

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

Wei Wang      Yan Yang      Jingyu Zhang<sup>†</sup>

April 20, 2023

## Abstract

Serving on unsecured creditors' committee (UCC) of a bankrupt firm, hedge funds gain access to material nonpublic information. Although hedge funds are prohibited from trading bankrupt firm's securities with information access, less is known about whether such information access facilitates hedge funds' trading in securities of non-bankrupt firms. We show that hedge funds have higher portfolio turnover and make large trades in the few quarters after joining UCC. Hedge funds do not trade differently after accessing public information of bankrupt firms, and other institutional investors do not experience abnormal portfolio turnover after joining UCC. Hedge funds' large trades concentrate in stocks of nonbankrupt firms that have close economic linkages with the bankrupt firm. Those trades are profitable. The evidence suggests that hedge funds exploit material nonpublic information to trade across asset markets.

*Keywords:* Bankruptcy, Unsecured Creditors' Committee, Hedge Funds, Private Information, Trading

*JEL classification:* G14, G23, G33

---

\*We thank Xing Liu, Justin Murfin, Valeri Sokolovski, Natee Amornsiripanitch, and seminar participants at Financial Markets and Corporate Governance Conference, HEC Montreal, and Queen's University for their helpful comments. We are grateful for the excellent research assistance of Marco Iskander and Kevin Doyle. We also thank Yuehua Tang for sharing with us the link-file of Lipper Tass hedge fund Database and 13F filings and acknowledge the funding support of the Social Sciences and Humanities Research Council of Canada (SSHRC). All errors are our own.

<sup>†</sup>Stephen J.R. Smith School of Business, Queen's University, Kingston, Ontario, Canada, K7L2N6.  
Author emails: [wwang@queensu.ca](mailto:wwang@queensu.ca), [yan.yang@queensu.ca](mailto:yan.yang@queensu.ca), and [jingyu.zhang@queensu.ca](mailto:jingyu.zhang@queensu.ca), respectively.

# 1 Introduction

Hedge funds play a prominent role in shaping the restructuring outcomes of financially distressed firms (Jiang, Li, and Wang, 2012, Lim, 2015, Elias, 2016). Their deep knowledge in understanding the legal process of bankruptcy reorganization, activism in corporate governance, and sophisticated strategies in trading distressed securities allow distress-investing hedge funds to generate superior returns in the past three decades in the US (Figure 1).

[Insert Figure 1 Here]

Hedge funds' most popular entry point in the capital structure of distressed firms is unsecured debt because its "fulcrum" nature and option-like payoffs. Holding large amount of unsecured bonds of a financially distressed firm, hedge funds often join the unsecured creditors' committee (UCC) shortly after the firm files for Chapter 11 bankruptcy. Owing fiduciary duties to all represented unsecured creditors and sitting on the front seat of the bargaining table, UCC members are granted by court to access firm's material non-public information such as its proprietary financial projections and business plans as well as 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 and has, in fact, imposed significant penalties on firms and individuals that violated those rules through its enforcement actions.

Although they may be disincentivized to trade bankrupt firms' debt securities while serving on the UCC given those rules, little is known about whether hedge funds exploit material nonpublic information of the bankrupt firm to facilitate their trading across asset markets. This paper is the first study to examine whether hedge funds trade securities of

nonbankrupt firms after gaining access to material nonpublic information of a bankrupt firm.<sup>1</sup>

We construct a comprehensive sample of hedge funds' involvement in the UCC 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), we search electronic court dockets obtained from the Public Access to Court Electronic Records Database (PACER) to determine whether the U.S. Trustee appointed an 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 with an UCC formed.<sup>2</sup> We find that about 40% of Chapter 11 cases have at least one hedge fund serving on the UCC. We merge all institutional investors with Refinitiv 13F Database and for hedge funds, we further merge them with the Lipper TASS Hedge Fund Database. There are 79 unique hedge funds that served on the UCC and appear in both data sources.

