Num. Unsecured B&N (8)
Top IB	0.060	0.070	-0.055	0.124**	-0.118**	-1.001**	-0.031	-0.970***
	(0.846)	(1.514)	(-1.377)	(2.142)	(-2.201)	(-2.613)	(-0.084)	(-3.124)
Log(Assets)	0.005	-0.003	0.012	-0.032**	0.031*	-0.645**	0.053	-0.697***
	(0.274)	(-0.179)	(0.844)	(-2.434)	(1.978)	(-2.759)	(0.463)	(-3.715)
Leverage	0.070	0.055	-0.018	-0.036	0.054*	-0.571**	-0.103	-0.468**
	(1.461)	(1.475)	(-0.688)	(-0.981)	(1.736)	(-2.146)	(-1.036)	(-2.068)
Cash/Assets	0.569***	0.096	0.022	-0.189	-0.143	0.274	-0.366	0.640
	(2.933)	(0.663)	(0.189)	(-1.390)	(-0.717)	(0.174)	(-0.355)	(0.690)
ROA	0.108	0.129**	-0.077**	0.044	-0.091*	0.385	-0.084	0.469
	(1.458)	(2.358)	(-2.339)	(0.660)	(-1.756)	(0.847)	(-0.433)	(1.197)
Tangibility	0.173**	0.179	-0.010	0.026	-0.119	-0.010	-0.396	0.387
	(2.624)	(1.318)	(-0.110)	(0.225)	(-1.333)	(-0.015)	(-0.691)	(0.794)
Secured Debt Share	-0.300**	-0.903***	0.841***	-0.488***	0.704***	1.269***	-1.071***	2.340***
	(-2.635)	(-19.559)	(14.899)	(-4.687)	(12.839)	(2.812)	(-3.694)	(6.539)
Year FE	Y	Y	Y	Y	Y	Y	Y	Y
Industry FE	Y	Y	Y	Y	Y	Y	Y	Y
Observations	230	230	230	230	230	230	230	230
Adj. R^2	0.112	0.464	0.471	0.138	0.374	0.115	0.058	0.192

Table 1.10: **Top-tier Advisors and Other Bankruptcy Outcomes**

This table examines the relation between Chapter 11 case outcomes and top-tier advisors using the following specification:

$$Case\ Outcome_i = \beta\ Top\ IB_i + \Phi' X_i + \delta_k + \theta_t + \epsilon_i$$

The dependent variables are various measures of bankruptcy outcomes. *Acquired* is an indicator variable that equals one if the firm was acquired upon exit, and zero otherwise. *Emerged* is an indicator variable that equals one if the plan of reorganization was approved by creditors and bankruptcy court upon exit (i.e., the firm is deemed viable to continue operations under the terms set forth in the reorganization plan), and zero otherwise. *Refile (3 Y)* is an indicator variable that equals one if the firm refiled for bankruptcy within three years after emergence. *ROA (Post)* is the ratio of the earnings before interest, taxes, depreciation, and amortization (EBITDA) over total assets from the most recent 10-K filings after emergence. *Top IB* is an indicator variable that equals one if a top-tier investment bank advisor is retained by the bankrupt firm *i*, and zero otherwise. *Log(Assets)* is the logarithm of assets. *Leverage* is the ratio of total debt over total assets. *Cash/Assets* is defined as the sum of cash and all securities readily transferable to cash divided by total assets. *ROA* is the ratio of earnings before interest, taxes, depreciation, and amortization (EBITDA) over total assets. *Secured Debt Share* is the ratio of secured debt over total debt. *Judge Experience* is the number of months from a judge's appointment date to the case filing date. *Prepackaged* is an indicator variable that equals to one if the bankruptcy case is prepackaged (i.e., the debtor drafts the plan, submits it to a vote of the impaired classes, and claims to have obtained the acceptances necessary for consensual confirmation before filing the case.), and zero otherwise. *DE/NY SD* is an indicator variable that equals to one if the bankruptcy case is filed in the District of Delaware or the Southern District of New York, and zero otherwise. Columns (1) – (4) report results for the sample with investment bank advisors. Columns (5) – (8) report results for the full sample of bankruptcies. Firm-level financial information uses the most recent information before filing. Year fixed effects and industry fixed effects are included in all columns. Standard errors are clustered at the court district level, and *t*-statistics are reported with coefficients. ***, **, and * stand for statistical significance at the 1%, 5%, and 10% levels, respectively.

	Hiring IB Sample				Full Sample			
	Acquired	Emerged	Refile (3Y)	ROA (Post)	Acquired	Emerged	Refile (3Y)	ROA (Post)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Top IB	-0.037*	0.024	-0.018	-0.027	-0.030*	0.059*	0.013	-0.000
	(-1.885)	(0.762)	(-0.590)	(-0.622)	(-1.695)	(1.975)	(0.590)	(-0.007)
Log(Assets)	-0.012	0.098***	0.013	0.020**	-0.010	0.082***	0.011	0.128***
	(-1.651)	(6.719)	(1.101)	(2.212)	(-1.431)	(8.171)	(1.323)	(4.764)
Leverage	-0.053***	0.158***	0.009	0.115***	-0.012	0.129***	0.010	0.053
	(-5.376)	(10.181)	(0.651)	(4.383)	(-0.867)	(10.020)	(1.147)	(0.542)
Cash/Assets	0.012	-0.216***	0.188**	-1.160***	-0.043	-0.012	0.114*	-0.236
	(0.159)	(-2.835)	(2.413)	(-3.392)	(-1.009)	(-0.126)	(1.716)	(-0.438)
ROA	0.007	0.013	0.059***	0.128*	-0.001	0.034	0.052***	0.363*
	(0.194)	(0.358)	(3.320)	(1.909)	(-0.035)	(1.191)	(4.682)	(1.925)
Tangibility	-0.019	0.074	-0.059	-0.067	-0.063	0.183***	-0.050	0.026
	(-0.297)	(1.177)	(-1.381)	(-1.023)	(-1.236)	(2.673)	(-1.375)	(0.175)
Secured Debt Share	0.037	-0.093*	-0.011	-0.087	0.048	-0.071	-0.004	-0.171
	(1.036)	(-1.774)	(-0.232)	(-1.170)	(1.660)	(-1.222)	(-0.122)	(-1.242)
Judge Experience	-0.020	0.012	0.004	0.026**	-0.010	0.007	-0.002	-0.006
	(-1.595)	(0.767)	(0.184)	(2.124)	(-0.928)	(0.531)	(-0.086)	(-0.206)
Prepackaged	-0.025*	0.321***	-0.001	0.040	-0.032*	0.331***	-0.015	0.202*
	(-1.850)	(5.395)	(-0.068)	(0.639)	(-1.999)	(5.834)	(-1.347)	(1.972)
DE/NY SD	-0.003	0.051	-0.009	-0.015	-0.001	0.024	-0.019	0.096
	(-0.117)	(0.723)	(-0.297)	(-0.592)	(-0.096)	(0.374)	(-0.766)	(1.171)
Year FE	Y	Y	Y	Y	Y	Y	Y	Y
Industry FE	Y	Y	Y	Y	Y	Y	Y	Y
Observations	602	602	341	165	861	861	443	225
Adj. R^2	0.023	0.271	0.025	0.369	0.011	0.255	0.025	0.311

Table 1.11: **Top-tier Advisors and Managerial Incentives**

This table examines the relation between managerial incentives and top-tier advisors using the following specification:

$$Managerial\ Incentives_i = \beta\, Top\, IB_i + \Phi' X_i + \delta_k + \theta_t + \epsilon_i$$

The dependent variables are proxies associated with managerial incentives. *Incumbent CEO Turnover* is an indicator variable that equals one if the incumbent CEO leaves the position and is replaced by another individual around the bankruptcy event, and zero otherwise. *Incumbent CEO Turnover (Before Filing)* is an indicator variable that equals one if *incumbent CEO Turnover* occurs before bankruptcy filing date, and zero otherwise. *Incumbent CEO Turnover (After Filing)* is an indicator variable that equals one if *incumbent CEO Turnover* occurs after bankruptcy filing date, and zero otherwise. *IB-Engaged CEO Turnover* is an indicator variable that equals one if the CEO who retains the investment bank advisor leaves the position and is replaced by another individual around the bankruptcy event, and zero otherwise. *KERP* is an indicator variable that equals one if the firm adopts any key employee retention or incentive programs during Chapter 11, and zero otherwise. *Top IB* is an indicator variable that equals one if a top-tier investment bank advisor is retained by the bankrupt firm *i*, and zero otherwise. *Log(Assets)* is the logarithm of assets. *Leverage* is the ratio of total debt over total assets. *Cash/Assets* is defined as the sum of cash and all securities readily transferable to cash divided by total assets. *ROA* is the ratio of earnings before interest, taxes, depreciation, and amortization (EBITDA) over total assets. *Secured Debt Share* is the ratio of secured debt over total debt. Firm-level financial information uses the most recent information before filing. Year fixed effects and industry fixed effects are included in all columns. Standard errors are clustered at the court district level, and *t*-statistics are reported with coefficients. ***, **, and * stand for statistical significance at the 1%, 5%, and 10% levels, respectively.

	Incumbent CEO Turnover	Incumbent CEO Turnover (Before Filing)	Incumbent CEO Turnover (After Filing)	IB-engaged CEO Turnover	KERP
	(1)	(2)	(3)	(4)	(5)
Top IB	-0.197***	0.015	-0.211***	-0.255***	0.111***
	(-2.875)	(0.180)	(-3.302)	(-3.664)	(4.137)
Log(Assets)	0.106***	0.064*	0.042*	0.147***	0.088***
	(3.810)	(1.807)	(1.900)	(2.996)	(10.852)
Leverage	-0.091	0.077	-0.168	-0.113	-0.012
	(-0.573)	(1.011)	(-0.906)	(-1.005)	(-0.958)
Cash/Assets	-1.264	-0.822	-0.442	0.318	0.110*
	(-1.142)	(-0.678)	(-0.788)	(0.359)	(1.798)
ROA	0.202	-0.223	0.425	0.860**	-0.060
	(0.577)	(-0.730)	(1.633)	(2.284)	(-1.570)
Tangibility	-0.089	-0.296**	0.208	0.252	-0.103
	(-0.514)	(-2.127)	(1.103)	(1.160)	(-1.250)
Secured Debt Share	-0.109	-0.027	-0.082	-0.018	0.053
	(-0.736)	(-0.164)	(-0.894)	(-0.141)	(1.355)
Year FE	Y	Y	Y	Y	Y
Industry FE	Y	Y	Y	Y	Y
Observations	114	114	114	114	861
Adj. R^2	0.135	0.015	0.005	0.068	0.145

Table 1.12: **Firm Characteristics and Advisor Choice - Robustness Test**

This table examines the determinants of advisor choice using alternative measures for the complexity of a bankrupt company. The analysis is performed using the following specification:

$$Top\ IB_i = \Phi' X_i + \delta_k + \theta_t + \epsilon_i$$

The dependent variable *Top IB* is an indicator variable that equals one if a top-tier investment bank advisor is retained by the bankrupt firm i, and zero otherwise. *Leverage* is the ratio of total debt over total assets. *Cash/Assets* is defined as the sum of cash and all securities readily transferable to cash divided by total assets. *ROA* is the ratio of earnings before interest, taxes, depreciation, and amortization (EBITDA) over total assets. *Tangibility* is the ratio of total property, plant, and equity over total assets. *Log(Liabilities)* is the logarithm of total liabilities. *Log(Sales)* is the logarithm of sales. *Log(Employees)* is the logarithm of employees. *Num. B&N* is the logarithm of the number of outstanding bonds and notes. Columns (1) – (4) report results for the sample with investment bank advisors. Columns (5) – (8) report results for the full sample of bankruptcies. All explanatory variables use the most recent financial information before filing. Year fixed effects and industry fixed effects are included in all columns. Standard errors are clustered at the court district level, and t-statistics are reported with coefficients. ***, **, and * stand for statistical significance at the 1%, 5%, and 10% levels, respectively.

	Top IB							
	Hiring IB Sample				Full Sample			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Leverage	-0.010	0.042**	0.040**	0.021	-0.021	0.040***	0.027**	0.014
	(-0.451)	(2.414)	(2.243)	(1.180)	(-1.618)	(3.864)	(2.453)	(0.965)
Cash/Assets	-0.083	0.139	-0.057	-0.043	-0.014	0.171	0.001	-0.015
	(-0.392)	(0.600)	(-0.277)	(-0.226)	(-0.093)	(0.976)	(0.004)	(-0.110)
ROA	-0.034	-0.046	0.011	0.082	-0.039*	-0.032	0.041	0.126***
	(-1.070)	(-1.575)	(0.230)	(1.577)	(-1.707)	(-1.489)	(1.143)	(3.045)
Tangibility	-0.039	0.069	0.047	0.086	-0.053	0.072	0.040	0.092
	(-0.735)	(1.242)	(0.631)	(0.963)	(-1.034)	(1.341)	(0.582)	(1.140)
Log(Liabilities)	0.162***				0.158***			
	(11.061)				(19.220)			
Log(Sales)		0.135***				0.134***		
		(14.910)				(17.748)		
Log(Employees)			0.183***				0.218***	
			(11.363)				(18.546)	
Log(Num. B&N)				0.067**				0.058*
				(2.660)				(1.841)
Year FE	Y	Y	Y	Y	Y	Y	Y	Y
Industry FE	Y	Y	Y	Y	Y	Y	Y	Y
Observations	602	602	602	602	861	861	861	861
Adj. R^2	0.305	0.254	0.195	0.097	0.377	0.325	0.266	0.127

Table 1.13: **Top-tier Advisors and Total Debt Changes**

This table presents the relationship between top-tier advisors and changes in the levels of total debt. The analysis is performed using the following specification:

$$Total\ Debt\ Chg_i = \beta\ Top\ IB_i + \Phi' X_i + \delta_k + \theta_t + \epsilon_i$$

The dependent variables are measures of total debt for firms that continue operations after emergence and file total debt information in Compustat. *Chg(Total Debt)* is the change in total debt that is calculated by subtracting pre-filing total debt from post-emergence total debt. *Leverage (Post)* is the ratio of total debt over total assets using the most recent financial information post emergence. *Top IB* is an indicator variable that equals one if a top-tier investment bank advisor is retained by the bankrupt firm *i*, and zero otherwise. *Log(Assets)* is the logarithm of assets. *Leverage* is the ratio of total debt over total assets. *Cash/Assets* is defined as the sum of cash and all securities readily transferable to cash divided by total assets. *ROA* is the ratio of earnings before interest, taxes, depreciation, and amortization (EBITDA) over total assets. *Secured Debt Share* is the ratio of secured debt over total debt. Firm-level financial information uses the most recent information before filing. Year fixed effects and industry fixed effects are included in all columns. Standard errors are clustered at the court district level, and *t*-statistics are reported with coefficients. ***, **, and * stand for statistical significance at the 1%, 5%, and 10% levels, respectively.

	Chg(Total Debt) (1)	Leverage (Post) (2)
Top IB	-0.057	-0.030
	(-0.690)	(-0.416)
Log(Assets)	-0.049	-0.049
	(-1.073)	(-1.119)
Leverage	-1.012***	0.044
	(-13.533)	(0.777)
Cash/Assets	-1.228***	-0.651*
	(-2.756)	(-1.876)
ROA	0.100	-0.048
	(0.360)	(-0.350)
Tangibility	0.197*	0.199**
	(1.725)	(2.112)
Secured Debt Share	0.132	0.095
	(1.359)	(1.213)
Year FE	Y	Y
Industry FE	Y	Y
Observations	225	225
Adj. R^2	0.660	0.049

Chapter 3

Do Hedge Funds Exploit Material Nonpublic Information? Evidence from Corporate Bankruptcies

Serving on the unsecured creditors' committee (UCC) of a bankrupt firm allows hedge funds to access material nonpublic information (MNPI), which can facilitate hedge funds' trading in other firms and across asset markets. We show that hedge funds have higher equity portfolio turnover and make large trades in the few quarters after joining a UCC. Hedge funds do not trade differently after accessing public information of bankrupt firms. Hedge funds' large trades concentrate in firms that have close economic links to the bankrupt firm. Returns from large trades driven by access to MNPI are substantial.

Keywords: Bankruptcy, Unsecured Creditors' Committee, Hedge Funds, Material Nonpublic Information, Informed Trading
JEL classification: G14, G23, G33

3.1 Introduction

Hedge funds as distressed-debt investors play a prominent role in shaping the restructuring outcomes of financially distressed firms (Jiang et al., 2012, Lim, 2015, Elias, 2016).[1] In the United States, during the past three decades, a deep understanding of the legal process of bankruptcy reorganization, activism in corporate governance, and sophisticated strategies in trading distressed securities have allowed distress-investing hedge funds to generate superior returns (Figure 2.1).

[Insert Figure 2.1 Here]

Unsecured debt is the most common entry point for hedge firms in the capital structure of distressed firms because of its "fulcrum" nature and option-like payoffs. Holding large amounts of unsecured bonds of a financially distressed firm, hedge funds often join a firm's unsecured creditors' committee (UCC) shortly after the firm files for Chapter 11 bankruptcy. Because UCC members owe fiduciary duties to all represented unsecured creditors and sit at the head of the bargaining table, they are legally allowed to access the firm's material nonpublic information (MNPI), such as its proprietary financial projections and business plans as well as information on the competitive landscape of related industries. Hence, the Securities and Exchange Commission (SEC) has specific rules prohibiting UCC members from trading debt securities of the bankrupt firm. It has, in fact, imposed significant penalties on firms and individuals that violated these rules.

Given these rules, hedge funds may be disincentivized to trade bankrupt firms' debt securities while serving on the UCC, but little is known about whether they exploit MNPI of the bankrupt firm to facilitate trading across asset markets. This paper is the first study to investigate this important topic by examining whether hedge funds trade securities of nonbankrupt firms after gaining access to MNPI of a bankrupt firm.[2]

[1] Hedge funds are also important investors in nondistressed firms, such as providing private equity to public firms (Brophy et al., 2009)

[2] Prior literature shows that an important source for hedge funds' superior performance is their ability to

We construct a comprehensive sample of hedge funds' involvement in the UCCs of all Chapter 11 bankruptcies filed by large public US firms from 1996 to 2019. After retrieving a list of Chapter 11 filings from the Florida-UCLA-LoPucki Bankruptcy Research Database (BRD) and New Generation Research's BankruptcyData.com, we search electronic court dockets obtained from the Public Access to Court Electronic Records (PACER) database to determine whether the US Trustee appointed a UCC for each firm and the identities of the members. We are able to determine whether hedge funds are UCC members for all 612 cases involving UCCs.[3] We find that about 40% of Chapter 11 cases have at least one hedge fund serving on the UCC. We merge all institutional UCC members with the Refinitiv 13F database, and for hedge funds, we further merge them with the Lipper hedge fund database (TASS). Our final sample includes 79 unique hedge funds that served on the UCCs of 144 unique Chapter 11 cases during the sample period.

An identifying assumption for our main empirical tests is that hedge funds trade large quantities of distressed debt for a portfolio of firms and do not perfectly time bankruptcy filings among the financially distressed firms. A bankruptcy filing triggers UCC formation and thus hedge funds' access to information, rather than hedge funds endogenously buying large amounts of debt right before or after a bankruptcy filing. This assumption is plausible given that a UCC is typically formed within several weeks of a Chapter 11 filing and distressed bonds are highly illiquid, making it challenging for a hedge fund to build up a large stake within a short period of time (Longstaff et al., 2005, Chen et al., 2007). Nonetheless, before performing our main tests, we empirically verify that the arrival of a UCC event is not predictable based on the observable features of hedge funds such as fund flows and returns.

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access and process private information (Massoud et al. (2011),Gao and Huang (2016),Gargano et al. (2017), Kumar et al. (2020)). Yet very few studies provides direct evidence on hedge funds' cross-market trading after gaining access to *material nonpublic information* of corporations, which can be an important source for generating superior returns. Interestingly, Kacperczyk and Pagnotta (2019) construct a unique dataset of SEC investigation cases and find that some hedge funds with close connections with corporate insiders are caught and prosecuted by the SEC for using MNPI to trade stocks and options.

[3] We use the term "hedge funds" to refer to hedge fund management companies since we observe their debt holdings at the management company level.

Our baseline specifications show that hedge funds appointed as UCC members (UCC hedge funds) tend to have high portfolio turnover following UCC formation. We find that hedge funds, after joining a UCC, are 10.9 percentage points more likely to have high portfolio turnover. This translates into a 24.8% increase relative to the unconditional probability of a hedge fund making above-median turnover in a given quarter. Similarly, we find that UCC hedge funds are 11.4 percentage points more likely to make large trades. On the extensive margin, hedge funds tend to make a greater number of large trades upon being appointed as UCC members.

We perform an extensive set of additional tests to ensure that the abnormal stock-trading activities that we document are driven by access to MNPI. First, we show that our results are robust after removing the top 10 most active hedge funds or removing prepackaged and pre-negotiated cases in our sample. Second, we investigate whether UCC hedge funds respond to public information disclosed through bankruptcy filings (i.e., pseudo-UCC events). Specifically, we examine hedge funds' stock-trading activities upon bankruptcy-filing events where no UCC is formed. Our evidence indicates that hedge funds do not trade differently merely due to public information released around bankruptcy filings. Moreover, using UCC formation as alternative measure for pseudo events yields similar results. These findings are consistent with our argument that it is the MNPI that drives the abnormal stock-trading behavior of UCC hedge funds. Importantly, we find that hedge funds have similar probability of high portfolio turnover or making large trades regardless of the bankrupt firm size, but they place more large trades in large cases. The evidence suggests that while UCC hedge funds exploit MNPI in all Chapter 11 cases, the higher information intensity associated with large firms allows them to place more trades in those cases.