An identifying assumption for our main empirical tests is that hedge funds trade large quantity of distressed debt of a portfolio of firms. A bankruptcy filing triggers UCC formation and thus hedge funds' access to information, rather than hedge funds endogenously buying large amount of debt right before or after a bankruptcy filing. This assumption is plausible given that UCC is typically formed within a few weeks of a Chapter 11 filing and distressed bonds are highly illiquid, making it challenging for a hedge

---

<sup>1</sup>Prior literature shows that an important source for hedge funds' superior performance is their ability to access and process private information (Massoud, Nandy, Saunders, and Song, 2011, Gao and Huang, 2016, Gargano, Rossi, and Wermers, 2017, Kumar, Mullally, Ray, and Tang, 2020). Yet none of the studies provides direct evidence on hedge funds' 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 have close connections with corporate insiders and use material nonpublic information extracted for trading.

<sup>2</sup>We use "hedge funds" to refer to hedge fund management companies since we observe their stock holdings at the company level.

fund to build up a large stake in a short period of time (Longstaff, Mithal, and Neis, 2005, Chen, Lesmond, and Wei, 2007). Nonetheless, before performing our main tests, we empirically verify that the arrival of an UCC event is not predictable based on observable features of hedge funds. Specifically, we generate alternative measures to describe the arrival of UCC events and find that none of these measures is correlated with hedge fund characteristics in a statistically significant pattern.

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 after joining UCC, hedge funds are more likely to have high portfolio turnover by 13.6 percentage points. This translates into a 30% 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 more likely to make large-size trades by 10.9 percentage points. This probability differential is of economic significance, when compared with the sample mean of *Large Trade* being 57.5 percentage points. On the extensive margin, our evidence indicates that hedge funds tend to make a greater number of large-size trades after being appointed as UCC members.

We perform an extensive battery of additional tests to ensure that the abnormal stock trading activities that we document are driven by access to private information through UCC. First, we parallel-shift the arrival of UCC events by various time periods and find that UCC hedge funds do not exhibit abnormal trading behavior around these pseudo-events. Our evidence indicates no abnormal stock trading activities by UCC hedge funds when no material nonpublic information of bankrupt firms is in presence.

Second, we examine whether hedge funds specializing in distress debt markets have abnormal trading behavior in the presence of bankruptcy-filing events but in the absence

of UCC formation. That is, we investigate whether UCC hedge funds act upon private information or public information released by the bankrupt firm at bankruptcy filing. We classify all hedge funds that have ever involved with an UCC event throughout our sample period as specialized investors in distress debt markets. We examine their stock trading activities around bankruptcy-filing events where no UCC is formed. Our evidence indicates that these specialized hedge funds do not exhibit abnormal trading behavior simply due to some firms filing for bankruptcy. These findings are consistent with our argument that it is the UCC private information that drives our main results.

Third, we examine whether distressed hedge funds trade abnormally when an UCC is formed but none of the UCC members are hedge funds. We find that distressed hedge funds do not exhibit abnormal stock trading activities in the presence of non-hedge-fund UCC members. If any statistical pattern, they seem to avoid trading much or having large-size trades during these times.

Finally, we investigate whether non-hedge-fund institutional investors trade differently after joining an UCC. Compared to hedge funds, other traditional institutional investors such as pension funds and mutual funds are required by law to maintain diversified and prudent portfolios and face stricter compliance requirements. Furthermore, hedge fund managers are more incentivized and skillful to take risks than other institutions due to their performance fee structure. As a result, non-hedge fund institutional investors are not likely to exploit material nonpublic information for trading cross asset markets. Our results show no statistically different trading behavior of non-hedge-funds institutional investors shortly after their UCC appointment. Our evidence shows that the abnormal stock trading activities around UCC events concentrates in hedge funds.