We also investigate whether non-hedge-fund institutional investors exhibit abnormal stock-trading behavior after joining a UCC. Compared to hedge funds, other institutional investors, such as pension funds and mutual funds, face stricter regulations and compliance requirements. Furthermore, hedge fund managers are more skillful in distressed investing and have stronger incentives to take risks due to their performance fee structures. Therefore, we do not expect other institutional investors to exploit MNPI for trading across asset markets the same way as hedge funds. Consistent with our conjecture, our results show no abnormal stock-trading activities around UCC events by those investors. The evidence also helps to further alleviate the concern that it may be the public or less sensitive private information (rather than MNPI) that drives UCC hedge funds to trade.

To explore the mechanism for hedge funds to exploit MNPI, we first investigate the type of stocks intensely traded by UCC hedge funds. Specifically, we examine whether a firm traded by hedge funds has an economic link to the bankrupt firm. We define an economic link as whether the traded non-bankrupt firm and the bankrupt firm are in the same Fama-French 12 industry, have a customer-supplier relationship, or share similar products (Hoberg and Phillips, 2010, 2016). We find that UCC hedge funds are more likely to trade among stocks of non-bankrupt firms that have an underlying economic link to the bankrupt firm. Moreover, we examine whether a hedge fund management company's fund strategy and structure help facilitate cross-asset market trading. Our results show that hedge funds that have at least one product using equity strategies and at least one product using fixed income strategies (i.e., dual strategies) are five to six times more likely to have high portfolio turnover than other hedge funds and twice more likely to make large trades. The evidence suggests that hedge fund investment strategies and in-house expertise help drive the execution of their equity trades.

In the last section, we consider each large transaction executed by hedge funds serving on a UCC as an event and present evidence on returns to their large trades. We find that the DGTW-adjusted buy-and-hold returns of large transactions by UCC hedge funds is economically large. To further demonstrate that the returns from large transactions are driven by hedge funds' access to MNPI rather than other sources of information, we also calculate DGTW-adjusted returns of large trades by hedge funds when they are not on a firm's UCC. In the 12-month window around large trades, we find that the share price impact of hedge funds making large transactions while serving on a firm's UCC is 3.4 percentage points higher than when they do not serve on the UCC. The evidence suggests that large trades by UCC hedge funds are highly likely to be information-driven and that the incremental contribution to cumulative returns by MNPI is substantial.

Our paper is closely related to a burgeoning literature examining mechanisms through which hedge funds gain informational advantage in equity trading. Specifically, prior studies show that hedge funds acquire private information via the syndicated loan market (Massoud et al., 2011), private meetings with senior management (Solomon and Soltes, 2015), Freedom of Information Act (FOIA) requests (Gargano et al., 2017), and connections with lobbyists (Gao and Huang, 2016) and prime brokers (Kumar et al., 2020). Our study contributes to this literature by identifying a nuanced channel for hedge funds to gain informational advantages: access to MNPI while serving on a bankrupt firm's UCC. In addition, our empirical setting focuses on a specific group of hedge funds that specialize in distressed investing, allowing us to compare the trading behavior of hedge funds that have access to MNPI and those that access only public information for the same bankrupt firm. We control for hedge fund managers' skills and their ability to access other information on the distressed debt markets. To the best of our knowledge, this is the first paper to study whether hedge funds exploit MNPI in cross-market trading.

Our study also contributes to the literature on the impact of non-bank institutional investors' presence in the debt market and its influence on the equity market.[4] For example, Ivashina and Sun (2011) provide evidence on institutional investors as loan syndicate participants exploiting private information around loan amendments to trade borrowers' equities and obtain abnormal returns. In a similar vein, Massoud et al. (2011) examine the involvement of hedge funds as non-bank institutional investors in the syndicated loan

[4]See, for example, Bushman et al. (2010), Jiang et al. (2010), Ivashina and Sun (2011), Massoud et al. (2011), and Kumar et al. (2020).

market and show that hedge fund lenders take short positions in the equity of borrowers prior to public announcements of loan origination and amendments. While those studies focus on hedge funds holding loans and trading stocks of the same company, our paper examines how hedge funds acquire MNPI by holding debt of financially distressed firms and trading in the equity market of nondistressed firms. Our findings highlight an important link from the distressed debt market to the equity market.

3.2 Institutional Background

3.2.1 The UCC in Chapter 11

Financially distressed firms in the United States can file for bankruptcy protection and reorganize under court supervision. The goal of the bankruptcy process is to have managers, creditors, shareholders, and other related parties negotiate about the future of the firm and the value of the claims they hold or will receive, if any (Wang, 2022). To facilitate negotiation, the Bankruptcy Code allows formation of official committees represented by unsecured creditors and shareholders, with a judge's approval. Specifically, §1102 and §1103 of the code govern the formation, powers, and duties of creditors' and equity security holders' committees. The formation of such committees is managed by the United States Trustee appointed by the Department of Justice, which is responsible for overseeing the administration of bankruptcy cases.

The US Trustee typically conducts a meeting of the creditors (known as a §341 meeting) shortly after the Chapter 11 filing and appoints a committee of creditors holding unsecured claims. The US Trustee may also appoint additional committees of other creditors or equity security holders if deemed appropriate. According to §1102, a committee of unsecured creditors appointed "*shall ordinarily consist of the persons, willing to serve, that hold the seven largest claims against the debtor of the kinds represented on such committee, or of the members of a committee organized by creditors before the commencement of the case..., if such* *committee was fairly chosen.*" §1103 specifies the powers and duties of committees, which include but are not limited to "*investigate the acts, conduct, assets, liabilities, and financial condition of the debtor, the operation of the debtor's business and the desirability of the continuance of such business, and any other matter relevant to the case or to the formulation of a plan.*"

One advantage for members serving on the official UCC is their access to MNPI with regard to the most recent business plan and financial condition, detailed management projections, contemplated financing alternatives, the timing and terms of proposed plans of reorganization, and proprietary advisor analyses of the bankrupt company. Such information may concern not only bankrupt firms but also their economically linked firms such as competitors, suppliers, and customers. Importantly, a bankrupt firm does not operate in a vacuum. In the process of reorganization, the bankrupt company may need to cut off existing business ties, look for new strategic partners, and pivot to adopt advanced technologies. Moreover, as managers' fiduciary duties shift from shareholders to all investors of the firm after bankruptcy (Becker and Stromberg, 2012), debtors' managers are willing to share a variety of information, including but not limited to detailed financial projections, restructuring alternatives, and recovery sensitivity analyses, with the UCC members. Hence, the US Securities and Exchange Commission (SEC) has strict rules prohibiting UCC members from trading securities of the bankrupt firm because trading based on access to MNPI can be a violation of the insider trading rules of US federal securities laws.

Debt holders with MNPI may still choose to trade but would need to ensure the counterparty is aware that they have MNPI through the execution of a big-boy letter.[5] However, even with a big-boy letter in place, the "restricted" party (i.e., the seller) could still be

[5]A big-boy letter is a pre-sale agreement between a security seller and a buyer. It contains two features: awareness by the nonrestricted party (typically the buyer) of the counterparty's (i.e., the restricted party, typically the seller) possession of nonpublic information, and a waiver of claims that the nonrestricted party might otherwise have under securities laws. In other words, the buyer is aware that the seller may possess MNPI of the securities and will not sue over nondisclosure of MNPI. However, the enforceability of a big-boy letter is questionable. As Eshmoili (2008) points out, big-boy letters occupy a gray area of the law, and the SEC has never issued any official guidance on big-boy letters.

litigated. The SEC has undertaken several enforcement actions against parties that traded debt claims of the bankrupt firm while serving on a UCC. For example, according to an SEC Litigation Release dated May 30, 2007,[6] Barclays Bank PLC and Steven J. Landzberg illegally traded millions of dollars of bond securities based on MNPI received through six bankruptcy creditors' committees. Serving as a member of the creditors' committee on behalf of Barclays and a proprietary trader, Landzberg breached fiduciary duties by failing to disclose any of those trades to the creditors' committees, issuers, or other sources of such information. Even with big-boy letters in place for a few instances, the SEC still alleged that Barclays and Landzberg failed to disclose the MNPI received from the creditors' committees to their bond-trading counterparties. Barclays paid \$10.9 million to settle insider trading charges. Landzberg was permanently enjoined from participation in any creditors' committee in any federal bankruptcy proceeding involving an issuer of securities, and paid a civil penalty of \$750,000.[7]

Given the SEC's strict insider trading rules and precedent cases, it is not surprising that hedge funds may refrain from trading securities of bankrupt firms while serving on a UCC. However, it is not clear whether hedge funds exploit MNPI of the bankrupt firm to profit from stock trading related to non-bankrupt firms. Strictly speaking, such cross-asset and cross-firm trading based on MNPI may serve as evidence of violating the prohibition on insider trading rules, but these types of trading activities have been largely overlooked.

[6]See `https://www.sec.gov/litigation/litreleases/2007/lr20132.htm` for detail.

[7]A more recent piece of anecdotal evidence concerns Daniel Kamensky, founder of the hedge fund company Marble Ridge Capital. He was sentenced to prison due to bankruptcy fraud in 2021. As co-chair of the UCC for the Neiman Marcus Group, Kamensky had fiduciary duties to all unsecured creditors. However, he coerced a rival bidder to abandon its higher bid for the preferred shares issued by Neiman Marcus so that his own hedge fund company could obtain those assets at a lower price, but at the cost of all unsecured creditors. According to an SEC press release on September 3, 2020, *"Kamensky abused his position as a fiduciary to the Neiman Marcus unsecured creditors by secretly working against them."* Refer to Appendix B.3 for a detailed description of the two cases.

3.2.2 Nature of the MNPI from the UCC

The MNPI accessible to hedge funds serving on the UCC in Chapter 11 bankruptcy cases includes a wealth of detailed and sensitive data about both the bankrupt firm and its related nonbankrupt firms. These related firms often include suppliers, customers, landlords, critical vendors, and other related parties, whose business fortunes are closely tied to the restructuring strategies and outcomes of the bankrupt firm. Due to the intricate and interconnected nature of these relationships, any restructuring decisions made by the bankrupt firm can significantly impact the financial health and operational viability of these related entities.

For instance, a hedge fund member of a UCC may gain access to the debtor's strategic plans for renegotiating contracts with major suppliers or decisions about continuing or terminating leases with critical landlords. Such information provides deep insights into the operational changes and financial expectations of these nonbankrupt firms. Furthermore, detailed discussions about customer contracts or vendor agreements that are part of the debtor's plan of reorganization can reveal the potential future performance of these firms. Hedge funds, known for their activism in Chapter 11, can leverage this MNPI to influence the restructuring trajectory within the bankrupt firm. By pushing for certain restructuring decisions that align with their investment strategies, hedge funds can create favorable outcomes not only for the bankrupt firm but also for the related firms in which they might hold stakes.[8] This dual influence allows them to optimize their investment portfolio based on insider knowledge, potentially leading to significant financial gains.

Therefore, the MNPI accessed by hedge funds through UCC membership is not limited to the internal information of the bankrupt firm alone. Instead, it encompasses im-

[8]For example, hedge funds can push for the court to authorize a debtor to pay prepetition claims of certain suppliers or vendors that are deemed essential to the debtor's ongoing operations in Chapter 11 (i.e., hedge funds may facilitate critical vendors' approval.). Conversely, these hedge funds can negatively impact the related firms by facilitating the discontinuation of the business relationship between the bankrupt firm and these related firms. Specifically, §365 of the Bankruptcy Code allows a debtor to reject leases, supply contracts, and other executory contracts that it deems to be inconsistent with the variability of the firm.

portant information about related firms whose futures are indirectly or directly shaped by the bankruptcy proceedings. This interconnected web of information presumably provides hedge funds with a powerful tool to exploit in Chapter 11 bankruptcies.

3.3 Data Description

In this section, we provide detailed descriptions of the data sources we rely on to obtain key information on Chapter 11 bankruptcy filings, hedge funds as UCC members, firm fundamentals, and institutional stock holdings.

3.3.1 Chapter 11 Filings

Our initial bankruptcy sample includes all Chapter 11 bankruptcies filed by large public US firms from 1996 to 2019, retrieved from the Florida-UCLA-LoPucki BRD.[9] All sample firms have book assets of at least $100 million (measured in 1980 constant dollars using the consumer price index [CPI] deflator) at the time of the bankruptcy filing, and must have filed at least one 10K in the previous three-year period. We obtain basic information for Chapter 11 firms from the BRD, including firm-level financial information such as assets, liabilities, and sales, and case-level characteristics such as bankruptcy filing date, duration, and whether a bankruptcy case is pre-negotiated or prepackaged. Such information is cross-checked with the BankruptcyData.com database whenever possible. We merge our sample of Chapter 11 filers with the Compustat and Capital IQ databases to retrieve additional firm-level financial information. The initial sample contains 880 Chapter 11 cases.

[9] According to Chapter 11 US Bankruptcy Code §1102(a) paragraph(3), which governs the appointment of creditors' and equity security holders' committees, "Unless the court for cause orders otherwise, a committee of creditors may not be appointed in a small business case or a case under subchapter V of this chapter (i.e., subchapter V under Chapter 11 Bankruptcy Code: Small Business Debtor Reorganization)." Therefore, we focus on large public bankruptcy cases in order to observe hedge fund companies on unsecured creditors' committees.

3.3.2 Members of the UCC

We identify UCC members for each case in two steps. First, we download the US bankruptcy court dockets of the 880 sample cases from the PACER database and use those dockets to determine whether the US Trustee appointed a UCC for each case.[10] Specifically, we search each docket for the court order granting the formation of a UCC. Second, we extract information on UCC members from the disclosure document on appointing UCC members submitted by the US Trustee to the bankruptcy court.[11]

It is possible that UCC membership changes throughout the bankruptcy process as debt ownership changes due to trading. We take snapshots of each UCC formation and its membership. Our focus is on the first UCC formed right after a bankruptcy filing to avoid potential biases arising from hedge funds' strategically trading debt claims throughout bankruptcy. We record the initial UCC appointment date and the amendment date, if any. Our sample contains 612 bankruptcy cases with identifiable UCC members, and 4,062 bankruptcy case/UCC member–level observations. There are seven UCC members per bankruptcy case on average.

Following Jiang et al. (2012), we use multiple sources including SEC filings, institutions' official websites, and industry directories and publications (e.g., *Barron's, Alpha Magazine*, and *Institutional Investor*) to identify whether a UCC member is a hedge fund. We restrict our definition of hedge fund companies to two types: (1) "pure-play" hedge funds as defined in Agarwal et al. (2013) and (2) investment companies in which the hedge fund division represents their core business. We remove investment arms of full-service banks or mutual fund arms entering the hedge fund business to ensure that the

[10] A typical bankruptcy court docket contains a record of negotiation dialogues among the debtor, the claim holders, and other related parties. A court docket also includes motions submitted by various parties such as the debtor, the creditors, and other stakeholders of the bankrupt firm, orders granted or denied by the bankruptcy judge, and disclosure statements including notices of hearing and declarations of an individual or entity in support of certain parties.

[11] Figure 2.5 and Figure 2.6 provide examples of a court docket and a UCC notice, respectively. In this UCC notice, US Trustee William K. Harrington appointed seven members to the UCC of the bankrupt company Sun Edison, Inc. on April 29, 2016. A typical UCC notice, as in this case, contains the filing parties, the filing date, and UCC member information, including names, addresses, and contact information.

equity holdings of 13F institutions are informative about the investments made by hedge fund companies.[12] After this step, there are 243 cases with at least one hedge fund serving on the UCC.

In Figure 2.2, we plot the percentage of cases with hedge funds appointed as UCC members over the number of bankruptcy filings, as well as the total sample cases each year from 1996 to 2019. Hedge funds are crucial participants on UCCs in the Chapter 11 bankruptcy process—on average, 40% of bankruptcy filings have at least one hedge fund serving on the UCC of a bankruptcy case over our sample period.

[Insert Figure 2.2 Here]

3.3.3 Stock Holdings and Characteristics of Hedge Funds

We obtain institutional investors' stock holdings data from the Refinitiv Institutional Holdings (13F) database and merge it with our bankruptcy case/UCC member–level dataset by name.[13] The 13F filings are aggregated at the institution level, comparable to the level of management companies.[14] We are able to match 1,366 UCC members to 306 unique 13F institutions, with 167 of these institutions being hedge fund companies that took part in the UCCs of 233 bankruptcy cases.

We augment the stock holdings of UCC member hedge funds with fund characteristics, such as fund size, fund flows, and rate of return from the Lipper hedge fund database

[12] As shown in Figure 2.6, D. E. Shaw Composite Holdings LLC, Advantage Opportunities Fund LP, and AQR DELTA Master Account LP are classified as hedge funds, whereas BOKF, N.A. is categorized as a commercial bank. D. E. Shaw Composite Holdings LLC is a subsidiary of hedge fund company D. E. Shaw & Co. Advantage Opportunities Fund LP is related to Advantage Capital Management, and its SEC filing describes it as a "Pooled Investment Fund." AQR DELTA Master Account LP is a subsidiary of hedge fund company AQR Capital Management. BOKF, N.A. is a subsidiary of BOK Financial Corporation, a financial services holding company that offers retail and commercial services. It is worth noting that some UCC member names are at the fund level, while others are names of individuals. For example, OCM Opportunities Fund III LP is associated with Oaktree Capital Management, while Alan Parsow is the general partner at Elkhorn Partners LP.

[13] Section B.1 of the Appendix provides a detailed description of the name-matching procedure.

[14] Institutional investors that hold over $100 million or more in 13F securities are required to disclose their quarterly holdings. 13F securities are mostly exchange-traded equities. For more details about 13F filing, see https://www.sec.gov/divisions/investment/13ffaq.

(TASS). The reporting unit in the TASS database is usually at the fund level, while a 13F-filing institution is at the management company level. Hence, pairing a 13F institution to hedge funds is often a one-to-multiple match. We track all hedge funds that are managed by a management company, mainly through name and address, supplemented by the BrokerCheck website.[15] For multiple hedge fund products corresponding to one 13F institution, we aggregate fund characteristics by weighted assets under management (AUM). After the above procedures, we find 79 unique hedge fund companies involved in 144 Chapter 11 cases as UCC members.[16] The average fraction of cases with hedge funds on UCCs is 20.52%.[17]

Table 2.12 presents a comparison between our final sample of 144 Chapter 11 cases and those with hedge funds (HFs) not in the TASS database. We find no statistically significant difference between the two subsamples of cases. Both the firm-level and case-level characteristics of our final sample cases do not statistically differ from cases with hedge funds on UCC but without the TASS coverage. The evidence alleviates concerns about self-reporting biases in commercial databases.

[15]BrokerCheck is a free tool offered by the Financial Industry Regulatory Authority (FINRA) to research the background and experience of financial brokers, advisers, and firms. For more details, please see https://brokercheck.finra.org/

[16]The matching rate between 13F hedge fund companies and the TASS hedge funds is similar to that in Gao and Huang (2016).

[17]Table 2.11 shows the top 10 hedge funds involved in Chapter 11 bankruptcy as UCC members, ranked by the total number of bankruptcy cases a hedge fund company was ever appointed as a UCC member. Panel A lists the top hedge fund companies as 13F institutions. Panel B presents the most active hedge fund companies in our final sample. We acknowledge that because we require a hedge fund to file 13F and have a TASS company ID, it is possible that our study sample mainly captures large equity-oriented hedge fund companies, given that 13F institutions are situational investment managers that hold over $100 million or more in 13F securities. Besides, commercial databases have self-reporting biases as in Agarwal et al. (2013). The largest and the most successful hedge funds often shun publicity. The inclusion of these funds' performance into the data vendor's index, usually value-weighted by AUM, may lead to loss of secrecy and privacy (Lhabitant, 2007). For example, Oaktree Capital Management, one of the largest alternative investors (it had $164 billion assets under management as of March 31, 2022) and the most active hedge fund company on UCCs, did not report to commercial databases during our sample period. We compare the characteristics of a different subsample of cases in Table 2.12.

3.4 Empirical Results

3.4.1 Summary Statistics

Table 2.2 presents descriptive statistics of the sample firms with hedge funds as UCC members and hedge fund trading activities. In Panel A, we describe the firm-level characteristics of the 144 sample cases with at least one hedge fund on the UCC. The financial information is extracted from the last annual reports immediately before the bankruptcy filing. Chapter 11 firms with hedge funds as UCC members, on average, have $10.9 billion in book assets (with a median of $1.4 billion). The average (median) leverage ratio is 0.73 (0.64), and the average (median) ratio of secured debt over total liabilities is 0.33 (0.25).

[Insert Table 2.2 Here]

The average time between the bankruptcy filing date and the date of UCC appointment is 17 days, and the 95th percentile of this time interval is 35 days. This evidence indicates that the UCC is appointed within just a few weeks after Chapter 11 filing in almost all cases. It is important to note that the UCC membership may evolve over time as claims trading takes place. We find that the US Trustee amended the UCC membership in 42% of cases. On average, it takes 284 days from the UCC's appointment date to the amendment date, with a median of 151 days. Our focus is on the first UCC formed immediately following the bankruptcy filing. This approach is taken to mitigate potential biases that may arise due to hedge funds engaging in strategic trading of debt claims during the bankruptcy process.

Panel B presents key variables for stock-trading activities and other features of hedge funds. Our final sample contains 79 hedge fund companies and their quarterly holdings from 3,186 distinct fund quarters from the first quarter of 1994 to the last quarter of 2021.[18]

[18]We consider stock-trading activities of sample hedge funds two years before 1996 and two years after 2019 to test whether hedge funds exhibit abnormal trading activities in the six quarters (excluding the bankruptcy filing quarter) after UCC formation. Results are robust to different sample periods.

We employ measures of portfolio turnover and trade size to describe how intensely hedge funds trade stocks. Following Agarwal et al. (2014), Pástor et al. (2017), and many others, portfolio turnover is defined as the ratio of the minimum of the dollar value of buy transactions and the dollar value of sell transactions over assets under management. *High Turnover* is an indicator variable that equals one if the portfolio turnover of a hedge fund is above its annual median, and zero otherwise.

We also construct measures of portfolio turnover contributed by buy transactions and sell transactions separately. *Turnover Buy* (*Turnover Sell*) is the ratio of the dollar value of buy (sell) transactions over assets under management. A buy (sell) transaction in our setup requires both an increase (decrease) in the dollar value of holdings in a firm's stocks and an increase (decrease) in the percentage ownership of the firm.[19] The increases (decreases) in the dollar value of firm stocks held by a hedge fund are aggregated into the dollar value of all buy (sell) transactions for a hedge fund at a quarterly frequency.

High Turnover Buy (*High Turnover Sell*) is an indicator variable that equals one if the portfolio turnover due to buy (sell) transactions is above the annual median, and zero otherwise. The average of *High Turnover* is 0.44 across all fund quarters in our sample. *High Turnover Buy* and *High Turnover Sell*, on average, are both close to 0.45. We will use the indicator variables of high portfolio turnover (buy and sell) in our empirical tests because the raw measures of portfolio turnover for hedge funds deviate much from a normal distribution and are subject to extreme values.

Prior studies show that informed traders prefer trading larger amounts and these large trades have a pronounced price impact (e.g., Easley and O'Hara (1987), Hasbrouck (1991)). We therefore use various measures of *Large Trade* to describe whether a hedge fund manifests abnormal trading patterns. At the fund-stock-year-quarter level, a trade is defined of large size if the absolute quarterly change in a hedge fund's percentage ownership in a firm's stock exceeds its 95th percentile over the whole sample. At the

[19] In unreported tables, we follow Ben-David et al. (2012) to define buy and sell transactions, and our main results hold.

fund-year-quarter level, *Large Trade* is an indicator variable that equals one if a hedge fund makes at least one large trade among all portfolio firms, and zero otherwise. *Num Large Trade* is the total number of large trades a hedge fund makes among all portfolio firms within a year-quarter. The sample average of *Large Trade* is 0.58. A hedge fund company makes 31 large trades each quarter on average (the median is 3). Measures of high portfolio turnover and large trades by hedge funds are the key outcome variables in most of our regressions. *UCC Infor* is an indicator variable that equals one for a hedge fund company on a UCC over the next six quarters following bankruptcy filing. This selection of the event window is motivated by the observation that the average duration of cases in our sample is 16 months. After this period, the UCC is typically dissolved, leading to hedge funds losing access to MNPI from the UCC.[20] *UCC Infor* is the main explanatory variable in our regressions and has a sample mean of 0.14.

3.4.2 Arrival of UCC Events

One important identification condition for our main empirical tests is that hedge funds engage in trading of distressed debt among a portfolio of firms. A bankruptcy filing triggers UCC formation and thus hedge funds' access to MNPI, rather than hedge funds endogenously buying large amounts of unsecured debt instruments right before or after a bankruptcy filing in order to join a UCC. This assumption is plausible given that a UCC is typically formed within a few weeks of a Chapter 11 filing and distressed bonds are highly illiquid (Longstaff et al., 2005, Chen et al., 2007), making it challenging for a hedge fund to build up a large stake after the bankruptcy filing and before the UCC is formed.[21]

[20] For the purpose of conducting robustness tests, we consider event windows of five and seven quarters, as detailed in Table 2.14.

[21] Rule 1007(d) of the Federal Rules of Bankruptcy Procedure requires a firm filing for a voluntary Chapter 11 organization to disclose the 20 largest unsecured creditors in its petition form. But the list typically contains large trade creditors and financial institutions who are bond trustees (Ivashina and Sun, 2011). Nonetheless, we collect such information for 131 of our sample cases and find that in 15% of the cases, the same UCC hedge funds are already listed among the largest unsecured creditors, despite the list being dominated by other types of "passive" creditors.

Nonetheless, in this section, we present two pieces of evidence that suggest that UCC arrivals are exogenous to hedge fund trading.[22]

We first verify that the arrival of UCC events for hedge funds cannot be predicted by their characteristics in a statistically significant manner. Specifically, we use fund size, fund flows, and fund rate of return to predict next-period UCC events. Observations are at the fund level on a quarterly basis. All independent variables are measured at the previous quarter-end. In particular, we employ the following regression equation:

$$I(UCCEvents)_{j,t} = \Phi' X_{j,t-1} + \delta_j + \theta_t + \epsilon_{j,t} \tag{3.1}$$

where $X_{j,t-1}$ are fund size, fund flows, and fund rate of return. All three variables are generally available in the Lipper hedge fund database for all our sample hedge funds. Fund fixed effects are included to absorb time-invariant features across hedge funds that may affect their participation in UCC events, and year-quarter fixed effects are included as well to absorb time-varying factors that may affect all hedge funds in our sample. If hedge funds can predict the formation of a UCC, we expect some fund-level characteristics such as fund flows to be statistically significant, as hedge funds would seek additional capital to take advantage of such investment opportunities.

[Insert Table 2.3 Here]

In Table 2.3, we use alternative measures to describe the arrival of UCC events. *Event UCC* in column (1) is an indicator variable that equals one if a hedge fund has a UCC event within a year-quarter, and zero otherwise. *Multiple UCC* in column (2) is an indicator variable that equals one if a hedge fund has more than one UCC event within a year-quarter, and zero otherwise. Columns (3) and (4) use the number of UCC events for a hedge fund within a year-quarter. Overall, all four columns show that the coefficient

[22] We are aware that due to data limitations, we are unable to empirically explore how these specialized hedge funds may trade unsecured debt instruments right before or after a bankruptcy filing for the sake of joining the UCC.

estimates for hedge fund characteristics are not only statistically insignificant but also economically small in predicting the arrival of UCC events.[23]

Next, we compare the characteristics of firms with hedge funds as UCC members and covered by the TASS database and those not targeted by hedge funds in Table 2.12. On average, a bankrupt company with a sample hedge fund as a UCC member has $10.9 billion (median is $1.4 billion) in book assets, whereas firms with no hedge funds as UCC members have $4.1 billion (median is $0.9 billion) in book assets. Despite having larger book assets and liabilities than those without hedge fund participation, firms with hedge funds on their UCCs have comparable sales and number of employees to other firms. Importantly, we find no statistically significant difference in leverage and operating performance between the two sets of firms, though hedge fund targets have more tangible assets. Consistent with Jiang et al. (2012), hedge funds invest in firms with a lower ratio of secured debt to total liabilities. Lower secured debt implies that senior secured debt is more likely to be overcollateralized, and hence it leaves more room for unsecured creditors. In addition, the two groups of firms do not differ in key bankruptcy characteristics, including the percentage of prepackaged bankruptcy cases, the fraction of cases filed in Delaware, debtor-in-possession (DIP) financing, and bankruptcy duration.

Overall, consistent with prior studies on hedge funds' activism in distressed firms, the evidence suggests that hedge funds target firms where they can have a larger influence in the restructuring process while protecting their investments with more tangible assets. Importantly, firms to which hedge funds have information access do not differ in performance, leverage, and bankruptcy characteristics and outcomes from those not targeted by hedge funds. The evidence does not suggest that hedge funds strategically target firms

[23]Following Agarwal et al. (2013), Jiang et al. (2022), and other studies, we include a comprehensive list of hedge fund characteristics in the regressions to examine their predictive power over the arrival of UCC events in Table 2.13. The number of observations drops substantially when more characteristics of hedge funds are included. We find that none of the six added variables on hedge fund characteristics are statistically significant. Importantly, the new variables do not provide additional explanatory power, as the adjusted R^2 barely changes. Ideally, variables measuring hedge funds' debt holdings and trading activities before bankruptcy filings should be included in the regressions, but unfortunately such information is not available.

with the purpose of gaining information access to facilitate cross-market trading.

3.4.3 Baseline Results

Table 2.4 examines stock-trading activities by hedge funds after they join a UCC. Hedge funds that are UCC members are highly likely to access MNPI in the next few quarters after a bankruptcy filing. Specifically, we conjecture that UCC hedge funds are more likely to have high portfolio turnover and make large trades while accessing MNPI. We examine the relationship between hedge funds' stock-trading activities and their access to information using the following specification:

$$(TradingOutcome)_{j,t} = \beta(UCCInfor)_{j,t} + \Phi' X_{j,t-1} + \delta_j + \theta_t + \epsilon_{j,t} \tag{3.2}$$

where the dependent variable represents a set of trading outcome variables for hedge fund *j* in quarter *t*—namely, *High Turnover*, *High Turnover Buy*, *High Turnover Sell*, *Large Trade*, and *Num Large Trade*. The key variable of interest is *UCC Infor*, an indicator variable that equals one for a hedge fund that joins the UCC for a bankruptcy-filing firm over the next six quarters upon filing bankruptcy, and zero otherwise.[24] $X_{j,t-1}$ is a set of covariates including hedge fund size, flows, and rate of return, all measured at the previous quarter-end. Fund-fixed effects are included to absorb fund-specific time-invariant characteristics that may affect hedge funds' stock-trading activities. Year-quarter fixed effects are included to absorb possible common time trends in the trading activities of all hedge funds.

[Insert Table 2.4 Here]

Table 2.4 presents the regression results. Column (1) does not include any control vari-

[24]Observations of UCC hedge funds for the bankruptcy-filing quarter are excluded from our analyses to avoid implementation effects. UCC hedge funds gain access to a large amount of public information as well as MNPI in the bankruptcy-filing quarter. Nonetheless, Table 2.14 shows that our results are robust to alternative time windows.

ables or fixed effects, while Column (2) includes control variables and fund- and year-quarter fixed effects. We double-cluster the standard errors at fund- and year-quarter levels, and *t*-statistics with robust standard errors are reported in parentheses across all columns. We find that hedge funds are more likely to exhibit high portfolio turnover when accessing MNPI. Using coefficient estimates in column (2), we find that hedge funds are 24.8% (= 0.109/0.440) more likely, relative to the unconditional mean, to have high portfolio turnover in the six quarters after the bankruptcy filing. The next two columns further explore alternative measures for portfolio turnover—turnover from buy transactions only and from sell transactions only, respectively. These results are generally consistent with what we find in column (2). These probability differentials are of economic significance as well when compared to the sample mean of these portfolio turnover variables.

Columns (5) and (6) in Table 2.4 show the abnormal stock-trading patterns of UCC hedge funds along another dimension: large trades. Column (5) shows that the probability differential in making large trades between UCC and non-UCC hedge funds is 12.3 percentage points. In column (6), which further includes control variables and fund- and year-quarter fixed effects, we find that the probability differential remains positive and statistically significant at the 1% level, and its magnitude is at 11.4 percentage points. The economic significance of these coefficients is substantial when compared to the sample mean of *Large Trade* at 0.58. To further differentiate between hedge funds making only one large trade and those making multiple large trades, the last two columns of Table 2.4 use the number of large trades for a hedge fund as the outcome variable in the Poisson model estimation. We find that UCC hedge funds tend to make a greater number of large trades when they have access to MNPI.

To illustrate the time-series dynamics of UCC hedge funds making large trades in the six quarters after the bankruptcy filing, we plot the quarterly probability differentials in making large trades between observations with and without access to UCC MNPI in

Figure 2.3. In this figure, the blue bars represent the coefficient estimates of β_1 to β_6 in regression Equation (3.3) without covariates or fixed effects, while the orange bars represent these coefficients when both covariates and fixed effects are included. The horizontal axis is the relative time after a bankruptcy filing.

$$I(LargeTrade)_{j,t} = \sum_{k=1}^{6} \beta_k (UCCInfor)_{j,k} + \Phi' X_{j,t-1} + \delta_j + \theta_t + \epsilon_{j,t} \tag{3.3}$$

We find that hedge funds are more likely to make large trades throughout all six quarters, though probability differentials vary. Notably, hedge funds are most likely to make large trades in the first quarter upon joining a UCC.[25] The blue bars suggest that UCC hedge funds are more likely to make at least one large trade in the first quarter by 15.7 percentage points. In the next five quarters, there is still a higher chance, around 11 percentage points, that UCC hedge funds will make large trades. The orange bars are of similar patterns but smaller magnitudes in general as more variations along the vertical axis are absorbed by covariates and fixed effects. The results are intuitive: Hedge funds are likely to receive the most information immediately after joining a UCC. The information access continues in the next few quarters, but the intensity generally declines.

[Insert Figure 2.3 Here]

3.4.4 Robustness Tests

We perform a number of additional tests to further confirm the validity of our baseline results. First, to address the concern that our results may be largely driven by the few most active players in the market, we remove the top 10 hedge funds in our sample (see Table 2.15) and show that our results remain qualitatively the same and quantitatively

[25]This result is consistent with the anecdotal evidence that UCC members are able to review MNPI on an earlier date. Please see https://www.wallstreetprep.com/knowledge/creditor-committees-chapter-11-reorganization-role/ and https://www.foley.com/en/insights/publications/2019/09/official-committees-of-unsecured-creditors for details.

similar. Second, we notice that some UCC events are involved with prepackaged and pre-negotiated cases in which the debtor and creditors negotiate a reorganization or liquidation plan before filing for Chapter 11 bankruptcy. Given there is less uncertainty in the restructuring outcome of these cases than the "full-blown" Chapter 11 cases, hedge funds' representation on the UCC may not prove to be effective in accessing valuable information during the six quarters upon UCC formation. Therefore, we perform the baseline regressions but replace *UCC Infor* with zero for prepackaged or pre-negotiated cases (see Table 2.16) and find that our results remain.

Third, one may be concerned that the empirical setup of our baseline results subtly combines two connected "events": UCC hedge funds not only have access to MNPI but also observe the public information disclosed upon the bankruptcy-filing event. For example, on the first day of Chapter 11 filing, a large amount of information about the bankrupt firm is released through court filings. Such information includes the identities of the largest unsecured debt holders, terms of debtor-in-possession (DIP) financing, retention of professionals, testimonials by financial advisors, etc.[26] We therefore conduct additional analyses to explore whether it is the hedge funds' access to MNPI or their ability to process public information that drives them to trade more and make large trades. We focus on bankruptcy-filing cases where no UCC is formed. Specifically, we run the following regression:

$$(TradingOutcome)_{j,t} = \beta(PseudoUCC)_{j,t} + \Phi' X_{j,t-1} + \delta_j + \theta_t + \epsilon_{j,t} \tag{3.4}$$

where $PseudoUCC$ is an indicator variable that represents the occurrence of the bankruptcy filing but without any UCC being formed, and $TradingOutcome$ is the same proxy for stock-trading activities as in Table 2.4. If it is the public information around bankruptcy

[26]The arrival of public information may attract institutional investors' attention and affect their trading and eventually share price patterns. For example, Hirshleifer et al. (2009) find that investor attention to the focal firm's earnings news is reduced when a greater number of other firms are announcing their earnings on the same day. 13F institutional investors have been shown to make profitable trades regarding public information releases in Ke and Ramalingegowda (2005), Bushee and Goodman (2007), and many others.

filings rather than MNPI that drives our main results, we should expect hedge funds to exhibit abnormal stock-trading activities upon bankruptcy filings in the absence of UCC formation. However, Table 2.5 shows that this is not the case: We observe no abnormal stock-trading activities by hedge funds upon bankruptcy-filing announcements with no UCC being formed.

[Insert Table 2.5 Here]

Next, we check the validity of our results in Table 2.4 by examining whether the public information released around UCC formation drives our results. That is, we examine whether our main results are driven by hedge funds' attention to the arrival of such particular information on the formation of a UCC in a bankruptcy case. Specifically, we focus on bankruptcy cases where a UCC is formed but no hedge funds are UCC members. We examine how hedge funds may "react," in terms of stock-trading activities, to bankruptcy-filing cases with non-hedge-fund UCC members having access to information.

We conjecture that the specialized hedge funds are not more likely to have high portfolio turnover and make large trades when a UCC is formed for a bankruptcy case in which they do not participate. We employ the same specification above, but $PseudoUCC$ is now defined as an indicator variable that equals one for the quarter right after a bankruptcy filing case where non-hedge-fund investors serve as UCC members, and zero otherwise. Table 2.6 presents the results and confirms our conjecture: We find no evidence that hedge funds are more likely to have high portfolio turnover and make large trades in response to the formation of UCCs in bankruptcy cases where they are not participants.

[Insert Table 2.6 Here]

Last but not least, we use bankruptcy petition forms to identify hedge funds that are listed among the 20 largest unsecured creditors but do not sit on the UCC. Importantly, hedge funds that are not UCC members, regardless of whether they are among the largest creditors or not, do not have access to MNPI. It is likely that those non-UCC hedge funds are not among the seven largest holders and therefore do not qualify for UCC membership or they choose not to join the UCC. Hence, we use these non-UCC events as $PseudoUCC$ to run analysis using Equation (3.4). Our results in Table 2.17 show that hedge funds among the top 20 unsecured creditors without access to MNPI do not exhibit abnormal stock-trading behavior in the six quarters following the bankruptcy filing.

3.4.5 Information Intensity: Analysis by Firm Size

Our baseline results show that hedge funds, on average, are more likely to have higher portfolio turnover and to place large trades after serving on a UCC. Since Chapter 11 firms have different levels of complexity in their operations and are economically linked to different sets of firms, the extent of exploitation of MNPI by hedge funds can vary by firms. That is, exploiting a large quantity of information will likely result in hedge funds making more (large) trades. The empirical challenge to investigating whether hedge funds trade differently upon accessing heterogeneous intensity of information is that the information itself is not observable. To overcome the challenge, we seek empirical proxies for measuring information intensity. A natural choice is firm size. Large firms have richer business networks (e.g., suppliers and customers), and their bankruptcies are likely to affect more economically linked firms than small firms.

We consider three different measures of firm size: book assets, book liabilities, and sales, all of which are measured using annual filings right before bankruptcy retrieved from Compustat. Since our Chapter 11 sample contains mostly large US firms (with median book assets of $1.4 billion), we first place each firm in the annual size percentile in its Fama-French 12 industry. We then classify a bankrupt firm as a ”large” firm if its pre-filing assets exceed the 80th percentile of its industry—that is, if a large firm’s assets rank in the top 20% of the entire industry. We apply a similar procedure to the other two measures of firm size. An advantage of using the 80th percentile is that it allows for a nearly even split between large-firm UCC events and small-firm UCC events. Results based on alternative size cutoffs are presented in Table 2.18.

For the empirical setup, we replace the variable *UCC Infor* in Equation (3.2) with two indicator variables: *UCC Infor (Small Firms)* and *UCC Infor (Large Firms)*. Specifically, *UCC Infor (Large Firms)* equals one if *UCC Infor* equals one and the UCC event involves a firm whose size rank exceeds the 80th percentile of its industry, and zero otherwise. *UCC Infor (Small Firms)* equals one if *UCC Infor* equals one and the UCC event involves a firm whose size rank is below its industry's 80th percentile, and zero otherwise.

Table 2.7 reports the results. Panels A, B, and C classify bankrupt firms as large firms based on their assets, liabilities, and sales, respectively, relative to the size of their industry peers. Panel A shows that the coefficients for both *UCC Infor (Small Firms)* and *UCC Infor (Large Firms)* are positive and statistically significant at various significance levels across all columns. The evidence shows that hedge funds trade on MNPI regardless of the size of the firms. Importantly, we test the difference between the coefficient estimates of *UCC Infor (Small Firms)* and *UCC Infor (Large Firms)* and find that the two coefficients are not statistically significant across all columns except for the last one. That is, hedge funds place more large trades in large bankruptcy cases. We find similar patterns in Panels B and C using other size measures.

[Insert Table 2.7 Here]

Overall, our results show that hedge funds have similar probability of high portfolio turnover or making large trades regardless of the bankrupt firm size, but they place more large trades in large firm cases. The evidence suggests that hedge funds exploit MNPI while serving on UCCs in all Chapter 11 cases. The higher information intensity associated with large firms allows them to place more trades in those cases.

3.4.6 Trading by Non-Hedge Fund Institutional Investors

The evidence thus far shows that hedge funds experience high portfolio turnover and place large trades after joining a UCC. It is equally interesting to investigate whether non-hedge-fund UCC members such as mutual funds and other asset management companies may exhibit abnormal stock-trading activities. In fact, prior studies show that actively managed equity mutual funds have skill in timing the aggregate market and picking individual stocks (Kacperczyk et al., 2014, 2016). In Table 2.8 we examine non-hedge-fund 13F institutional investors' trading behavior upon their joining the UCC of a bankruptcy-filing firm, following the same empirical setup as in Equation (3.2).

[Insert Table 2.8 Here]

Our results show that non-hedge-fund 13F institutional investors are not more likely to have high portfolio turnover or make large trades while having access to MNPI. The absence of abnormal stock-trading activities by these 13F institutional investors may not be surprising for the following reasons. First, non-hedge-fund 13F institutional investors may have the skill set for stock picking and market timing but do not necessarily have the skills or instruments to exploit MNPI by intensely trading other firms' stocks. Second, those institutions face much tighter restrictions and regulations than hedge funds and thus face stricter scrutiny by regulators. For example, mutual funds are required to maintain well-diversified portfolios and face extensive disclosure requirements (Kacperczyk et al., 2008). In particular, Lo (2010) points out that non-hedge-fund institutional investors operate in a highly regulated environment and must comply with a number of federal and state laws.[27] Last, non-hedge-fund institutional investors may not have strong incentives to trade intensely upon such information because their pay-for-performance structure is not as compelling as the high-powered incentive structures faced by hedge fund managers, who are driven to deliver outperformance.

[27]See page 2 in Lo (2010) for a comprehensive summary of differences between hedge funds and other institutional investors.

3.5 Mechanisms for Hedge Funds' Cross-Market Trading

Our main empirical results show that hedge funds exhibit abnormal stock-trading activities upon joining a UCC. However, it is not clear what stocks these hedge funds trade after gaining access to MNPI; specifically, are these hedge funds more likely to trade stocks of firms that are economically linked to the bankruptcy-filing firm itself? Furthermore, because our study examines stock trading after hedge funds gain information access through their debt ownership, it is important to investigate whether a hedge fund management company's fund strategy and structure facilitate cross-asset-market trading.