To investigate the type of stocks traded by UCC hedge funds, we explore whether a

firm traded by hedge funds has an economic linkage with the bankrupt firm. We consider whether the two firms are in the same Fama-French 12 industries, have customer-supplier relationship, or share similar product markets as established by [Hoberg and Phillips \(2010, 2016\)](#). We conjecture that private information is more relevant and valuable to trading firms that have an economic linkage with the bankruptcy-filing firm. Our results confirm this conjecture and show that large trades by UCC hedge funds are more likely to happen among stocks of nonbankrupt firms that have underlying economic linkage with the bankrupt firm.

In the last set of tests, we investigate how profitable it is for hedge funds to trade upon access to material nonpublic information. Specifically, for each point in time, we form two ad-hoc portfolios, namely, the large-trade portfolio and the small-trade portfolio, from all stock holdings of an UCC hedge fund. We first calculate the DGTW-adjusted return for each stock in the large-trade portfolio of each UCC hedge fund at the quarterly frequency. We then calculate the value-weighted average to obtain a portfolio-level DGTW-adjusted return before consolidating the large-trade portfolio of each UCC hedge fund at quarter  $t$  into an aggregate large-trade portfolio to obtain the value-weighted average of portfolio-level DGTW-adjusted returns. We compare the performance of this aggregate large-trade portfolio with that of a similarly constructed aggregate small-trade portfolio over time. We consider various horizons from one quarter to six quarters to evaluate performance differentials between the large-trade and small-trade portfolios.

We find that the DGTW-adjusted returns for the aggregate small-trade portfolio over all horizons are statistically insignificantly different from zero. More importantly, we find positive differentials between the aggregate large-trade and small-trade portfolios over all horizons. The positive differentials are statistically significantly different from zero when

return horizons are three quarters or longer. Specifically, by the fifth quarter after joining UCC, hedge funds' large trades generate almost 2% higher characteristics-adjusted returns than their small trade. Our results suggest that hedge funds make abnormal returns from large trading after joining the UCC.

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, Nandy, Saunders, and Song, 2011), private meetings with senior management (Solomon and Soltes, 2015), the Freedom of Information Act (FOIA) requests (Gargano, Rossi, and Wermers, 2017), and connections with lobbyists (Gao and Huang, 2016) and prime brokers (Kumar, Mullally, Ray, and Tang, 2020).

Our study contributes to the literature by identifying a nuanced channel for hedge funds to acquire private information: access to material nonpublic information while serving on a bankrupt firm's official unsecured creditors' committee. In addition, by focusing on a specific group of hedge funds that specialize in distressed investing, our empirical setting allows us to compare trading behavior of hedge funds that have access to material nonpublic information and those that access only public information of the same bankrupt firm, while controlling for homogeneous hedge fund manager skills and their ability to access other information on the distressed debt markets in general. To the best of our knowledge, this is the first paper to study whether hedge funds exploit material nonpublic information in cross-market trading.

Our study also contributes to the literature on the impact of nonbank institutional investors' presence in the debt market and its influence on the equity market (e.g, see Bushman, Smith, and Wittenberg-Moerman (2010), Jiang, Li, and Shao (2010), Ivashina

and Sun (2011), Massoud, Nandy, Saunders, and Song (2011), Kumar, Mullally, Ray, and Tang (2020)). Compared to prior studies that primarily focus on institutional investors' trading behavior in debt and equity of the same firm, our paper examines how hedge funds acquire material nonpublic information by holding debt of financially distressed firms and trade in the equity market of non-distressed firms.<sup>3</sup> Our findings highlight an important link from uninformed trading in the debt market to informed trading in the equity market, highlighting "cross-asset" ownership and trading driven by private information. This special form of informed trading of hedge funds deserves the attention of regulators for considering legally-binding restrictions to ensure market efficiency and integrity in a broad sense.

The rest of this paper proceeds as follows. Section 2 provides institutional background for bankruptcy and UCC. Section 3 describes data sources and sample. Section 4 provides summary statistics, present main results, and conduct a variety of placebo tests and falsification tests, and Section 5 concludes.