3.5.1 Economically Linked Firms

Motivated by prior literature examining the spillover effects of financial distress,[28] we study which stocks UCC hedge funds trade intensively while having access to MNPI using the following specification:

$$I(LargeTrade)_{i,j,t} = \beta(EconLink)_{i,j,t} + \delta_{i,t} + \theta_{j,t} + \epsilon_{i,j,t} \tag{3.5}$$

where $I(LargeTrade)_{i,j,t}$ is defined for stock i and fund j at quarterly frequency. Specifically, $I(LargeTrade)_{i,j,t}$ is an indicator variable that equals one if the absolute value of the quarterly change in fund *j*'s percentage ownership in stock *i* for quarter *t* ranks in the top 5th percentile of the whole sample (i.e., greater than or equal to the 95th percentile), and

[28]Early work from Lang and Stulz (1992) documents the contagion effect on equities of rivalry firms in the same industry as the bankrupt firm upon bankruptcy announcements. Broadening the scope of related parties with distressed firms, Hertzel et al. (2008) provide evidence that suppliers of distressed firms experience significantly negative abnormal returns around both the bankruptcy filing date and the pre-filing distress date. James and Kizilaslan (2014) find that a firm's exposure to industry downturns affects its probability of becoming financially distressed and its debt recovery rate in bankruptcy, further documenting the industry-wide contagion effects. Bernstein et al. (2019) provide evidence that the liquidation of bankrupt establishments causes a reduction in local employment and business establishments compared with reorganized establishments. Using a different lens than prior studies, our paper examines whether sophisticated institutional investors exploit the spillovers of financial distress and make informed trades accordingly. Mehta et al. (2021) document the "shadow trading" behavior of firm managers making informed trades in stocks of economically linked firms.

equals zero otherwise.

We consider two variants of $(EconLink)_{i,j,t}$ to capture the underlying economic linkages between bankrupt firms and non-bankrupt firms: *Econ Link FF12Ind* is an indicator variable that equals one if portfolio firm *i* of UCC hedge fund *j* is in the same Fama-French 12 industry as the bankruptcy-filing firm, and zero otherwise.[29] *Econ Link Universal* is an indicator variable that equals one if a portfolio firm of a UCC hedge fund has one of the following three types of economic links with the bankruptcy-filing firm: being within the same Fama-French 12 industry; having a supplier or primary customer relationship for the current year or any of the previous three years; or having similar product descriptions and therefore being within the same industry classification as established in Hoberg and Phillips (2010, 2016). That is, *Econ Link Universal* captures three dimensions of economic linkages.

[Insert Table 2.9 Here]

Column (1) in Table 2.9 shows that UCC hedge funds are more likely to make large trades among firms within the same Fama-French 12 industry as the bankruptcy-filing firm. The probability differential is 1.3 percentage points and statistically significant at the 1% level. Column (2) extends the definition of economic linkages and shows that UCC hedge funds are more likely to make large trades among firms with underlying economic linkages with the bankruptcy-filing firm by 1.32 percentage points. These probability differentials are not only statistically significant at the 1% level but economically meaningful as well when compared to the sample mean of *Large Trade*, which is 5.66 percentage points. In the next four columns, we further define indicator variables of large trades by transaction directions: buy or sell. The evidence suggests that the results in the first two columns are actually driven by large trades of both buy and sell transactions.

[29]Our choice of this same-industry type of economic linkage is partly motivated by research work in the literature of mutual funds. For example, Kacperczyk et al. (2005) find that mutual funds whose portfolio holdings are concentrated in a small number of industries tend to perform better.

3.5.2 Fund Strategies

To apply valuable information derived from investment in the distressed debt markets to trading in the equity market, hedge funds must have expertise in equity trading and their fund structure or strategy should allow them to skillfully and timely take advantage of such trading opportunities. We conjecture that the effects of information access through the UCC on equity trading should be more pronounced among hedge funds with dual strategies in investing in both equity and fixed income markets. To test our hypothesis, we use the following regression equation:

$$(TradingOutcome)_{j,t} = \beta_1(UCCInfor\_NonDual)_{j,t} + \beta_2(UCCInfor\_Dual)_{j,t} \\ +\Phi' X_{j,t-1} + \delta_j + \theta_t + \epsilon_{j,t} \qquad (3.6)$$

where $UCCInfor\_Dual$ is an indicator variable that equals one if *UCC Infor* equals one and if a hedge fund simultaneously has at least one product using equity strategies and at least one product using fixed income strategies, and zero otherwise. $UCCInfor\_NonDual$ is an indicator variable that equals one if *UCC Infor* equals one and if $UCCInfor\_Dual$ equals zero, and zero otherwise. Strategy classifications on hedge funds' individual products are obtained from the Lipper hedge fund database. Specifically, non–dual strategy funds include those with either equity strategies or fixed income strategies (but not both) in combination with other strategies.

Table 2.10 shows that the coefficient for $UCCInfor\_NonDual$ is positive and statistically significant, suggesting that hedge funds without dual strategies in both equity and fixed income securities have higher portfolio turnover and make more large trades upon having access to MNPI. However, the estimates are smaller than those presented in our baseline regressions. Importantly, we find that the coefficient for $UCCInfor\_Dual$ is positive across all columns and statistically significant at the 1% level. The results show that hedge funds with dual strategies are five to six times more likely to have high portfolio turnover than those without dual strategies, and they are twice more likely to place large trades and place a higher number of large trades. The evidence confirms hedge fund expertise in equity trading as an important mechanism in executing trades to exploit MNPI derived from debt markets.

[Insert Table 2.10 Here]

3.6 Returns to Large Trades

The last section of this paper examines returns to hedge funds' large trades while serving on UCCs. The purpose for the empirical exercise is twofold. First, investigating the price impact of large trades by hedge funds helps further address the concern that the abnormal trading behavior of hedge funds may not be driven by information but rather due to other factors.[30] Second, examining returns to large trades allows one to gauge how profitable hedge funds' informed trades are.

We compare the cumulative returns of large buy and sell transactions by hedge funds, treating each large transaction as an event to examine share price dynamics surrounding the event. Since 13F institutional stock holdings are reported quarterly, large buy and large sell transactions are defined on a quarterly basis; that is, each change in portfolio stock holdings is from quarter-end $t-1$ to quarter-end t. We define event month 0 as the quarter-end month before which a large transaction is defined; that is, a large transaction may take place in month -2, -1, or 0. We construct buy-and-hold returns to ascertain the extent to which large trades by hedge funds are driven by their access to MNPI upon joining a UCC. Specifically, we calculate the cumulative holding-period gross returns of firm i compounded from month -12 to the current month and the cumulative DGTW-characteristics gross returns compounded from month -12 to the current

[30] In fact, previous studies show that stocks that are more prone to informed trading should incur higher price impact in equilibrium (Glosten and Milgrom, 1985, Kyle, 1985).

month. We then derive the cumulative buy-and-hold DGTW-adjusted returns by taking the difference between these two sets of cumulative returns.

[Insert Figure 2.4 Here]

Figure 2.4 compares the average cumulative DGTW-adjusted returns of large buy and large sell transactions by all specialized hedge funds in the distressed debt market, including those on a UCC and those not on a UCC. The vertical axis in all panels is in percentage points. All panels use the window of 12 months before to 12 months after event month 0. Panel A shows the average cumulative returns of large buy and large sell transactions by UCC hedge funds, as captured by the blue curve and the orange curve, respectively. Because hedge funds in our sample make both large transactions and "non-large" transactions and non-large transactions may capture other trends or patterns in the data over the [-12, 12] period, we subtract the same average cumulative return of non-large transactions from the average cumulative returns of large buy and large sell transactions, respectively, in Panel A to show the net returns of large trades over non-large trades.

The blue line, representing the average cumulative returns of large buy transactions, is relatively flat until month -3. The largest incremental increase occurs over the [-3, 3] period, after which the blue line trends up steadily. The orange line, representing the average cumulative returns of large sell transactions, is much flatter than the blue line: It gradually increases from month -12 with a turning point at month -3, after which it gradually drifts down. Notably, these large sell transactions are conditional on hedge funds holding these stocks in the first place; due to data limitations, we are unable to present stock price patterns due to hedge funds' short-selling activities.

Importantly, the gray bars capturing the differential between the blue and orange curves show that the largest incremental increase in return differentials concentrates in the few months around the event but the differences continue to increase over time. Essentially, the gray bars capture the share price impacts of large transactions. For example, the share price dynamics over the [-6, 6] window show that cumulative DGTW-adjusted returns of large buy and large sell transactions first increase at similar paces until month -3 and then diverge substantially over the next few months. If these large transactions are driven purely by noise, we should not observe any clear patterns in share price impact around the event month.

The evidence in Panel A suggests that the large transactions are driven by UCC hedge funds' access to MNPI and their skills as well as other information sources beyond the UCC.[31] In order to pin down the share price impact of the former, we capture the latter two among the same universe of hedge funds but in the absence of MNPI access. Panel B thus compares the average cumulative returns between large buy and large sell transactions by non-UCC hedge funds, both of which are adjusted with the same returns of non-large trades. The pattern of gray bars in Panel B is generally consistent with that in Panel A, but the magnitudes are much smaller.

Panel C plots the monthly differentials in the gray bars between Panel A and Panel B, and these differentials capture the share price impacts driven by UCC hedge funds' access to MNPI. The red line takes the value of 0.14 percentage points at month -12, 0.60 percentage points at month -6, 2.92 percentage points at month 0, 4.01 percentage points at month 6, and then 4.82 percentage points at month 12. Over the [-6, 6] window, for example, the share price impact of large transactions driven by MNPI is 3.41 percentage points (i.e., 4.01 - 0.60) for a 12-month period. Overall, our evidence in Figure 2.4 indicates that large trades by hedge funds are highly likely information-driven and that the incremental contribution to cumulative returns by access to MNPI is substantial.

3.7 Conclusion

This paper examines whether hedge funds exploit a special source of MNPI as debt-claim holders for bankruptcy-filing firms. We document abnormal stock-trading activities

[31] Considerable evidence has documented that hedge fund managers have skills to deliver superior performance (e.g., Aragon and Martin (2012), Cao et al. (2013), and Cao et al. (2016)).

upon hedge funds joining the unsecured creditors' committees of large Chapter 11 firms. Hedge funds are more likely to have high portfolio turnover and make large trades in the few quarters after joining a UCC. We conduct a number of robustness tests to mitigate concerns that such abnormal stock-trading activities may be driven by other information sources. Our analysis by firm size shows that although hedge funds are equally likely to have high portfolio turnover after joining the UCCs of both large firms and small firms, they engage in more large trades when serving on large firms' UCCs. Additionally, we find that hedge funds are more likely to make informed trades among firms that have an underlying economic linkage to the bankruptcy-filing firms, and the price impact of such large trades is pronounced. Overall, our findings suggest that hedge funds utilize MNPI obtained from the distressed debt markets for stock trading. This special form of informed trading activity by hedge funds deserves the attention of regulators for considering legally binding restrictions to ensure market efficiency and integrity in a broad sense.

Figure 2.1: Cumulative Returns to Distress Hedge Fund and Other Indices

This figure plots the Credit Suisse Distress Hedge Fund Index from January 1994 to July 2022. For comparison, also plotted are the Credit Suisse Event Driven Hedge Fund Index, the Credit Suisse All Hedge Fund Index, and the Credit Suisse Risk Arbitrage Index. All hedge fund indices are from the Lipper hedge fund database (TASS).

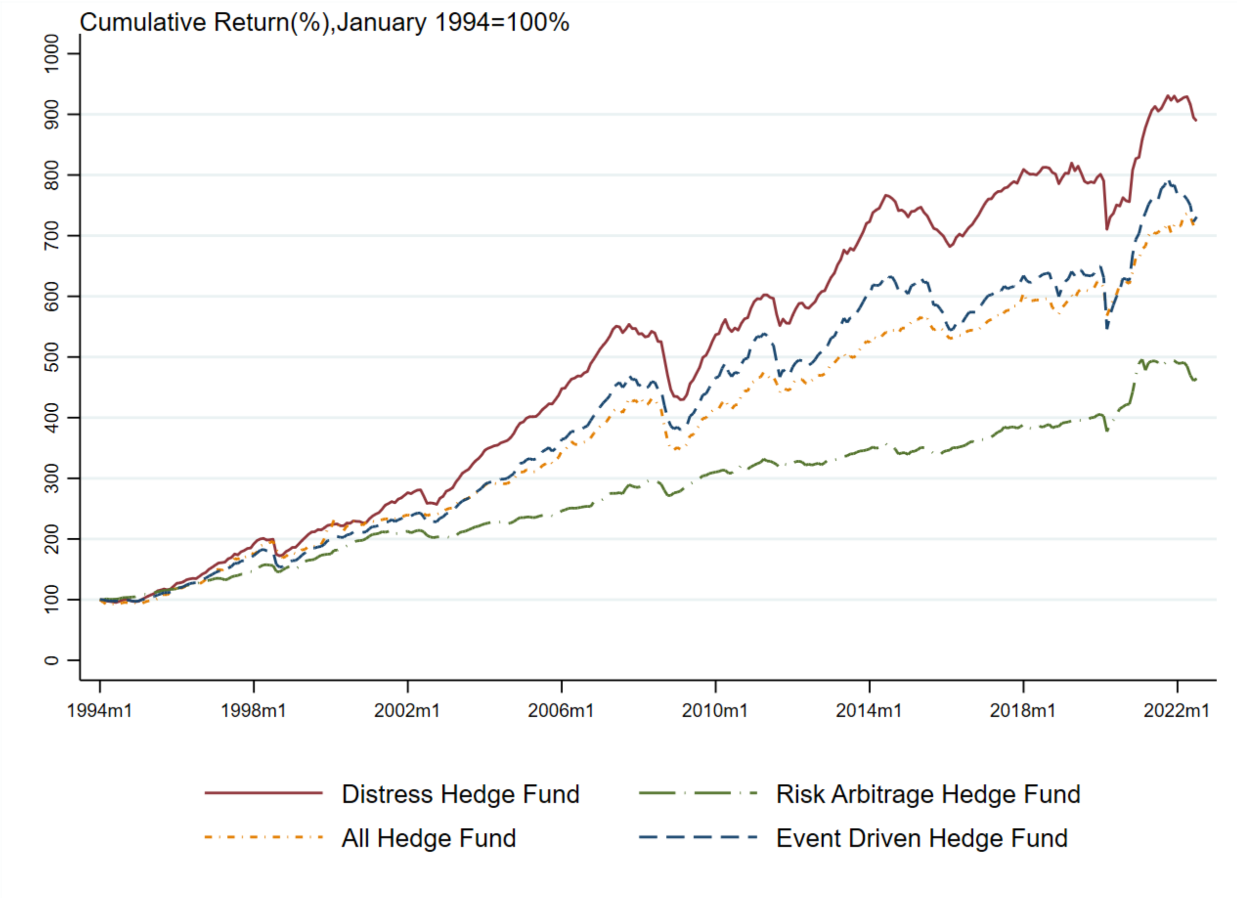


Figure 2.2: Hedge Funds on the UCC

This figure presents the time series of Chapter 11 bankruptcy cases from 1996 to 2019. These cases include bankrupt firms that have assets equal to or greater than $100 million (measured in 1980 constant dollars using the CPI deflator) at the time of bankruptcy, have filed 10Ks in the previous three-year period, and have appointed an official committee of unsecured creditors. The left vertical axis represents the number of bankruptcy filings, and the right vertical axis shows the percentage of cases with hedge funds as members of the unsecured creditors' committees over the total sample cases each year.

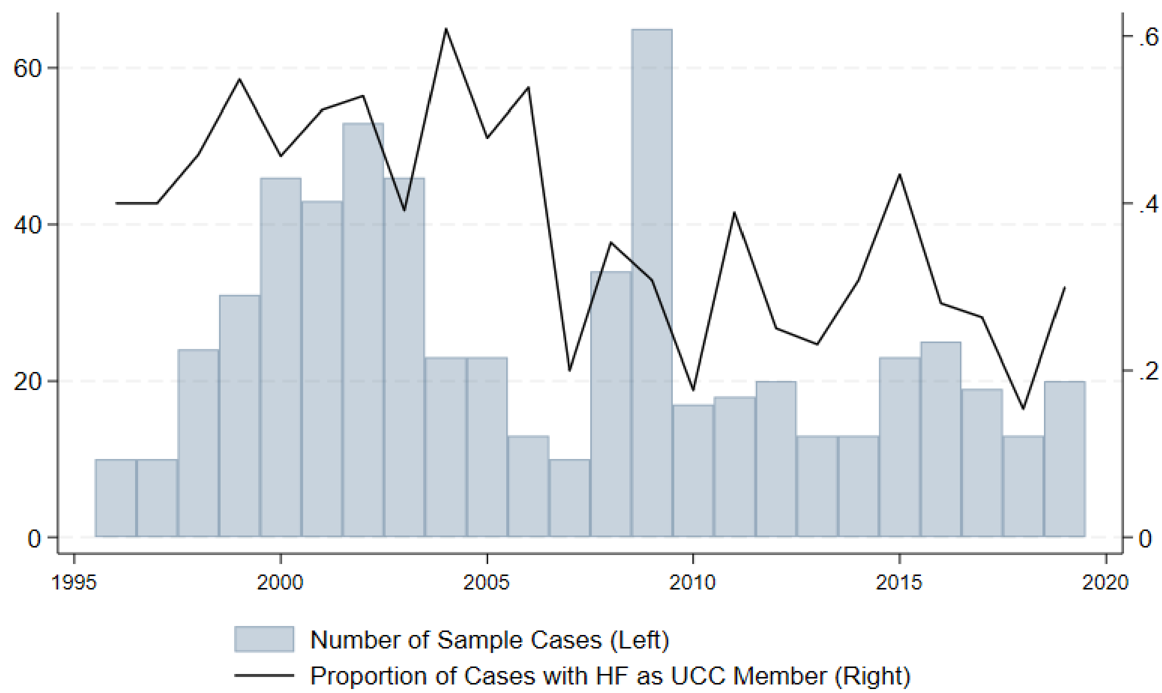


Figure 2.3: **Probability of UCC Hedge Funds Making Large Trades**

This figure presents the increased likelihood of UCC hedge funds to make large trades in the next six quarters after a bankruptcy filing compared to those without access to material nonpublic information. The vertical axis is the probability differential of UCC hedge funds making large trades, and the horizontal axis is the relative time after a bankruptcy filing. The blue bars are estimated from ordinary least squares (OLS) regressions with no covariates or fixed effects, while the orange bars are estimated from OLS regressions with both covariates and fixed effects.

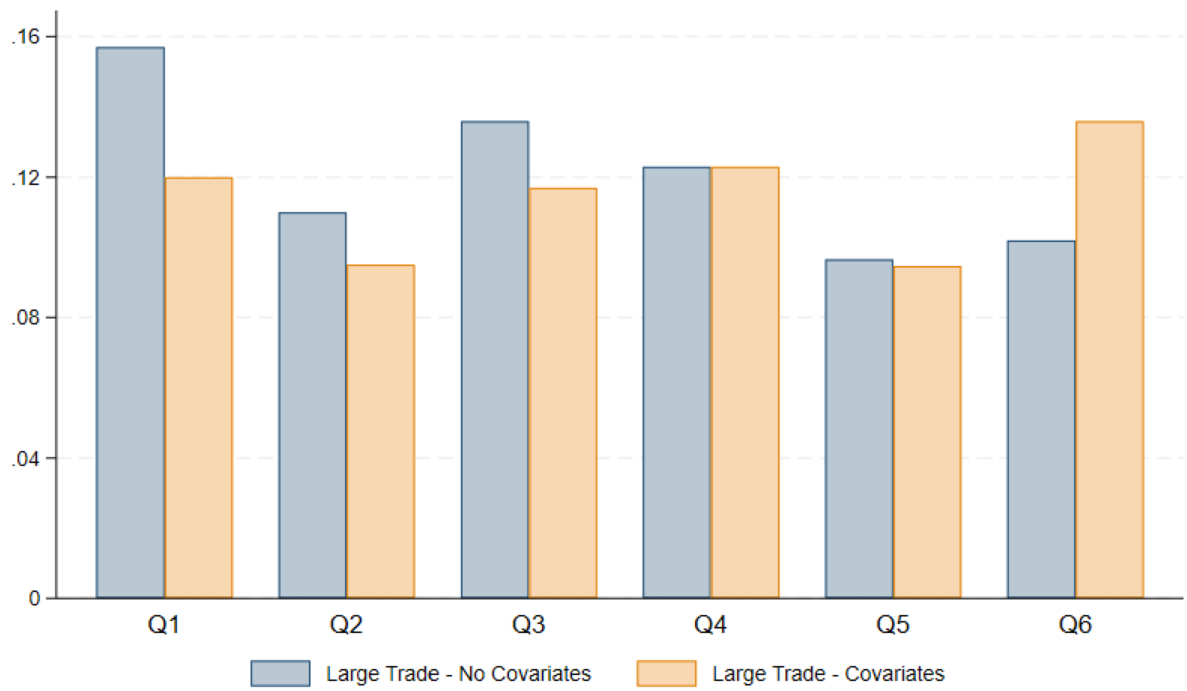
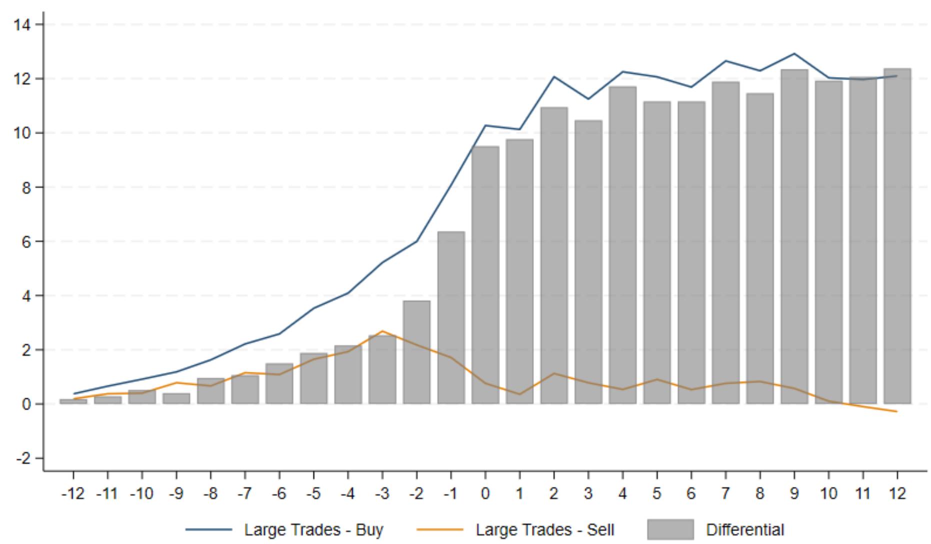


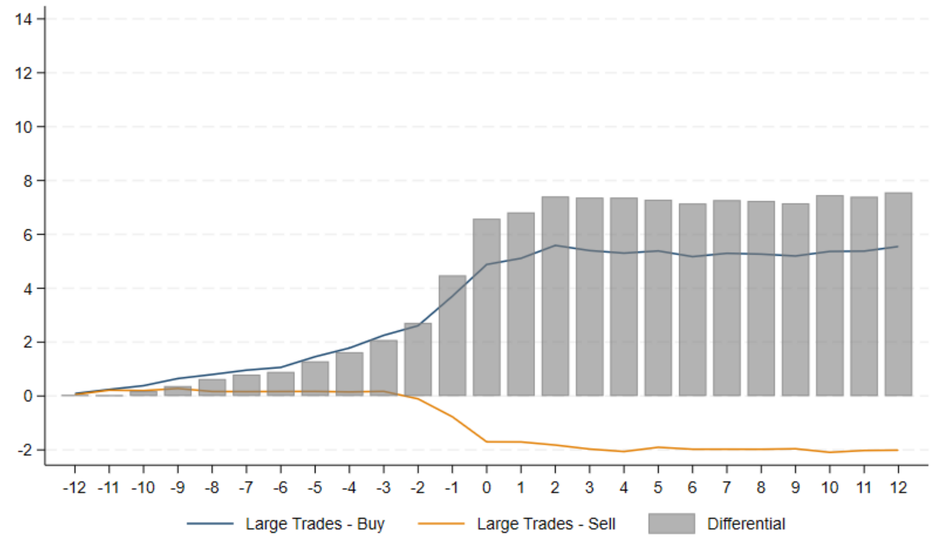
Figure 2.4: **Comparison of Cumulative Returns of Large Buy and Large Sell Transactions**

This figure compares average cumulative returns between large buy and large sell transactions by UCC hedge funds and non-UCC hedge funds, respectively. All panels use the window of 12 months before and 12 months after the quarter-end month, before which a large transaction is defined. The vertical axis in all panels is in percentage points. Panel A plots the average cumulative returns of large buy transactions by UCC hedge funds and of large sell transactions, both of which are adjusted with the returns of non-large trades. The differential between the average returns of large buy transactions and large sell transactions is provided as well. Panel B plots the average cumulative returns of large buy transactions by non-UCC hedge funds and of large sell transactions, both of which are adjusted with the returns of non-large trades. Panels A and B use DGTW-adjusted returns for each individual stock. Panel C compares the differentials in Panels A and B.

Panel A. Average cumulative returns around the trading month by UCC hedge funds



Panel B. Average cumulative returns around the trading month by non-UCC hedge funds



Panel C. Comparing the differentials for UCC and non-UCC hedge funds

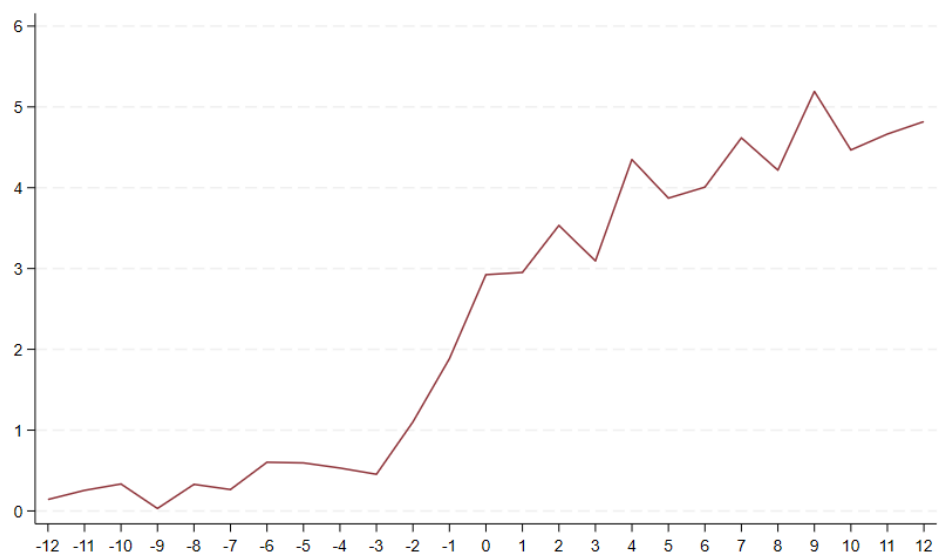


Figure 2.5: Sample Court Docket

This figure presents the court docket of the bankrupt company Sun Edison Inc., along with several notes to illustrate sources of case-level information. Importantly, it shows that the US Trustee submitted a notice appointing the unsecured creditors' committee in a court file with document number 148 on April 29, 2016. All of the court dockets in our sample cases are from the Public Access to Court Electronic Records (PACER) database.

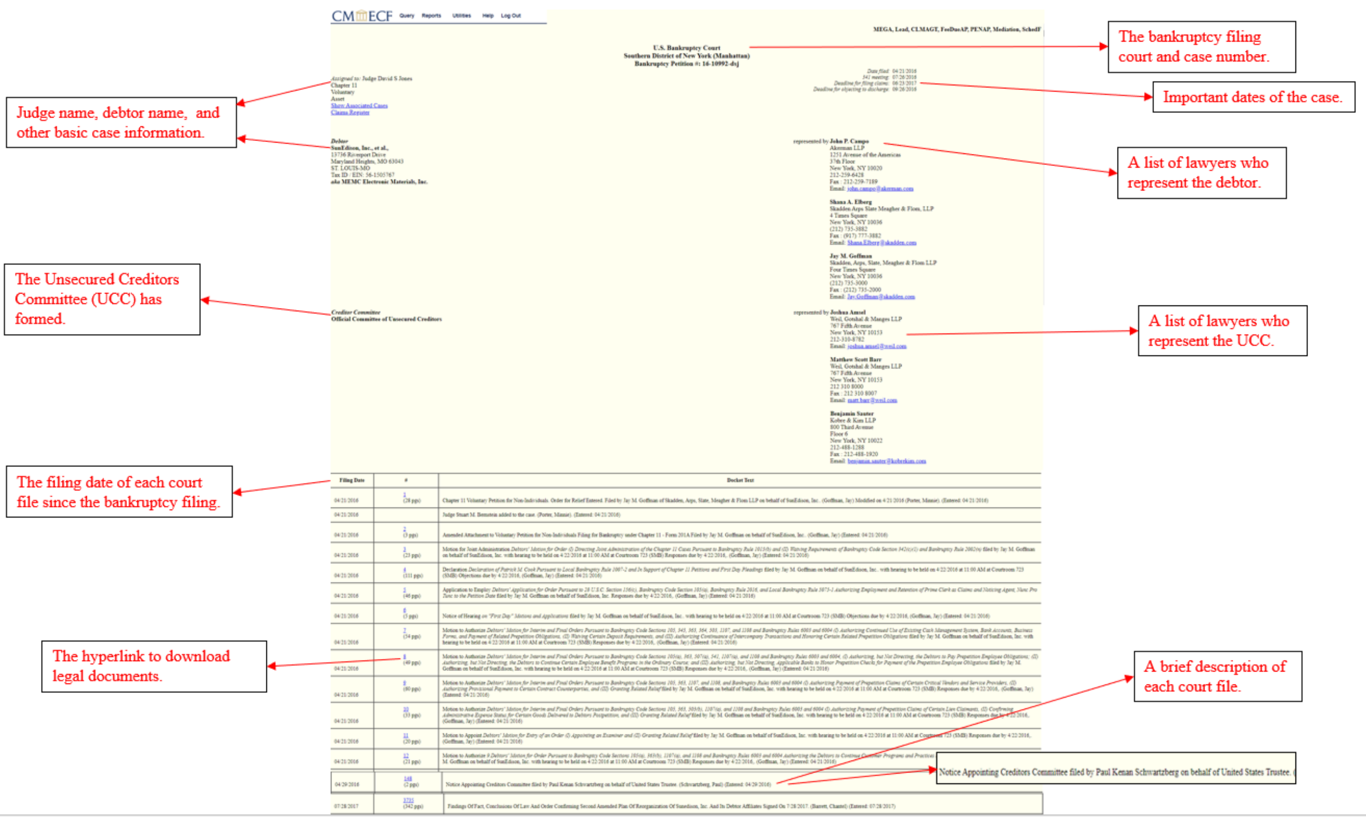


Figure 2.6: **Sample UCC Notice**

This example shows the UCC notice filed by US Trustee William K. Harrington that appointed seven members to the UCC of the bankrupt company Sun Edison Inc. on April 29, 2016. The representative and the address of a UCC member are instrumental in matching with the 13F and the TASS databases.

NOTICE OF APPOINTMENT OF OFFICIAL
COMMITTEE OF UNSECURED CREDITORS

William K. Harrington, United States Trustee for Region 2, pursuant to Section 1102(a) of title 11, United States Code, hereby appoints the following unsecured creditors that are willing to serve on the Official Committee of Unsecured Creditors of the SunEdison, Inc. and its affiliated debtors-in-possession:

1. BOKF, N.A., as Indenture Trustee
   1600 Broadway
   3rd Floor
   Denver, CO 80202
   Contact: George F. Kubin
   Telephone: (303) 864-7206

2. AQR DELTA Master Account, L.P.
   2 Greenwich Plaza, 4th Floor
   Greenwich, CT 06830
   Contact: Melinda C. Franek, VP
   Telephone: (203) 742-3007

3. Advantage Opportunities Fund, LP
   1221 Brickell Ave, Suite 2660
   Miami, FL 33131
   Contact: Irvin Schlussel
   Telephone: (914) 714-0531

4. D.E. Shaw Composite Holdings, LLC
   1166 Avenue of the Americas, 9th Floor
   New York, NY 10036
   Contact: Martin Lebwohl
   Telephone: (212) 478-0358

5. Flextronics Industrial, Ltd.
   600 Shiloh Road
   Plano, TX 75074
   Contact: Donald Heap
   Telephone: (469) 223-9726

6. Albemarle Corporation
   451 Florida Street
   Baton Rouge, LA 70801
   Contact: Michael Lutgring
   Telephone: (225) 388-7236

7. Vivint Solar, Inc.
   3301 N. Thanksgiving Way, Suite 500
   Lehi, UT 84043
   Contact: Jim Lundberg
   Telephone: (801) 234-7080

Dated: New York, New York
April 29, 2016

Figure 2.7: Comparison between 13F EDGAR and 13F Refinitiv: Number of 13F Institutions

This figure presents the number of unique 13F institutions (identified by unqiue MGRNO number) from the SEC 13F filings and the Refinitiv 13F database, respectively. Institutional investors with valid CRSP stock holdings (where holding shares greater than zero and where each stock's CUSIP must have a corresponding PERMNO identifier) are included. The data covers the period from June 2013 to March 2021.

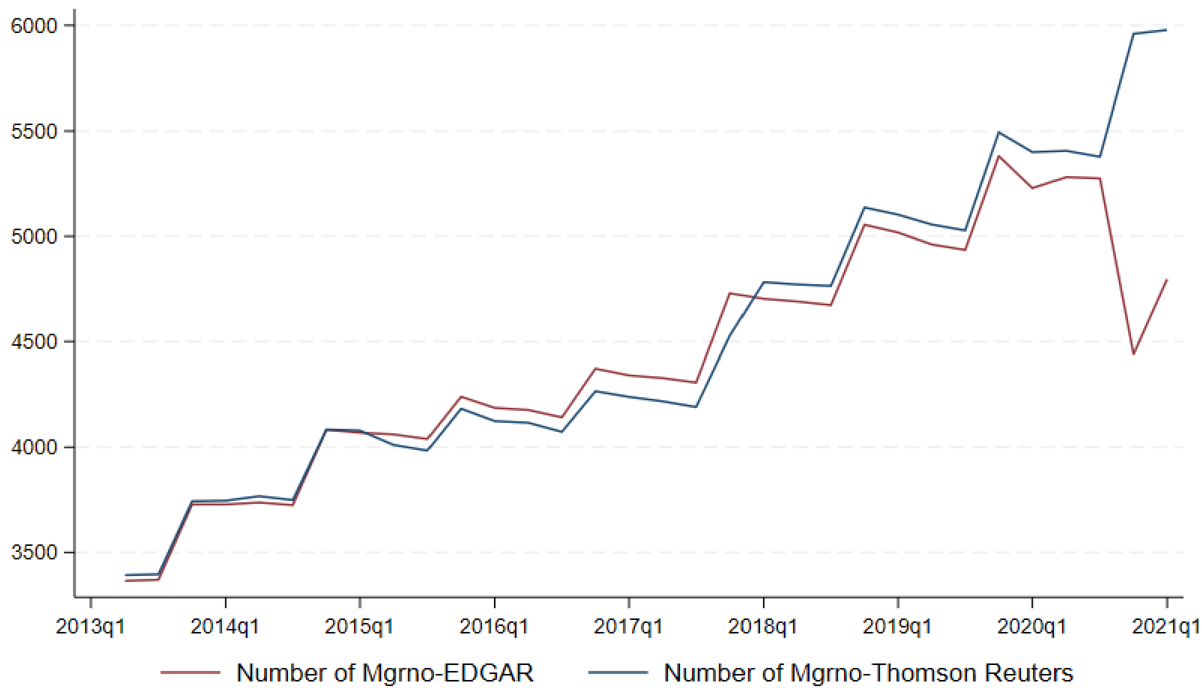


Figure 2.8: **Comparison between 13F EDGAR and 13F Refinitiv: Common Stock Ownership**

This figure shows the comparison of common stock ownership between the SEC 13F filings and the Refinitiv 13F database from June 2013 to March 2021. For comparison with the figure on page 14 of the "Research Note Regarding Thomson-Reuters Ownership Data Issues" issued by WRDS Research in May 2017, CRSP stocks with share codes 10, 11, and 12 (also known as US common stocks) are included. Institutional ownership is defined as the market value of 13F institutions' common stock holdings divided by the market cap of these stocks at the end of each quarter.

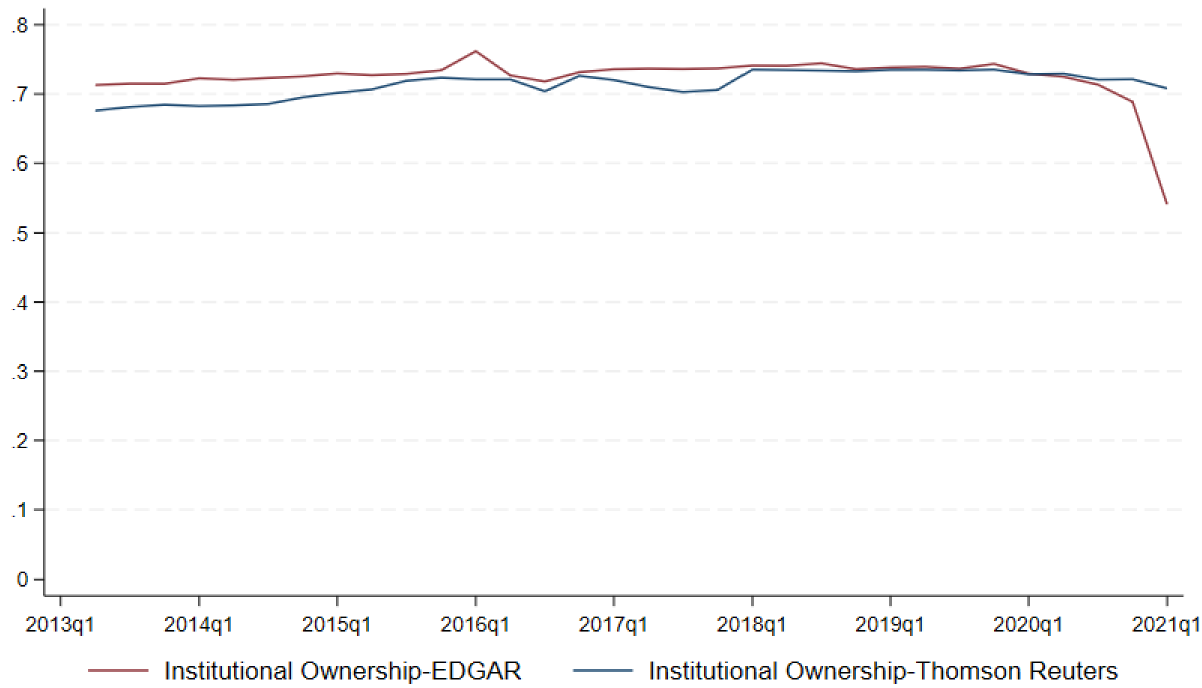


Table 2.1: Key Variable Definitions

This table presents definitions for key variables. Data sources for bankruptcy cases and characteristics of bankrupt firms are from the Florida-UCLA-LoPucki Bankruptcy Research Database (BRD), supplemented by Compustat, Capital IQ, and BankruptcyData.com. Bankruptcy court dockets and notices of the appointment of the unsecured creditors' committees are obtained from the Public Access to Court Electronic Records (PACER) database. Data sources for trading information of hedge funds and other institutional investors are the Refinitiv Institutional Holdings (13F) database and the Lipper hedge fund database (TASS).

Variable	**Definition and Construction**
A. Firm Characteristics	
Assets	Total assets from the last 10-K filed before bankruptcy, in millions of constant 2019 dollars.
Liabilities	Total liabilities from the last 10-K filed before bankruptcy, in millions of constant 2019 dollars.
Sales	Sales from the last 10-K filed before bankruptcy, in millions of constant 2019 dollars.
Employees	The number of persons employed by the firm as of the last 10-K before bankruptcy filing.
ROA	Ratio of earnings before interest, taxes, depreciation, and amortization over total assets.
Tangibility	Ratio of total property, plant, and equity over total assets.
Leverage	Ratio of total liabilities over total assets.
Secured debt/Liabilities	Ratio of total secured debt over total liabilities.
B. UCC Characteristics	
Amendment	Dummy variable indicating whether there is an order approving the amendment of the unsecured creditors' committee.
Days BKUCC	Number of days between the bankruptcy filing date and the date on which the US Trustee appointed the official committee of unsecured creditors.
Days BKAUCC	Number of days between the bankruptcy filing date and the date on which the US Trustee amended the official committee of unsecured creditors.
Days UCCAUCC	Number of days between the date on which the US Trustee appointed the official committee of unsecured creditors and the date on which the US Trustee amended the official committee of unsecured creditors.
Event UCC	Dummy variable that is equal to one when the US Trustee appointed a UCC for a hedge fund-year-quarter observation, and zero otherwise.
Multiple UCC	Dummy variable that is equal to one if there is strictly more than one UCC event for a hedge fund-year-quarter observation, and zero otherwise.
Num UCC	Number of UCC events for a hedge fund-year-quarter observation, starting from zero.

Variable	Definition and Construction
UCC Infor	Dummy variable that is equal to one for a hedge fund company on a UCC over the next six quarters following bankruptcy filing, and zero otherwise.
BK-No UCC	Dummy variable indicating whether there is a bankruptcy filing but no UCC is appointed for a hedge fund–year–quarter observation.
Non-HF UCC	Dummy variable indicating whether there is a UCC event without any hedge fund serving as a UCC member for a hedge fund-year-quarter observation.
Econ Link FF12Ind	Dummy variable that is equal to one for stocks of the non-bankrupt firm in the portfolio of a UCC hedge fund when the corresponding bankrupt firm is in the same Fama-French 12 industry as the non-bankrupt firm.
Econ Link Universal	Dummy variable indicating whether there is an economic linkage between a bankrupt firm and a non-bankrupt firm. Firms with economic linkage with a bankrupt firm include non-bankrupt firms that are customers or suppliers of the bankrupt company, operate in the same Fama-French 12 industry as the bankrupt company, or have the same Text-based Network Industry Classifications (TNIC) (Hoberg and Phillips, 2010, 2016).
C. Trading Variables	
HF Size	Assets under management (AUM) of each fund product aggregated to the hedge fund company level, in millions. *Lag HF Size* equals the natural log of fund size at the prior quarter-end.
HF Flow	Change in AUM net of changes due to return, scaled by last-period AUM. *Lag HF Flow* equals *HF Flow* at the prior quarter-end.
HF Return	The weighted average of return rate of each fund product aggregated to the hedge fund company level, in percentage, using AUM as the weight. *Lag HF Return* equals *HF Return* at the prior quarter-end.
High Turnover	Dummy variable that is equal to one if portfolio turnover is greater than median each year, and zero otherwise. *Turnover* is defined as the smaller of buy transactions and sell transactions, both in dollar amounts, scaled by AUM.
High Turnover Buy	Dummy variable that is equal to one if portfolio turnover is greater than median each year, and zero otherwise. *Turnover Buy* is the buy transactions in dollar amount scaled by AUM.
High Turnover Sell	Dummy variable that is equal to one if portfolio turnover is greater than median each year, and zero otherwise. *Turnover Sell* is the sell transactions in dollar amount scaled by AUM.
Large Trade	Dummy variable that is equal to one if a hedge fund company has made at least one large trade during a quarter, and zero otherwise. *Large Trade* is defined as a trade that is above the 95th percentile of trade size across the whole sample. Trade size is measured as the absolute change in investor j's percentage ownership in stock i.
Num Large Trade	Number of large trades for a hedge fund within a quarter, starting from zero.