## 2 Institutional Background

Financially distressed firms in the US 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 to bargain about the future of the firm and the

---

<sup>3</sup>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, Nandy, Saunders, and Song (2011) examine the involvement of hedge funds as nonbank institutional investors in the syndicated loan 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, we document that hedge funds utilize private information obtained from the focal firm (i.e. the bankrupt firm) to trade equities of the nonfocal firms (i.e. the non-bankrupt firms).



value of the claims they hold or will receive if any (Wang, 2022). To facilitate bargaining, the Bankruptcy Code allows the formation of the official committees represented by unsecured creditors and shareholders, with 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 U.S. Trustee typically conduct a meeting of the creditors (known as §341 meetings) shortly after the Chapter 11 filing, and appoint a committee of creditors holding unsecured claims and may appoint additional committees of other creditors or of equity security holders as the United States Trustee deems 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 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 unsecured creditors' committee (UCC) is their access to material nonpublic information with regard to the most recent business plan and financial condition, detailed management projections, contemplated financing alternatives, the timing and the terms of proposed plans of reorganization, and proprietary advisor analyses of the bankrupt company, etc. Such information may con-

cern not only bankrupt firms but also their economically linked firms such as competitors, suppliers, and customers. Hence, the U.S. Securities and Exchange Commission (SEC) has strict rules prohibiting UCC members from trading securities of the bankrupt firm because trading based on access to material nonpublic information can be a violation of the prohibition on insider trading rule of the U.S. federal securities laws.

Debt holders with private information may still choose to trade while ensuring the counterparty is aware that they have material nonpublic information through the execution of a big-boy letter.<sup>4</sup> However, even with a big-boy letter in place, the “restricted” party could still be litigated.<sup>5</sup> In fact, the SEC has undertaken several enforcement actions against parties that traded debt claims of the bankrupt firm while serving on the UCC. For example, according to SEC Litigation Release on May 30, 2007<sup>6</sup>, Barclays Bank PLC and Steven J. Landzberg illegally traded millions of dollars of bond securities based on material nonpublic information received through six bankruptcy creditors’ committees. Serving as a member of 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, SEC still alleged that Barclays and Landzberg failed to disclose the material nonpublic information received from 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 com-

---

<sup>4</sup>A big-boy letter is a pre-sale agreement between a security seller and a buyer. It contains two features: non-restricted party (typically the buyer)’s awareness of counterparty (typically the seller)’s possession of nonpublic information, and a waiver of claims that the non-restricted party might otherwise have under securities laws. In other words, the buyer is aware that the seller may possess private information of the securities and will not sue over non-disclosure of material nonpublic information.

<sup>5</sup>The enforceability of a big-boy letter is questionable. As Eshmoili (2008) points out that big boy letters occupy a gray area of the law and SEC has never issued any official guidance on big boy letters.

<sup>6</sup>See <https://www.sec.gov/litigation/litreleases/2007/lr20132.htm> for detail.

mittee in any federal bankruptcy proceeding involving an issuer of securities, and paid a civil money penalty of \$ 750,000.<sup>7</sup>

Given 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 the UCC. However, it is not clear whether hedge funds exploit private information of the bankrupt firm to profit from trading related nonbankrupt firms. Strictly speaking, such cross-asset and cross-firm trading based on material nonpublic information can still present evidence of violations of the prohibition on insider trading rules but this type of trading activities have been largely overlooked.

### 3 Data Description

In this section, we provide detailed description on different data sources that we use in this study including Chapter 11 Bankruptcy cases, hedge funds, institutional investors, and firm fundamental information databases. Specifically, we first obtain a list of bankruptcy cases and their characteristics from the Florida-UCLA-LoPucki Bankruptcy Research Database (BRD). Second, we use the Compustat and Capital IQ Databases to retrieve additional firm-level financial information. Third, we collect data on bankruptcy court dockets and notices detailing the appointment of UCC members from the Public Access to Court Electronic Records Database (PACER), supplemented by BankruptcyData.com Database. Finally, we use the Refinitiv Institutional Holdings Database (13F) extract quarterly equity

---

<sup>7</sup>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 has fiduciary duties to all unsecured creditors. However, he coerced a rivalry 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 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.*

holdings of hedge funds and other institutional investors, and the Lipper TASS Hedge Fund Database (TASS) to acquire information on fund size, flow, and performance.