Table 2.2: **Summary Statistics**

This table presents descriptive statistics of sample firms and hedge fund trading activities. Panel A provides a summary of the firm characteristics of bankrupt firms with at least one hedge fund on the unsecured creditors' committee in the latest fiscal year before filing bankruptcy. For each variable, we report the mean, standard deviation, 5th percentile, 25th percentile, median, 75th percentile, and 95th percentile. Panel B summarizes hedge fund characteristics and stock-trading activities at the hedge fund–year–quarter level. For each variable, the mean, the standard deviation, the 5th percentile, the 25th percentile, the median, the 75th percentile, and the 95th percentile are reported. The sample firms are defined in Section 3.3. Continuous financial variables are winsorized at the 1% and 99% levels to remove outliers. Detailed variable definitions can be found in Table 2.1.

Panel A. Firm Characteristics

	N	Mean	SD	P5	P25	Median	P75	P95
Size:								
Assets	144	10,921	69,834	356	646	1,375	3,728	18,511
Liabilities	144	10,114	66,666	315	579	1,342	3,519	21,967
Sales	143	2,853	7,630	102	502	925	2,436	11,032
Employees	143	8,155	12,550	144	1,650	3,400	8,500	33,500
Performance:								
ROA	134	0.007	0.243	-0.372	-0.015	0.048	0.096	0.208
Tangibility	135	0.416	0.316	0.013	0.177	0.384	0.638	0.859
Leverage	137	0.729	0.557	0.254	0.453	0.636	0.833	1.593
Secured debt/Liabilities	116	0.334	0.449	0.000	0.068	0.246	0.416	0.906
UCC Characteristics:								
Amendment	144	0.417	-	0	0	0	1	1
Days BKUCC	141	17	29	6	9	14	16	35
Days BKAUCC	60	303	404	20	70	173	340	1154
Days UCCAUCC	60	284	404	2	55	151	317	1140

Panel B. Stock-Trading Activities and Fund Characteristics

	N	Mean	SD	P5	P25	Median	P75	P95
High Turnover	3,186	0.440	0.497	0	0	0	1	1
High Turnover Buy	3,186	0.460	0.498	0	0	0	1	1
High Turnover Sell	3,186	0.454	0.498	0	0	0	1	1
Large Trade	3,186	0.582	0.493	0	0	1	1	1
Num Large Trade	3,186	31	76	0	0	3	26	166
Lag HF Size	3,136	19.573	1.852	16.392	18.351	19.753	20.991	22.239
Lag HF Flow	3,117	-0.639	4.022	-4.858	-1.777	-0.735	0.300	3.622
Lag HF Return	3,136	0.816	3.056	-3.293	-0.209	0.787	1.818	5.004
Event UCC	3,186	0.030	0.172	0	0	0	0	0
Multiple UCC	3,186	0.003	0.050	0	0	0	0	0
Num UCC	3,186	0.034	0.202	0	0	0	0	0
UCC Infor	3,186	0.138	0.345	0	0	0	0	1

Table 2.3: **Arrivals of UCC Events**

This table examines the determinants of UCC events. The analysis is performed using the following specification:

$$I(UCCEvents)_{j,t} = \Phi' X_{j,t-1} + \delta_j + \theta_t + \epsilon_{j,t}$$

Summary statistics are provided in Panel B of Table 2.2. $I(UCCEvents)_{j,t}$ represents various measures to describe the arrivals of UCC events across the columns. *Event UCC* is an indicator variable that equals one if a hedge fund is appointed as a UCC member within a year-quarter, and zero otherwise. *Multiple UCC* is an indicator variable that equals one if a hedge fund has more than one UCC event within a year-quarter, and zero otherwise. *Num UCC* captures the number of UCC events for a hedge fund within a year-quarter. Fund-level controls $X_{j,t-1}$ include fund size, fund flows, and rate of return. All explanatory variables are measured at the previous quarter-end. All variables are defined in Table 2.1. In the first three columns, coefficients are estimated using ordinary least squares (OLS). Column (4) uses the Poisson model. Fund fixed effects and year-quarter fixed effects are included in all columns. Standard errors are double-clustered at the fund and year-quarter level, and *t*-statistics or *z*-statistics are reported with coefficients. ***, **, and * stand for statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1) Event UCC	(2) Multiple UCC	(3) Num UCC	(4) Num UCC
Lag HF Size	0.003	0.001	0.004	0.083
	(0.772)	(0.526)	(0.781)	(0.493)
Lag HF Flows	0.000	0.000	0.000	0.014
	(-1.271)	(-0.436)	(-1.257)	(0.098)
Lag HF Return	0.000	0.000	0.001	0.061
	(0.386)	(0.283)	(0.497)	(0.402)
Fund FE	Y	Y	Y	Y
YQ FE	Y	Y	Y	Y
N Obs	3,115	3,115	3,115	3,117
Pseudo R^2	-	-	-	0.338
Adj. R^2	0.045	0.026	0.047	-

Table 2.4: **Hedge Fund Trading upon UCC Events**

This table examines the relation between hedge funds' access to MNPI and their trading activities using the following specification:

$$(TradingOutcome)_{j,t} = \beta(UCCInfor)_{j,t} + \Phi' X_{j,t-1} + \delta_j + \theta_t + \epsilon_{j,t}$$

Various measures are employed to describe the trading activities of hedge fund *j*—namely, *High Turnover*, *High Turnover Buy*, *High Turnover Sell*, *Large Trade*, and *Num Large Trade*. In particular, *High Turnover* is an indicator variable that equals one if the portfolio turnover of a hedge fund is above the annual median of portfolio turnover, and zero otherwise. *High Turnover Buy* is an indicator variable that equals one if the portfolio turnover due to buy transactions is above the annual median, and zero otherwise. *High Turnover Sell* is an indicator variable that equals one if the portfolio turnover due to sell transactions is above the annual median, and zero otherwise. *Large Trade* is an indicator variable that equals one if a hedge fund makes at least one large trade among all portfolio firms, and zero otherwise. *Num Large Trade* is the total number of large trades a hedge fund makes among all portfolio firms. *UCC Infor* is an indicator variable that equals one for a UCC hedge fund over the next six quarters upon the bankruptcy-filing quarter. Observations of UCC hedge funds for the bankruptcy-filing quarter are removed. Covariates $X_{j,t-1}$ include hedge fund size, flows, and rate of return, all measured at the previous quarter-end. All variables are defined in Table 2.1. The coefficients in the first six columns are estimated using OLS. Columns (7) and (8) use the Poisson model. Fund fixed effects and year fixed effects are included across all columns. Standard errors are double-clustered at the fund and year level, and *t*-statistics or *z*-statistics are reported with coefficients. ***, **, and * stand for statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1) High Turnover	(2) High Turnover	(3) High Turnover Buy	(4) High Turnover Sell	(5) Large Trade	(6) Large Trade	(7) Num Large Trade	(8) Num Large Trade
UCC Infor	0.129***	0.109***	0.103***	0.119***	0.123***	0.114***	0.511***	0.281***
	(5.034)	(3.345)	(3.634)	(4.189)	(5.110)	(3.204)	(4.155)	(5.291)
Covariates	N	Y	Y	Y	N	Y	N	Y
Fund FE	N	Y	Y	Y	N	Y	N	Y
YQ FE	N	Y	Y	Y	N	Y	N	Y
N Obs	3,186	3,115	3,115	3,115	3,186	3,115	3,186	3,117
Pseudo R^2	-	-	-	-	-	-	0.013	0.813
Adj. R^2	0.008	0.486	0.469	0.471	0.007	0.574	-	-

Table 2.5: Hedge Fund Trading around Bankruptcies without UCC Appointment

This table examines whether hedge funds appointed as UCC members (UCC hedge funds) trade on the public information of bankrupt firms using the following specification:

$$(TradingOutcome)_{j,t} = \beta(PseudoUCC)_{j,t} + \Phi' X_{j,t-1} + \delta_j + \theta_t + \epsilon_{j,t}$$

Various measures are employed to describe the trading activities of hedge fund *j* as employed in Table 2.4—namely, *High Turnover*, *High Turnover Buy*, *High Turnover Sell*, *Large Trade*, and *Num Large Trade*. We empirically explore the stock-trading activities of sample hedge funds (distressed hedge funds) after the bankruptcy filing but when no UCCs are formed. That is, $PseudoUCC$ (*BK - No UCC*) represents an indicator variable that equals one for bankruptcy-filing quarters where no UCCs are formed, and zero otherwise. Covariates $X_{j,t-1}$ include hedge fund size, flows, and rate of return, all measured at the previous quarter-end. All variables are defined in Table 2.1. The coefficients in the first four columns are estimated using OLS. Column (5) uses the Poisson model. Fund fixed effects and year fixed effects are included across all columns. Standard errors are double-clustered at the fund and year level, and *t*-statistics or *z*-statistics are reported with coefficients. ***, **, and * stand for statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1) High Turnover	(2) High Turnover Buy	(3) High Turnover Sell	(4) Large Trade	(5) Num Large Trade
BK - No UCC	0.010	0.018	-0.007	-0.006	-0.005
	(0.954)	(1.291)	(-0.744)	(-0.639)	(-0.144)
Covariates	Y	Y	Y	Y	Y
Fund FE	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y
N Obs	3,115	3,115	3,115	3,115	3,117
Pseudo R^2	-	-	-	-	0.805
Adj. R^2	0.491	0.470	0.474	0.575	-

Table 2.6: **UCC Events with No Hedge Funds as UCC Members**

This table examines the stock-trading behavior of hedge funds upon UCC events where no UCC members are hedge funds using the following specification:

$$(TradingOutcome)_{j,t} = \beta(PseudoUCC)_{j,t} + \Phi' X_{j,t-1} + \delta_j + \theta_t + \epsilon_{j,t}$$

Various measures are employed to describe the trading activities of hedge fund *j* as employed in Table 2.4—namely, *High Turnover*, *High Turnover Buy*, *High Turnover Sell*, *Large Trade*, and *Num Large Trade*. $PseudoUCC$ (*Non-HF UCC*) is an indicator variable that equals one for the bankruptcy-filing quarters where no hedge funds are UCC members but non-hedge-fund investors are UCC members, and zero otherwise. Covariates $X_{j,t-1}$ include hedge fund size, flows, and rate of return, all measured at the previous quarter-end. All variables are defined in Table 2.1. The coefficients in the first four columns are estimated using OLS. Column (5) uses the Poisson model. Fund fixed effects and year fixed effects are included across all columns. Standard errors are double-clustered at the fund and year level, and t-statistics or z-statistics are reported with coefficients. ***, **, and * stand for statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1) High Turnover	(2) High Turnover Buy	(3) High Turnover Sell	(4) Large Trade	(5) Num Large Trade
Non-HF UCC	-0.005	-0.019	0.011	-0.008	-0.131
	(-0.216)	(-0.759)	(0.576)	(-0.774)	(-1.220)
Covariates	Y	Y	Y	Y	Y
Fund FE	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y
N Obs	3,115	3,115	3,115	3,115	3,117
Pseudo R^2	-	-	-	-	0.806
Adj. R^2	0.491	0.470	0.474	0.575	-

Table 2.7: Hedge Fund Trading upon UCC Events: Firm Size

This table provides additional evidence on whether hedge funds appointed as UCC members (UCC hedge funds) trade on MNPI from bankrupt firms of different sizes using the following specification:

$$(TradingOutcome)_{j,t} = \beta_1(UCCInfor\_SmallFirms)_{j,t} + \beta_2(UCCInfor\_LargeFirms)_{j,t} \\ +\Phi' X_{j,t-1} + \delta_j + \theta_t + \epsilon_{j,t}$$

A bankrupt firm is classified as either small or large based on its total assets (Panel A), total liabilities (Panel B), or sales (Panel C) relative to other firms in the same Fama-French 12 industry and year (before filing bankruptcy) in the Compustat universe. We classify a firm as large if its total assets exceed the 80th percentile among firms within the same industry in Panel A, and small otherwise. The results using the 75th percentile and the 85th percentile as alternative cutoffs are presented in Table 2.18. $UCCInfor\_LargeFirms$ equals one if *UCC Infor* equals one and the UCC event involves a firm whose size rank exceeds the 80th percentile of its industry, and zero otherwise. $UCCInfor\_SmallFirms$ equals one if *UCC Infor* equals one and the UCC event involves a firm whose size rank is below its industry's 80th percentile, and zero otherwise. Various measures are employed to describe the trading activities of hedge fund *j* as employed in Table 2.4—namely, *High Turnover*, *High Turnover Buy*, *High Turnover Sell*, *Large Trade*, and *Num Large Trade*. Covariates include hedge fund size, flows, and rate of return, all measured at the previous quarter-end. All variables are defined in Table 2.1. From column (1) to column (4), the model is estimated using OLS. Column (5) is estimated using Poisson regression. Fund-fixed effects and year-quarter fixed effects are included, standard errors are double-clustered at the fund and year-quarter level, and *t*-statistics or *z*-statistics are reported with coefficients. ***, **, and * stand for statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Hedge Fund Trading upon UCC Events: Firm Size (Total Assets)

	(1) High Turnover	(2) High Turnover Buy	(3) High Turnover Sell	(4) Large Trade	(5) Num Large Trade
UCC Infor (Small Firms)	0.078*	0.080**	0.100***	0.084**	0.191**
	(1.969)	(2.322)	(2.734)	(2.076)	(2.194)
UCC Infor (Large Firms)	0.149***	0.134***	0.145***	0.154***	0.354***
	(3.283)	(2.977)	(3.686)	(3.148)	(6.531)
Covariates	Y	Y	Y	Y	Y
Fund FE	Y	Y	Y	Y	Y
YQ FE	Y	Y	Y	Y	Y
N Obs	3,115	3,115	3,115	3,115	3,117
Pseudo R^2	-	-	-	-	0.813
Adj. R^2	0.486	0.469	0.471	0.574	-

Panel B: Hedge Fund Trading upon UCC Events: Firm Size (Total Liabilities)

	(1) High Turnover	(2) High Turnover Buy	(3) High Turnover Sell	(4) Large Trade	(5) Num Large Trade
UCC Infor (Small Firms)	0.095*	0.104**	0.124**	0.120**	0.140
	(1.800)	(2.243)	(2.533)	(2.201)	(1.375)
UCC Infor (Large Firms)	0.120***	0.102**	0.115***	0.109**	0.355***
	(3.036)	(2.614)	(3.153)	(2.639)	(7.092)
Covariates	Y	Y	Y	Y	Y
Fund FE	Y	Y	Y	Y	Y
YQ FE	Y	Y	Y	Y	Y
N Obs	3,115	3,115	3,115	3,115	3,117
Pseudo R^2	-	-	-	-	0.813
Adj. R^2	0.485	0.469	0.471	0.573	-

Panel C: Hedge Fund Trading upon UCC Events: Firm Size (Sales)

	(1) High Turnover	(2) High Turnover Buy	(3) High Turnover Sell	(4) Large Trade	(5) Num Large Trade
UCC Infor (Small Firms)	0.116***	0.112***	0.131***	0.102**	0.238***
	(3.109)	(3.626)	(3.813)	(2.428)	(2.863)
UCC Infor (Large Firms)	0.097*	0.089*	0.102**	0.133**	0.311***
	(1.909)	(1.856)	(2.314)	(2.586)	(5.025)
Covariates	Y	Y	Y	Y	Y
Fund FE	Y	Y	Y	Y	Y
YQ FE	Y	Y	Y	Y	Y
N Obs	3,115	3,115	3,115	3,115	3,117
Pseudo R^2	-	-	-	-	0.813
Adj. R^2	0.485	0.469	0.471	0.574	-

Table 2.8: **Other Institutions Trading upon UCC Events**

This table explores the stock-trading activities of non-hedge-fund institutional investors upon joining the UCC of the bankruptcy-filing firm using the following specification:

$$(TradingOutcome)_{j,t} = \beta(UCCInfor)_{j,t} + \Phi' X_{j,t-1} + \delta_j + \theta_t + \epsilon_{j,t}$$

Various measures are employed to describe the trading activities of non-hedge-fund institutional investor *j* as employed in the previous tables—namely, *High Turnover*, *High Turnover Buy*, *High Turnover Sell*, *Large Trade*, and *Num Large Trade*. *UCC Infor* is an indicator variable that equals one for a hedge fund that joins the UCC for a bankruptcy-filing firm over the next six quarters upon the bankruptcy-filing quarter. We control for the market value of all stocks in a 13F institutional investor's portfolio. All variables are defined in Table 2.1. The coefficients in the first four columns are estimated using OLS. Column (5) uses the Poisson model. Fund fixed effects and year fixed effects are included across all columns. Standard errors are double-clustered at the fund and year level, and *t*-statistics or *z*-statistics are reported with coefficients. ***, **, and * stand for statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1) High Turnover	(2) High Turnover Buy	(3) High Turnover Sell	(4) Large Trade	(5) Num Large Trade
UCC Infor	0.017	0.013	0.015	-0.019	0.042
	(0.768)	(0.607)	(0.775)	(-1.344)	(1.330)
Covariates	Y	Y	Y	Y	Y
Fund FE	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y
N Obs	9,199	9,199	9,199	9,199	9,199
Pseudo R^2	-	-	-	-	0.847
Adj. R^2	0.330	0.272	0.288	0.436	-

Table 2.9: Hedge Fund MNPI Access: Evidence from Economic Linkages

This table explores the relation between stock-trading activities of UCC hedge funds and the economic links of portfolio stocks with the bankruptcy-filing firm over the next six quarters upon bankruptcy-filing quarter using the following specification:

$$I(LargeTrade)_{i,j,t} = \beta(EconLink)_{i,j,t} + \delta_{i,t} + \theta_{j,t} + \epsilon_{i,j,t}$$

Large Trade in this table is defined at the stock-fund level at quarterly frequency as equal to one if the absolute value of the quarterly change in a fund's percentage ownership in a stock ranks in the top 5th percentile for the whole sample (i.e., greater than or equal to the 95th percentile), and zero otherwise. *Large Trade-Buy* is equal to one if fund j made a large buy transaction of stock i in quarter t, whereas *Large Trade-Sell* is equal to one if fund j made a large sell transaction of stock i in quarter t. *Econ Link FF12Ind* is an indicator variable that equals one if a portfolio firm of a UCC hedge fund is within the same Fama-French 12 industry as the bankruptcy-filing firm. *Econ Link Universal* is an indicator variable that equals one if a portfolio firm of a UCC hedge fund has one of the following three types of economic links with the bankruptcy-filing firm: being within the same Fama-French 12 industry; having a supplier/big customer relationship for the current year or any of the previous three years; having similar product descriptions and therefore being within the same industry classification as established in Hoberg and Phillips (2010, 2016). Coefficients are in percentages. Detailed variable definitions are in Table 2.1. Fund-year-quarter fixed effects and stock-year-quarter fixed effects are included; standard errors are triple-clustered at the fund, stock, and year-quarter levels; and t-statistics are reported with coefficients. ***, **, and * stand for statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1) Large Trade	(2) Large Trade	(3) Large Trade Buy	(4) Large Trade Buy	(5) Large Trade Sell	(6) Large Trade Sell
Econ Link FF12Ind	1.300***		0.615***		0.663***	
	(3.593)		(2.973)		(3.122)	
Econ Link Universal		1.320***		0.617***		0.683***
		(3.673)		(2.993)		(3.328)
Fund*YQ FE	Y	Y	Y	Y	Y	Y
Stock*YQ FE	Y	Y	Y	Y	Y	Y
N Obs	254,858	254,858	254,858	254,858	254,858	254,858
Adj. R^2	0.135	0.135	0.122	0.122	0.104	0.104

Table 2.10: **Hedge Fund Trading upon UCC Events: Fund Strategies**

This table examines whether hedge funds of different trading strategies appointed as UCC members trade upon MNPI from bankrupt firms using the following specification:

$$(TradingOutcome)_{j,t} = \beta_1(UCCInfor\_NonDual)_{j,t} + \beta_2(UCCInfor\_Dual)_{j,t}$$
$$+\Phi' X_{j,t-1} + \delta_j + \theta_t + \epsilon_{j,t}$$

$UCCInfor\_Dual$ is an indicator variable that equals one if *UCC Infor* equals one and if a UCC hedge fund has at least one product using equity strategies and at least one product using fixed income strategies, and zero otherwise. $UCCInfor\_NonDual$ equals one if *UCC Infor* equals one and if $UCCInfor\_Dual$ equals zero, and zero otherwise. Various measures are employed to describe the trading activities of hedge fund *j* as employed in Table 2.4—namely, *High Turnover*, *High Turnover Buy*, *High Turnover Sell*, *Large Trade*, and *Num Large Trade*. Covariates $X_{j,t-1}$ include hedge fund size, flows, and rate of return, all measured at the previous quarter-end. All variables are defined in Table 2.1. The coefficients in the first four columns are estimated using OLS. Column (5) uses the Poisson model. Fund fixed effects and year fixed effects are included across all columns. Standard errors are double-clustered at the fund and year level, and *t*-statistics or *z*-statistics are reported with coefficients. ***, **, and * stand for statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1) High Turnover	(2) High Turnover Buy	(3) High Turnover Sell	(4) Large Trade	(5) Num Large Trade
UCC Infor (NonDual)	0.085**	0.076***	0.091***	0.107***	0.240***
	(2.541)	(2.785)	(3.265)	(2.951)	(4.266)
UCC Infor (Dual)	0.398***	0.430***	0.457***	0.201***	0.563***
	(6.388)	(5.509)	(6.644)	(2.729)	(5.548)
Covariates	Y	Y	Y	Y	Y
Fund FE	Y	Y	Y	Y	Y
YQ FE	Y	Y	Y	Y	Y
N Obs	3,115	3,115	3,115	3,115	3,117
Pseudo R^2	-	-	-	-	0.813
Adj. R^2	0.489	0.473	0.476	0.574	-

Table 2.11: **Most Active Hedge Funds on UCC**

This table presents the top 10 hedge funds appointed as UCC members in Chapter 11 bankruptcy. SEC filings, company official websites, and other specialized publications (e.g., *Barron's, Alpha Magazine,* and *Institutional Investors*) are utilized to identify hedge funds as one of the largest unsecured creditors on UCC. Panel A provides sample hedge funds that have a 13F identifier (MGRNO number) and a TASS identifier (companyid). For reference, Panel B presents hedge funds that have a 13F identifier but not a TASS identifier.

Panel A: Top Hedge Funds on UCC: Hedge Funds with 13F Coverage

Hedge Fund UCC Member	Cases Involved
Oaktree Capital Management	25
PPM America Special Investments Fund	12
Angelo, Gordon & Co. L.P.	8
Cerberus Capital Management	8
Loomis, Sayles & Co. L.P.	8
Magten Asset Management	8
Aegon Asset Management	7
Appaloosa Management L.P.	7
AQR Capital Management	7
Amalgamated Gadget L.P.	7

Panel B: Top Hedge Funds on UCC: Sample Hedge Funds

Hedge Fund UCC Member	Cases Involved
Angelo, Gordon & Co. L.P.	8
Cerberus Capital Management	8
Loomis, Sayles & Co. L.P.	8
Magten Asset Management	8
Aegon Asset Management	7
Appaloosa Management L.P.	7
AQR Capital Management	7
Elliott Investment Management	6
Highland Capital Management L.P.	5
York Capital Management	5

Table 2.12: **Firm Characteristics by UCC Hedge Fund**

This table provides comparisons among bankrupt firms with at least one sample hedge fund as a UCC member (Column (1)), bankrupt firms with at least one 13F hedge fund but not sample hedge funds as a UCC member (Column (2)), and bankrupt firms with no hedge funds as a UCC member (i.e., *Other Ins*, Column (3)) in the latest fiscal year before filing bankruptcy. For each variable, the mean and the median are reported. The last six columns present p-values from the two-sample t-tests and Wilcoxon rank-sum tests of the null hypothesis of there being no differences in firm characteristics across the subsample firms. Continuous financial variables are winsorized at the 1% and 99% levels to remove influential outliers. The definitions of variables on firm size and performance can be found in Table 2.1. Bankruptcy case–level characteristics are defined as follows: $Delaware$ is a dummy variable indicating whether the firm files bankruptcy in Delaware. DIP is a dummy variable indicating whether the firm obtains debtor-in-possession financing. $Prepack$ is a dummy variable indicating whether the bankruptcy filing is prepackaged or pre-negotiated. $Duration$ is defined as the number of months between bankruptcy filing date and the date on which the bankruptcy court entered its order approving the plan of reorganization, the dismissal of the case, or the conversion of the case to Chapter 7.

	Whole Sample (N=612)		Sample with HFs (13F and TASS) (N=144) (1)		Sample with HFs (13F and no TASS) (N=89) (2)		Sample with no HFs (N=379) (3)		(1) vs. (2)		(1) vs. (3)		(1+2) vs. (3)	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	t-test	rk-test	t-test	rk-test	t-test	rk-test
Size:														
Assets	6,018	1,054	10,921	1,375	6,265	1,230	4,096	932	0.536	0.875	0.088	0.010	0.112	0.002
Liabilities	5,932	1,081	10,114	1,342	5,784	1,185	4,379	924	0.545	0.888	0.140	0.007	0.185	0.002
Sales	2,875	839	2,853	925	3,714	966	2,686	819	0.576	0.998	0.861	0.338	0.581	0.239
Employees	8,458	2,900	8,155	3,400	8,380	2,900	8,592	2,700	0.907	0.382	0.832	0.064	0.837	0.099
Performance:														
ROA	0.009	0.045	0.007	0.048	0.048	0.048	0.000	0.041	0.154	0.366	0.800	0.722	0.309	0.293
Tangibility	0.361	0.328	0.416	0.384	0.363	0.345	0.338	0.300	0.210	0.233	0.007	0.009	0.017	0.019
Leverage	1.044	0.933	1.134	0.893	0.972	0.946	1.026	0.934	0.099	0.970	0.089	0.918	0.369	0.932
Secured debt/Liabilities	0.321	0.290	0.279	0.247	0.278	0.213	0.350	0.326	0.968	0.718	0.016	0.030	0.005	0.009
Bankruptcy Characteristics:														
Delaware	0.444	-	0.444	-	0.416	-	0.451	-	0.669	-	0.890	-	0.669	-
DIP	0.704	-	0.646	-	0.730	-	0.720	-	0.181	-	0.097	-	0.267	-
Prepack	0.270	-	0.292	-	0.292	-	0.256	-	0.994	-	0.410	-	0.332	-
Duration	514	364	483	379	566	442	513	344	0.296	0.353	0.548	0.859	0.973	0.761

Table 2.13: **Arrivals of UCC Events: Additional Fund Characteristics**

This table employs a long list of explanatory variables to examine the predictive power of hedge fund characteristics on the arrivals of UCC events. All explanatory variables are measured at the previous quarter-end. The specification is the same as Table 2.3. *HF Size* equals the natural log of assets under management for a hedge fund. *HF Flow* is the change in total fund size between two consecutive quarters net of the increase due to returns, expressed as a percentage of assets under management. *HF Return* is the weighted average of return rate of each fund product aggregated to the fund company level. *HF Age* is the natural log of the number of years since the institution's first appearance on the Refinitiv 13F database. *HF PortVol* is the monthly portfolio return volatility during the past 12 months. *IncentiveFee* and *ManagementFee* are in percentage points. *MinInvestment* is a dummy variable for funds with minimum investment requirement. *NumProduct* is the total number of fund products under a hedge fund management company. ***, **, and * stand for statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1) Event UCC	(2) Multiple UCC	(3) Num UCC	(4) Num UCC
Lag HF Size	0.009	0.000	0.010	0.391
	(1.321)	(0.057)	(1.300)	(1.317)
Lag HF Flows	-0.000	-0.000	-0.000	0.102
	(-0.483)	(-0.469)	(-0.498)	(0.501)
Lag HF Return	-0.000	-0.000	0.000	0.126
	(-0.006)	(-0.225)	(0.188)	(0.632)
Lag HF Age	-0.002	-0.000	-0.002	-0.053
	(-1.043)	(-0.417)	(-0.864)	(-0.588)
Lag HF PortVol	-0.002	-0.000	-0.003	-0.133
	(-0.779)	(-0.064)	(-0.795)	(-0.836)
Lag IncentiveFee	-0.023	-0.003	-0.025	1.558
	(-1.424)	(-0.543)	(-1.219)	(1.489)
Lag ManagementFee	-0.051	-0.018	-0.066	-1.658
	(-1.195)	(-0.847)	(-1.044)	(-1.073)
Lag MinInvestment	0.010	0.000	0.008	0.873
	(0.929)	(0.071)	(0.628)	(1.423)
Lag NumProduct	-0.002	0.003	-0.000	-0.250
	(-0.174)	(0.858)	(-0.032)	(-0.563)
Fund FE	Y	Y	Y	Y
YQ FE	Y	Y	Y	Y
N Obs	2,346	2,346	2,346	2,348
Pseudo R^2	-	-	-	0.379
Adj. R^2	0.041	0.034	0.049	-

Table 2.14: **Hedge Fund Trading upon UCC Events: Alternative Event Windows**

This table provides additional tests on whether hedge funds appointed as UCC members (UCC hedge funds) trade on MNPI of bankrupt firms using different event windows. The specification is the same as in Table 2.4. In particular, Panels A and B examine trading activities of UCC hedge funds in the five quarters and seven quarters after the bankruptcy event, respectively. Covariates include hedge fund size, flows, and rate of return, all measured at the previous quarter-end. All variables are defined in Table 2.1. From column (1) to column (4), the model is estimated using OLS. Column (5) is estimated using Poisson regression. Fund-fixed effects and year-quarter fixed effects are included, standard errors are double-clustered at the fund and year-quarter level, and t-statistics or z-statistics are reported with coefficients. ***, **, and * stand for statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Hedge Fund Trading upon UCC Events: Five Quarters

	(1) High Turnover	(2) High Turnover Buy	(3) High Turnover Sell	(4) Large Trade	(5) Num Large Trade
UCC Infor	0.098***	0.081***	0.110***	0.103***	0.278***
	(2.898)	(2.929)	(3.899)	(2.937)	(4.951)
Covariates	Y	Y	Y	Y	Y
Fund FE	Y	Y	Y	Y	Y
YQ FE	Y	Y	Y	Y	Y
N Obs	3,115	3,115	3,115	3,115	3,117
Pseudo R^2	-	-	-	-	0.812
Adj. R^2	0.484	0.467	0.470	0.572	-

Panel B: Hedge Fund Trading upon UCC Events: Seven Quarters

	(1) High Turnover	(2) High Turnover Buy	(3) High Turnover Sell	(4) Large Trade	(5) Num Large Trade
UCC Infor	0.122***	0.111***	0.125***	0.118***	0.272***
	(3.685)	(3.617)	(4.187)	(3.159)	(5.024)
Covariates	Y	Y	Y	Y	Y
Fund FE	Y	Y	Y	Y	Y
YQ FE	Y	Y	Y	Y	Y
N Obs	3,115	3,115	3,115	3,115	3,117
Pseudo R^2	-	-	-	-	0.813
Adj. R^2	0.487	0.470	0.472	0.574	-

Table 2.15: Hedge Fund Trading upon UCC Events: Drop Most Active Hedge Funds

This table examines whether hedge funds appointed as UCC members (UCC hedge funds) trade on MNPI in the six quarters following the UCC event after dropping the top 10 most active hedge funds involved in UCCs of bankrupt firms. The specification is the same as Table 2.4. Covariates include hedge fund size, flows, and rate of return, all measured at the previous quarter-end. All variables are defined in Table 2.1. From column (1) to column (4), the model is estimated using OLS. Column (5) is estimated using Poisson regression. Fund fixed effects and year-quarter fixed effects are included, standard errors are double-clustered at the fund and year-quarter level, and t-statistics or z-statistics are reported with coefficients. ***, **, and * stand for statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1) High Turnover	(2) High Turnover Buy	(3) High Turnover Sell	(4) Large Trade	(5) Num Large Trade
UCC Infor	0.112***	0.120***	0.125***	0.139***	0.230***
	(3.052)	(3.618)	(3.743)	(3.416)	(3.268)
Covariates	Y	Y	Y	Y	Y
Fund FE	Y	Y	Y	Y	Y
YQ FE	Y	Y	Y	Y	Y
N Obs	2,749	2,749	2,749	2,749	2,751
Pseudo R^2	-	-	-	-	0.805
Adj. R^2	0.491	0.470	0.476	0.578	-

Table 2.16: **Hedge Fund Trading upon UCC Events: No Prepackaged Bankruptcies**

This table examines whether hedge funds appointed as UCC members (UCC hedge funds) trade on MNPI in the six quarters following the UCC event for bankruptcy filings that are not prepackaged or pre-negotiated. The specification is the same as Table 2.4. Covariates include hedge fund size, flows, and rate of return, all measured at the previous quarter-end. All variables are defined in Table 2.1. From column (1) to column (4), the model is estimated using OLS. Column (5) is estimated using Poisson regression. Fund fixed effects and year-quarter fixed effects are included, standard errors are double-clustered at the fund and year-quarter level, and *t*-statistics or *z*-statistics are reported with coefficients. ***, **, and * stand for statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1) High Turnover	(2) High Turnover Buy	(3) High Turnover Sell	(4) Large Trade	(5) Num Large Trade
UCC Infor - No Prepack	0.097***	0.098**	0.088**	0.072*	0.297***
	(2.662)	(2.602)	(2.624)	(1.932)	(4.597)
Covariates	Y	Y	Y	Y	Y
Fund FE	Y	Y	Y	Y	Y
YQ FE	Y	Y	Y	Y	Y
N Obs	3,115	3,115	3,115	3,115	3,117
Pseudo R^2	-	-	-	-	0.812
Adj. R^2	0.484	0.468	0.468	0.570	-

Table 2.17: **Hedge Fund Trading upon UCC Events: Top 20 Unsecured Creditors Outside UCC**

This table investigates the trading behavior of hedge funds ranked among the top 20 largest unsecured creditors of a bankrupt company, excluding those on the UCC, over the six quarters following a UCC event. The specification is the same as Table 2.4. Covariates include hedge fund size, flows, and rate of return, all measured at the previous quarter-end. All variables are defined in Table 2.1. From column (1) to column (4), the model is estimated using OLS. Column (5) is estimated using Poisson regression. Fund fixed effects and year-quarter fixed effects are included, standard errors are double-clustered at the fund and year-quarter level, and *t*-statistics or *z*-statistics are reported with coefficients. ***, **, and * stand for statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1) High Turnover	(2) High Turnover Buy	(3) High Turnover Sell	(4) Large Trade	(5) Num Large Trade
Top20-NonUCC-HF UCC	-0.002	-0.030	-0.011	-0.010	0.095
	(-0.058)	(-0.465)	(-0.379)	(-0.274)	(0.824)
Covariates	Y	Y	Y	Y	Y
Fund FE	Y	Y	Y	Y	Y
YQ FE	Y	Y	Y	Y	Y
N Obs	408	408	408	408	416
Pseudo R^2	-	-	-	-	0.846
Adj. R^2	0.556	0.561	0.593	0.637	-

Table 2.18: **Hedge Fund Trading upon UCC Events—By Firm Size (Robustness Tests)**

This table provides robustness tests on whether hedge funds appointed as UCC members (UCC hedge funds) trade on MNPI from bankrupt firms of different firm sizes. A bankrupt firm is classified as either small or large based on its total assets, total liabilities, or sales compared to other firms in the same industry and year in the Compustat universe. Panel A.1 (Panel A.2 or Panel A.3) uses the 85th percentile of total assets (total liabilities or sales) as a threshold; Panel B.1 (Panel B.2 or Panel B.3) uses the 75th percentile of total assets (total liabilities or sales) as a threshold. The specification is the same as in Table 2.7. All variables are defined in Table 2.1. From column (1) to column (4), the model is estimated using OLS. Column (5) is estimated using Poisson regression. Fund-fixed effects and year-quarter fixed effects are included, standard errors are double-clustered at the fund and year-quarter level, and t-statistics or z-statistics are reported with coefficients. ***, **, and * stand for statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A.1: Hedge Fund Trading upon UCC Events: Firm Size (Total Assets–85th Percentile)

	(1) High Turnover	(2) High Turnover Buy	(3) High Turnover Sell	(4) Large Trade	(5) Num Large Trade
UCC Infor (Small Firms)	0.094**	0.094***	0.110***	0.089**	0.195***
	(2.511)	(2.930)	(3.104)	(2.438)	(2.762)
UCC Infor (Large Firms)	0.148***	0.129**	0.145***	0.182***	0.405***
	(2.695)	(2.408)	(3.226)	(2.897)	(6.735)
Covariates	Y	Y	Y	Y	Y
Fund FE	Y	Y	Y	Y	Y
YQ FE	Y	Y	Y	Y	Y
N Obs	3,115	3,115	3,115	3,115	3,117
Pseudo R^2	-	-	-	-	0.813
Adj. R^2	0.486	0.469	0.471	0.574	-

Panel A.2: Hedge Fund Trading upon UCC Events: Firm Size (Total Liabilities–85th Percentile)

	(1) High Turnover	(2) High Turnover Buy	(3) High Turnover Sell	(4) Large Trade	(5) Num Large Trade
UCC Infor (Small Firms)	0.085**	0.087**	0.104***	0.084**	0.137*
	(2.171)	(2.617)	(2.997)	(2.305)	(1.840)
UCC Infor (Large Firms)	0.152***	0.133***	0.147***	0.168***	0.434***
	(3.210)	(2.934)	(3.354)	(2.974)	(7.747)
Covariates	Y	Y	Y	Y	Y
Fund FE	Y	Y	Y	Y	Y
YQ FE	Y	Y	Y	Y	Y
N Obs	3,115	3,115	3,115	3,115	3,117
Pseudo R^2	-	-	-	-	0.813
Adj. R^2	0.485	0.469	0.471	0.574	-

Panel A.3: Hedge Fund Trading upon UCC Events: Firm Size (Sales–85th Percentile)

	(1) High Turnover	(2) High Turnover Buy	(3) High Turnover Sell	(4) Large Trade	(5) Num Large Trade
UCC Infor (Small Firms)	0.112***	0.110***	0.129***	0.103***	0.217***
	(3.117)	(3.803)	(4.215)	(2.837)	(3.216)
UCC Infor (Large Firms)	0.098	0.084	0.090*	0.145**	0.395***
	(1.587)	(1.563)	(1.713)	(2.173)	(5.691)
Covariates	Y	Y	Y	Y	Y
Fund FE	Y	Y	Y	Y	Y
YQ FE	Y	Y	Y	Y	Y
N Obs	3,115	3,115	3,115	3,115	3,117
Pseudo R^2	-	-	-	-	0.813
Adj. R^2	0.485	0.469	0.471	0.574	-

Panel B.1: Hedge Fund Trading upon UCC Events: Firm Size (Total Assets–75th Percentile)

	(1) High Turnover	(2) High Turnover Buy	(3) High Turnover Sell	(4) Large Trade	(5) Num Large Trade
UCC Infor (Small Firms)	0.076	0.081**	0.099**	0.085*	0.173*
	(1.654)	(2.069)	(2.361)	(1.849)	(1.709)
UCC Infor (Large Firms)	0.139***	0.125***	0.138***	0.142***	0.337***
	(3.525)	(3.210)	(3.891)	(3.384)	(6.825)
Covariates	Y	Y	Y	Y	Y
Fund FE	Y	Y	Y	Y	Y
YQ FE	Y	Y	Y	Y	Y
N Obs	3,115	3,115	3,115	3,115	3,117
Pseudo R^2	-	-	-	-	0.813
Adj. R^2	0.486	0.469	0.471	0.574	-

Panel B.2: Hedge Fund Trading upon UCC Events: Firm Size (Total Liabilities–75th Percentile)

	(1) High Turnover	(2) High Turnover Buy	(3) High Turnover Sell	(4) Large Trade	(5) Num Large Trade
UCC Infor (Small Firms)	0.060	0.077	0.090*	0.075	0.263**
	(1.100)	(1.515)	(1.847)	(1.295)	(2.269)
UCC Infor (Large Firms)	0.134***	0.117***	0.135***	0.135***	0.288***
	(3.703)	(3.496)	(3.981)	(3.567)	(5.266)
Covariates	Y	Y	Y	Y	Y
Fund FE	Y	Y	Y	Y	Y
YQ FE	Y	Y	Y	Y	Y
N Obs	3,115	3,115	3,115	3,115	3,117
Pseudo R^2	-	-	-	-	0.813
Adj. R^2	0.486	0.469	0.471	0.574	-

Panel B.3: Hedge Fund Trading upon UCC Events: Firm Size (Sales–75th Percentile)

	(1) High Turnover	(2) High Turnover Buy	(3) High Turnover Sell	(4) Large Trade	(5) Num Large Trade
UCC Infor (Small Firms)	0.110**	0.108**	0.135***	0.109**	0.273***
	(2.350)	(2.636)	(3.119)	(2.232)	(2.870)
UCC Infor (Large Firms)	0.107**	0.099**	0.105***	0.119***	0.286***
	(2.612)	(2.538)	(2.795)	(2.863)	(4.603)
Covariates	Y	Y	Y	Y	Y
Fund FE	Y	Y	Y	Y	Y
YQ FE	Y	Y	Y	Y	Y
N Obs	3,115	3,115	3,115	3,115	3,117
Pseudo R^2	-	-	-	-	0.813
Adj. R^2	0.485	0.469	0.471	0.573	-

Table 2.19: **Updates Regarding Refinitiv Ownership Data Issues: Tables**

This table presents evidence that the data quality issues in the Refinitiv 13F database were resolved as of July 2023. Panel A uses BlackRock Inc. as an example, and Panel B features Apple Inc. For the purpose of comparison, Panel A.1 and Panel B.1 are tables from the "Research Note Regarding Thomson-Reuters Ownership Data Issues," whereas Panel A.2 and Panel B.2 are tables following the same criteria as tables in Panel A.1 and Panel B.1, but based on the latest version of the Refinitiv 13F database. The detailed sample construction method is in the Online Appendix of Ben-David et al. (2021) and the aforementioned research note from WRDS Research.