### **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.<sup>8</sup> All sample firms have book assets of at least \$100 million (measured in 1980 constant dollars using the CPI deflator) at the time of the bankruptcy filing, and must have filed at one 10K in the previous three-year period. We obtain the basic information about sample bankrupt firms from BRD, including firm-level financial information such as assets, liabilities, and sales, case-level characteristics such as bankruptcy filing date, duration, and whether a bankruptcy case is pre-negotiated or pre-packaged.<sup>9</sup> We merge our sample of Chapter 11 filers with the Compustat and Capital IQ Databases to retrieve additional firm-level financial information. The resulting dataset contains 880 Chapter 11 cases.

### **3.2 Members of the UCC**

In order to identify hedge funds on the UCC, we obtain a list of UCC members for each sample case from the Bankruptcy court dockets. Particularly, we download the U.S. bankruptcy court dockets of the 880 sample cases from the Public Access to Court Electronic Records Database (PACER). A typical bankruptcy court docket contains a record

---

<sup>8</sup>According to Chapter 11 U.S. Bankruptcy Code §1102, which governing 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., Small Business Debtor Reorganization)." Therefore, we focus on large public bankruptcy cases in order to observe the frequency of hedge fund companies on the Unsecured Creditors' Committee.

<sup>9</sup>Such information is cross-checked with BankruptcyData.com Database whenever possible.

of negotiation dialogues among the bankruptcy court, the debtor, the claim holders, and other related parties.<sup>10</sup>

We collect information on UCC members in the following two steps. First, we examine whether the U.S. Trustee appointed UCC for each case based on its court docket. Crucial parties, such as the debtor, the official committee of unsecured creditors, and the U.S. Trustee, along with their legal representatives are listed at the beginning of the court docket. We also search for the court order granting the appointment of UCC on the court docket. Second, we extract information on UCC members from disclosure document submitted by the U.S. Trustee to the bankruptcy court to appoint UCC members.<sup>11</sup> We cross-check with BankruptcyData.com Database on UCC members for each case.<sup>12</sup> 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. Consistent with the U.S. Bankruptcy Code, there are seven UCC members per bankruptcy case on average.

Following [Jiang, Li, and Wang \(2012\)](#), we use multiple sources including SEC filings, institutions' official websites, and industry directories and publications (e.g., Barron's, Alpha Magazine, and Institutional Investors.) to identify whether an UCC member is a hedge fund. We restrict our definition of hedge fund companies to two types: First,

---

<sup>10</sup>A ourt docket also contains 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 Notice of Hearing and Declaration of an individual or entity in support of certain parties.

<sup>11</sup>Figure [A1](#) of Online Appendix illustrates an example of an UCC notice. In this notice, U.S. Trustee William K. Harrington appointed seven members for 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, address, and contact information.

<sup>12</sup>It is possible that the 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 bankruptcy fling to avoid potential biases arising from hedge funds' strategically trading debt claims throughout bankruptcy.

“pure-play” hedge funds as defined in Agarwal, Jiang, Tang, and Yang (2013). Second, 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 equity holdings of 13F institutions are informative about the investments made by hedge fund companies.<sup>13</sup> After this step, there are 243 cases with at least one hedge fund serving on the UCC, representing 40% of the sample cases.