Panel A.1: BlackRock Inc. Stock Holdings from WRDS Research Note May 2017

MGRNO	fdate	Manager Name	Report Date	File Date	13F Assets	Note
9385	2012-03-31	BLACKROCK INC.	2012-03-31	2012-03-31	$725,428.00	
9385	2012-06-30	BLACKROCK INC.	2012-06-30	2012-06-30	$702,026.00	
9385	2012-09-30	BLACKROCK INC.	2012-09-30	2012-09-30	$710,955.00	
9385	2012-12-31	BLACKROCK INC.	2012-12-31	2012-12-31	$707,000.00	
9385	2013-03-31	BLACKROCK INC.	2013-03-31	2013-03-31	$815,320.00	
9385	2013-06-30	BLACKROCK INC.	2013-06-30	2013-09-30	$819,888.00	
9385	2013-09-30	BLACKROCK INC.	2013-06-30	2013-09-30	$864,935.00	Stale Record
9385	2013-12-31	BLACKROCK INC.	2013-06-30	2013-09-30	$940,828.00	Stale Record
9385	2014-03-31	BLACKROCK INC.	2013-06-30	2013-09-30	$947,754.00	Stale Record
	2014-06-30					Missing Record
	2014-09-30					Missing Record
	2014-12-31					Missing Record
	2015-03-31					Missing Record
9385	2015-06-30	BLACKROCK INC.	2015-06-30	2015-06-30	$48,229.00	Incorrect Record
9385	2015-09-30	BLACKROCK INC.	2015-09-30	2015-09-30	$44,882.00	Incorrect Record

Panel A.2: BlackRock Inc. Stock Holdings as of the Lastest Draft of Our Paper

MGRNO	Manager Name	Report Date	File Date	13F Assets	Note
9385	BLACKROCK INC.	2012-03-31	2012-03-31	$875,643.33	
9385	BLACKROCK INC.	2012-06-30	2012-06-30	$831,668.43	
9385	BLACKROCK INC.	2012-09-30	2012-09-30	$846,933.29	
9385	BLACKROCK INC.	2012-12-31	2012-12-31	$856,461.91	
9385	BLACKROCK INC.	2013-03-31	2013-03-31	$974,637.37	
9385	BLACKROCK INC.	2013-06-30	2013-06-30	$988,731.61	No Stale or Missing Record
9385	BLACKROCK INC.	2013-09-30	2013-09-30	$1,063,401.44	No Stale or Missing Record
9385	BLACKROCK INC.	2013-12-31	2013-12-31	$1,158,718.80	No Stale or Missing Record
9385	BLACKROCK INC.	2014-03-31	2014-03-31	$1,183,717.28	No Stale or Missing Record
9385	BLACKROCK INC.	2014-06-30	2014-06-30	$1,233,652.17	No Stale or Missing Record
9385	BLACKROCK INC.	2014-09-30	2014-09-30	$1,218,726.92	No Stale or Missing Record
9385	BLACKROCK INC.	2014-12-31	2014-12-31	$1,313,858.22	No Stale or Missing Record
9385	BLACKROCK INC.	2015-03-31	2015-03-31	$1,339,730.50	No Stale or Missing Record
9385	BLACKROCK INC.	2015-06-30	2015-06-30	$1,325,713.91	No Stale or Missing Record
9385	BLACKROCK INC.	2015-09-30	2015-09-30	$1,229,413.59	No Stale or Missing Record

Panel B.1: The Number of 13F Institutions and APPL Ownership from WRDS Research Note May 2017

Thomson 13F Institutional Ownership Data (S34)			
File Date	# of Institutions (mgrnos)	# of Institutions with AAPL Ownership	Inst. Ownership of AAPL in Thomson S34
2012-06-30	3,315	1,853	610,017,713
2012-09-30	3,261	1,865	609,991,935
2012-12-31	3,454	1,894	574,073,371
2013-03-31	3,492	1,908	561,021,234
2013-06-30	3,506	1,881	535,325,538
2013-09-30	3,406	1,841	524,699,863
2013-12-31	3,739	2,056	523,773,321
2014-03-31	3,763	2,049	516,786,227
2014-06-30	3,772	2,124	3,665,520,154
2014-09-30	3,707	2,111	3,531,420,698
2014-12-31	3,719	2,116	3,029,086,294
2015-03-31	3,709	2,143	2,819,825,800
2015-06-30	3,608	0	0
2015-09-30	3,523	0	0
2015-12-31	3,497	0	0

Panel B.2: The Number of 13F Institutions and APPL Ownership as of the Lastest Draft of Our Paper

Thomson 13F Institutional Ownership Data (S34)			
File Date	# of Institutions (mgrnos)	# of Institutions with AAPL Ownership	Inst. Ownership of AAPL in Thomson S34
2012-06-30	3,230	1,861	632,728,949
2012-09-30	3,214	1,876	621,500,906
2012-12-31	3,404	1,924	596,614,842
2013-03-31	3,393	1,916	564,727,080
2013-06-30	3,370	1,875	553,550,109
2013-09-30	3,376	1,908	544,594,798
2013-12-31	3,713	2,088	543,156,976
2014-03-31	3,714	2,065	527,573,789
2014-06-30	3,732	2,138	3,717,765,224
2014-09-30	3,711	2,145	3,562,308,240
2014-12-31	4,044	2,315	3,552,543,107
2015-03-31	4,037	2,350	3,503,097,452
2015-06-30	3,973	2,342	3,342,373,805
2015-09-30	3,945	2,314	3,220,854,917
2015-12-31	4,137	2,412	3,203,302,075

Chapter 4

The Disappeared Outperformance of Post-reorg Equity

Using trading information of a comprehensive sample of relisted Chapter 11 firms in the past few decades, we find that an equal-weighted calendar-time portfolio generates 7.2% annualized excess returns over a five-factor benchmark from 1992 to 2019. However, the outperformance concentrates in the 2000s, when institutional ownership of post-reorganization equity increased significantly. The positive post-emergence earnings announcement returns disappear in the most recent decade, and stocks of firms have better initial valuation after emergence. The evidence suggests that the outperformance of post-reorg equity documented in earlier studies is most likely due to market expectation errors for future earnings and thus initial undervaluation, which has been corrected in the recent period by sophisticated institutional investors.

Keywords: Bankruptcy, Stock Returns, Factor Models, Earnings Announcement, Institutional Investors

JEL classification: G11, G14, G33

4.1 Disclaimer

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Chapter 5

Thesis Summary

5.1 Conclusion

This dissertation has explored the intricate dynamics of Chapter 11 bankruptcy, documenting critical insights into how bankruptcy regimes not only aid in economic stabilization but also influence firm behavior and market dynamics. The analysis presented in three comprehensive essays highlights the multifaceted roles of financial advisors, the implications of material nonpublic information on hedge funds' trading activities, and the performance of equity post-reorganization.

The first essay is related to "incentives". It examines why managers of bankrupt companies retain top-tier investment banks as financial advisors during Chapter 11 bankruptcies. The findings suggest that these advisors play a multifaceted role in the process. Consistent with the 'value-enhancing' perspective, the use of top-tier advisors is associated with expedited restructurings. They facilitate the restructuring process and enhance firm value by mitigating negotiation frictions, securing timely financing, and restructuring public debt. However, according to the 'self-serving' perspective, firms advised by top-tier banks are more likely to remain independent after distress resolution, although this does not lead to improved post-emergence performance or reduced recidivism rates. Further investigations into managerial career changes around Chapter 11 reveal a decreased likelihood of replacing incumbent management with the presence of top-tier advisors. In summary, while these advisors facilitate quicker resolutions, their engagement also caters to managers' desires to maintain control and secure their positions.

The second essay is about "information". It analyzes the stock trading activities of hedge funds serving on the Unsecured Creditors' Committee (UCC) of a bankrupt firm. As large unsecured creditors, these hedge funds have access to material nonpublic information from the UCC. Consequently, hedge funds as UCC members are prohibited from trading securities of the bankrupt firm according to the SEC's insider trading rules. The study provides the first piece of empirical evidence that hedge funds have higher portfolio turnover and make large trades in the few quarters after accessing such information. Hedge funds do not trade differently after accessing public information of bankrupt firms or when they are not UCC members. Hedge funds' large trades concentrate in firms that have close economic links to the bankrupt firm. Moreover, returns from large trades driven by access to material nonpublic information are substantial. The evidence collectively suggests that hedge funds exploit material nonpublic information in corporate bankruptcies to trade across firms and across asset markets.

The third essay, focusing on "investments", examines the performance of equity issued by public companies that emerged from Chapter 11 bankruptcy, namely, post-reorg equity. Using trading information from a comprehensive sample of relisted Chapter 11 firms over the past few decades, the study shows that one-year characteristics-adjusted buy-and-hold returns of post-reorg equity range from 35% to 49%. An equal-weighted calendar-time portfolio of post-reorg stocks generates 7.2% annualized excess returns over a five-factor benchmark from 1992 to 2019. More importantly, this study uncovers a novel phenomenon: the previously documented outperformance of post-reorg equity has disappeared in recent decades. This disappearance is attributed to corrected market expectation errors, resolved information discrepancies between emerged firms and investors, and the influence of institutional investors, particularly hedge funds and investment management companies.

All told, this dissertation investigates the incentives of managers and financial advisors, the exploitation of material nonpublic information by hedge funds, and the investment returns in post-reorg equities in Chapter 11 bankruptcies. This research advances our understanding of the strategic behaviors and financial outcomes associated with Chapter 11 bankruptcies, pinpointing critical areas for regulatory and managerial attention.

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Appendix A

Appendix: "Financial Advisors, CEO Control Benefits, and Chapter 11 Bankruptcies"

This Online Appendix explains the procedures of data construction, illustrates institutional details, and provides additional empirical results. The goal of these additional results is to check the robustness of the main results presented in the paper. The intuition and summary of these results are in the main body of the paper with corresponding references.

A.1 Data Construction

In this section, I present details on combining the Florida-UCLA-LoPucki Bankruptcy Research (BRD) database and the New Generation Research BankruptcyData.com (NGR) database.

To begin, I retrieve a sample of Chapter 11 cases filed by "public and large private companies" in the NGR database. Then, I identify cases from the BRD database in the

NGR database. Since the BRD database covers all large, public company bankruptcies with $100 million or more in total assets (measured in 1980 dollars), cases in the BRD database are expected to be a subset of the NGR database, given that the NGR considers cases meeting the following criteria: *"We compile a database of case information for all companies that file for bankruptcy in the 94 U.S. Bankruptcy Courts in near real time. We also track and report on public companies currently operating under Chapter 11 protection, in addition to all companies with $50 million in assets or liabilities."* By comparing bankruptcy filing date, court location, and other case-level characteristics, I identify 593 cases from the BRD database among the 2,355 cases from the NGR database. The NGR database does not cover 7 cases from the BRD database. Taken together, there are 2362 (2355+7) cases in the BRD/NGR combined dataset, of which 593 cases are included in both databases, 1762 cases are from the NGR database, and 7 cases are from the BRD database.

When a company files for Chapter 11 bankruptcy, each of its subsidiaries will file separate petitions in the same court on the same day or soon thereafter. In the above combination process, I find that the NGR database has a tendency to record the member case filed by members of a corporate group rather than the lead case filed by the parent company when there are overlaps between the NGR database and the BRD database. To address this issue, I consolidate member cases of a group into one case following the protocols for the BRD database (see Section 2 on "Definition of a Case"). Specifically, if the bankruptcy cases of several members of a corporate group are pending before the same court at the same time, the court will consolidate the cases, administratively or substantively, and they will constitute one case. If the case of a group member proceeds independently, resulting in confirmation of a separate, independent plan at a different time, the case of the group member is not part of the "case." In addition, I check the court dockets from the PACER database to reconcile discrepancies in bankruptcy filing dates between the NGR database and the BRD database. Moreover, I remove financial firms and utility firms (SIC code: between 4900 and 4999; between 6000 and 6999). After these procedures, I obtain the combined data set with 2,094 Chapter 11 filings, of which 495 cases are included in both databases, 1596 cases are from the NGR database, and 3 cases are from the BRD database.

Appendix B

Appendix: "Do Hedge Funds Exploit Material Nonpublic Information? Evidence from Corporate Bankruptcies"

This Online Appendix explains the procedures of sample construction, elucidates institutional details, provides supplementary empirical results, and investigates data issues documented in previous studies. The goal of these additional results is to check the robustness of the main results presented in the paper. The intuition and summary of these results are in the main body of the paper with corresponding references.

B.1 Name-Matching Procedures

In this section, we provide details on name-matching procedures between UCC members and 13F institutional investors. We conduct the following two steps to match UCC member names with the historical names of 13F institutional investors.

First, we match UCC members and 13F institutions by name, supplemented by cross-checking the address and the representative of a UCC member with the 13F filings of the same entity. We obtain a complete list of historical management company names (MGRNAME) and identifiers (MGRNO) from the Refinitiv Institutional Holdings (13F) database. This dataset is arranged by the MGRNAME-MGRNO pair and tracks the name changes of any investment company that has ever filed a Form 13F with the SEC on a quarterly basis.[1] We first remove punctuation and entity designations from the names of UCC members and 13F institutions. For UCC members, the strings include "and Subsidiaries," "and Affiliates," " Association," "N.A.," "Corporation," "Company," "Corp.," "Co.," "Inc.," "Limited," "LP," and any variant thereof. For 13F institutions, strings such as "MANAGEMENT COMPANY," "MANAGEMENT SA," "MANAGEMENT INC.," "MGMT CORP," "MGMT LTD," "INCORPORATED," "INC.," "LP," "LLC," "PTNR," "SVCS.," and any variant thereof are removed. We then use the COMPLEV function in SAS to generate a list of potential matches between the names of UCC members and the historical names of 13F institutions. Next, we manually verify whether these potential matches are accurate matches. Specifically, we cross-check the address and the representative of a UCC member with the 13F filings of the same entity in the quarter of UCC formation.[2] For example, UCC member "Pentwater Capital Management LP" for the bankrupt company Samson Resources Corporation matches with 13F institutional investor "PENTWATER CAPITAL MGMT LP" with MGRNO 11894. On the UCC notice of the case, "Pentwater Capital Management LP" is associated with the address "614 Davis St., Evanston, IL," which is exactly the same as the address on the Form 13F filed in the quarter of UCC

[1]MGRNO is the manager number for a particular investment company assigned by 13F. Note that the MGRNO identifiers are reused. According to the 13F data manual, a gap of more than one year in the reporting date for the same MGRNO typically reflects a different and unrelated manager. In other cases, a manager may be reassigned a different MGRNO, usually when a name change occurs. However, most name changes are not associated with a different MGRNO, but instead reflect an official name change or a different manner of abbreviating the same name. We take into account these data details in our name-matching process.

[2]A few UCC members do not file Form 13F around the corresponding UCC event but instead file Form 13F in other quarters during our sample periods. In other words, we are able to identify MGRNO for these UCC members, but we could not observe their stock holdings around a UCC event. We include these institutions in our sample because we are interested in hedge funds that have ever appeared on a UCC (we define these funds as distressed hedge funds). Section 3.4.4 relies on all of our in-sample distressed hedge funds and presents supporting evidence of our main results.

formation.[3]

Second, we examine UCC members for whom we fail to find a match after the first step. A simple name-match may overlook institutional investors since some UCC member names are at the fund level or subsidiary level, whereas the names of 13F institutions are at the management company level.[4] We proceed by searching each UCC member for which we fail to find a match after the first step in EDGAR, supplemented by internet searches, to check whether a fund is under a particular management company, and more importantly, to check whether the associated management company files Form 13F. Similarly, we cross-check the address and the representative of a UCC member with the 13F filings of the corresponding management company.

Importantly, we take mergers and acquisitions (M&A) between financial institutions, especially full-service banks, into account in the name-matching process. We obtain information on M&A of a UCC member from the Securities Data Company (SDC) Platinum M&A database. For example, Fleet Financial Group merged with BankBoston to form Fleet Boston Corporation on March 14, 1999. The merged entity continued to use the MGRNO 38260 until Fleet Boston was acquired by Bank of America on October 27, 2003. We use the MGRNO 62890 of Bank of America for all UCC member names associated with Fleet Boston or Fleet Financial Group after the merger date. Another example is Allied Capital Corporation, a private equity firm. On April 1, 2010, Allied Capital Corporation was acquired by Ares Capital Management, a hedge fund company. However, the bankruptcy case in which Allied Capital Corporation served as a UCC member was filed on June 1, 1999. Although we know the MGRNO for Ares Capital Management, we can not use it for Allied Capital Corporation because the merger did not happen at the time of the UCC formation.

[3]Samson Resources Corporation filed for bankruptcy on September 16, 2015. Therefore, we check the Form 13F at the end of September 2015. See `https://www.sec.gov/Archives/edgar/data/1425851/000114036115041820/xslForm13F_X01/primary_doc.xml` for details.

[4]Most of the UCC member names that are at the fund level also list the associated management company. For example, Hutchin Hill Capital Primary Fund, Ltd. c/o Hutchin Hill Capital, LP.

We follow similar procedures to match UCC members with hedge funds in the Lipper hedge fund database.[5]

[5]We thank Yuehua Tang for sharing with us the link-file of the Lipper hedge fund database and the 13F filings.

B.2 Updates Regarding the Refinitiv Ownership Data Issues

As Ben-David et al. (2021) pointed out that the Refinitiv Institutional Holdings (13F) database exhibits an increase in stale data, excluded securities, and the number of dropped institutions beginning in June 2013, we conduct the following tests to investigate the magnitude of the problem and conclude that Refinitiv has fixed these data quality issues as of the latest draft of our paper.

We follow the "Research Note Regarding Thomson-Reuters Ownership Data Issues" from WRDS Research in May 2017 to fix the 13F data problem.[6] In particular, we obtain the 13F dataset based on original SEC 13F filings from the WRDS SEC Analytics Suite Database. Then, we follow and double-check the data fix SAS code from WRDS Research to construct an updated 13F institutional holdings' dataset (13F EDGAR thereafter) from June 2013 to March 2021.[7] To compare the magnitude of the data quality issues, we follow the same procedures to construct a 13F institutional holdings' dataset (13F Refinitiv thereafter) in the same sample period.

The following tests support our argument that the Refinitiv 13F ownership database does not have quality issues as stated in Ben-David et al. (2021) as of July 2023. First, we compare the number of unique 13F institutions between 13F EDGAR and 13F Refinitiv. In Appendix Figure 2.7, the number of reporting 13F institutions from both data sources follows almost the same trajectory from June 2013 to December 2019. However, we observe that the number of 13F institutions is larger in 13F Refinitiv starting from March 2020. The number of 13F institutions drops sharply from September 2020 to December

[6]See https://wrds-www.wharton.upenn.edu/documents/533/Research_Note_-Thomson_S34_Data_Issues.pdf for detail. In fact, further investigation shows that the 13F data issue was not resolved as of May 2020. Page 11 of https://wrds-www.wharton.upenn.edu/documents/1414/WRDS_Ownership_Data.pdf, issued by WRDS Research, says, *"As of May 2020, Thomson-Reuters 13F Data (SP, S34) is missing few entities (e.g. Blackrock) for 2018."*

[7]As of July 2023, the WRDS SEC Analytics Suite Database did not update this dataset. We conjecture that WRDS stopped updating the database perhaps because the data issue in the Refinitiv 13F database had been resolved after March 2021.

2020 in 13F EDGAR. Second, we find that institutional ownership of US common stocks is around 70% for both 13F EDGAR and 13F Refinitiv from June 2013 to December 2020 as in Appendix Figure 2.8. We notice that common stocks' institutional ownership is slightly higher in the first half of the sample period for the 13F EDGAR dataset. However, we observe that the ownership number drops drastically from December 2020 to March 2021 at the same time. We therefore argue that the latest version of 13F Refinitiv might be a better choice for studying institutional ownership of US common stocks given the negligible difference between the two datasets and the drastic decrease in 13F EDGAR. To provide more direct evidence to support our argument, we replicate the tables on pages three and four of the "Research Note Regarding Thomson-Reuters Ownership Data Issues." Researchers from WRDS noticed that Refinitiv dropped several institutions from their coverage and used stale carried-forward holdings beginning from the last quarter of 2013. To illustrate their point, they provided the holding reports of BlackRock Inc. as an example (see Panel A.1 of Appendix Table 2.19). We show that there is no stale or missing record for BlackRock Inc. during the same period using 13F Refinitiv (see Panel A.2 of Appendix Table 2.19). Moreover, they observed that Apple Inc. was missing from Refinitiv after June 2015 (see Panel B.1 of Appendix Table 2.19). We show that this is no longer the case. Both the number of 13F institutions that own Apple Inc.'s stocks and the shares of Apple Inc. owned by 13F institutions are stable during the same sample period (see Panel B.2 of Appendix Table 2.19). Taken together, we conclude that the Refinitiv 13F ownership database does not have quality issues as of the writing of our paper.

B.3 Examples on Material Nonpublic Information

In this section, we provide two examples to illustrate the content of material nonpublic information that can be obtained by hedge funds from serving on a UCC using the SEC complaint against Barclays Bank PLC and Steven J. Landzberg filed on May 30, 2007, and the SEC complaint against Daniel B. Kamensky filed on September 3, 2020, in the United States District Court for the Southern District of New York. We choose these two cases because the MNPI originating from the UCC is explicitly outlined in the corresponding SEC complaints. We collect the complaint documents from the official SEC website.

B.3.1 Galey & Lord, Inc.

According to the facts section of the SEC complaint against Barclays Bank PLC and Steven J. Landzberg, the US Trustee appointed Barclays to the official unsecured creditors committee of the bankrupt company Galey & Lord Inc. on March 1, 2002. Landzberg, who was a director and proprietary trader for Barclays, signed the official unsecured committee bylaws and submitted the creditors committee acceptance form to the US Trustee, which included confidentiality provisions, trading prohibitions, and an acknowledgment of fiduciary responsibility. However, Barclays made 15 illegal trades in Galey & Lord's bond securities, while Lanzberg had access to MNPI about Galey & Lord Inc. Importantly, the complaint emphasizes the specific content of the MNPI: *"At the time of these trades, the defendants (Barclays Bank PLC and Steven J. Landzberg) had material nonpublic information by virtue of membership on the Official Unsecured Creditors Committee—including but not limited to the company's most recent business plans, detailed management projections, proprietary analyses from committee advisors, and other information concerning the terms and status of the restructuring negotiations."*

B.3.2 Neiman Marcus Group Ltd. LLC

The SEC complaint against Daniel B. Kamensky points directly to hedge funds as UCC members and illustrates one type of MNPI that hedge funds exploit to advance their own pecuniary purposes. Kamensky founded hedge fund company Marble Ridge Capital LP and served as managing partner and portfolio manager for the firm. One of the largest unsecured debt holders of Neiman Marcus Group Ltd. LLC, Marble Ridge, represented by Kamensky, was elected as one of the three co-chairs of Neiman's UCC. In the solicitation letters to potential UCC members, the US Trustee states that UCC members would be required to act as *"fiduciaries who represent all unsecured creditors as a group."* In other words, the actions taken by UCC members must be aligned with the best interests of unsecured creditors as a group. However, Kamensky abused his role by utilizing MNPI obtained from the UCC to his own advantage. Kamensky bid for the Series B shares at $0.20 per share from other unsecured creditors wishing to sell their shares according to the plan of reorganization. Within an hour of learning of a competing bid for the Series B shares at $0.30 per share from the UCC's financial advisor, Kamensky tried to manipulate the offering of those securities and coerced the rival bidder to abandon its higher bid so that his own hedge fund company could obtain those securities at a lower price, but at the cost of all other unsecured creditors, who could have sold the Series B shares at $0.30 per share to the competing bidder. The complaint states: *"Kamensky had given the UCC the false impression that he would act appropriately during the bidding process in light of his fiduciary duty but then used information he obtained from his role on the UCC to intimidate a competing bidder and artificially reduce the price of the securities for Marble Ridge's financial gain....This fraudulent conduct violated Kamensky's fiduciary obligations to the UCC."*