### 3.3 Stock Holdings of Hedge Funds and Other Institutional Investors

We obtain stock holdings data of institutional investors from the Thomson Reuters Institutional Holdings Database (13F) and merge it with our bankruptcy case-UCC member level dataset by name.<sup>14</sup> Institutional investment managers that hold over \$100 million or more in 13F securities are required to disclose quarterly holdings.<sup>15</sup> The 13F filings are aggregated at the institution level, comparable to the level of management companies. We are able to match 1,366 UCC members to 306 unique 13F institutions, and there are 167 (out of 306) hedge fund companies.

We augment 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

---

<sup>13</sup>As shown in Figure A1, D.E. Shaw Composite Holdings, LLC, Advantage Opportunities Fund, LP, and AQR DELTA Master Account, L.P. are classified as hedge funds, whereas BOKF,N.A. is categorized as 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, L.P. 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, which offers retail and commercial services. It is worth noting that some UCC member names are at the fund-level, while others are those of individuals. For example, OCM Opportunities Fund III, L.P. is associated with Oaktree Capital Management, while Alan Parsow is the general partner at Elkhorn Partners L.P.

<sup>14</sup>Section A1 of Online Appendix provides a description of the name-matching procedure in detail.

<sup>15</sup>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 TASS 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 the management company of an UCC member, mainly through name and address, supplemented by BrokerCheck website.<sup>16</sup> For multiple hedge fund products corresponding to one 13F institution, we aggregate fund characteristics by weighted AUM.

After the above procedures, we find 79 unique hedge fund companies involved in 144 Chapter 11 cases as UCC members.<sup>17</sup> In Figure 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 UCC in Chapter 11 bankruptcy process — on average, 20.52% of bankruptcy filings have hedge funds in both 13F and TASS databases as UCC members over our sample period. If we consider only those with 13F manager ID, the average fraction of cases with hedge funds on UCC is 40%.<sup>18</sup>

[Insert Figure 2 Here]

---

<sup>16</sup>BrokerCheck is a free tool that is offered by The Financial Industry Regulatory Authority (FINRA) to research the background and experience of financial brokers, advisers and firms. For more details, please visit: <https://brokercheck.finra.org/>

<sup>17</sup>The matching rate between 13F hedge fund companies and TASS hedge funds is similar to Gao and Huang (2016).

<sup>18</sup>Table A1 of Online Appendix shows the top ten hedge funds involved in Chapter 11 Bankruptcy as UCC members, ranked by the total number of bankruptcy cases a hedge fund company ever appointed as 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 13(f) securities. Besides, commercial databases have self-reporting biases as in Agarwal, Fos, and Jiang (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, as one of the largest alternative investors (It has \$164 billion assets under management as of March 31, 2022.) and the most active hedge fund company on UCC, did not report to commercial databases during our sample period. We compare the characteristics of different sub-sample of cases in Online Appendix Table A2.

## 4 Empirical Results

### 4.1 Summary Statistics

Table 2 presents descriptive statistics of the sample firms with hedge funds as UCC members and hedge fund trading activities. Panel A describes firm-level characteristics of the 144 sample cases with at least one hedge fund on the UCC. The financial information is taken from the last annual reports immediately before bankruptcy filing. The Chapter 11 firms with hedge fund as UCC member have on average \$10.9 billion in book assets (median is \$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). About half of the sample cases are filed in Delaware, 65% cases had access to Debtor-in-possession (DIP) financing, and about 30% cases are prepackaged or prenegotiated cases. On average, it takes 483 days for the bankruptcy court to issue an order to close a case after the bankruptcy filing day, and the median is 379 days.

[Insert Table 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. The evidence indicates that the UCC is appointed within just few weeks after Chapter 11 filing in almost all cases. It is important to note that the UCC membership may involved over time as claims trading take place. We find that the U.S. Trustee amended the UCC membership in 42% cases. On average, it takes 284 days from the appointment date of UCC to the amendment date of UCC, and the median is 151 days.

Panel B presents key variables for stock trading activities and other features of hedge funds. In particular, we employ measures of portfolio turnover and trade size to describe



how intensely hedge funds trade stocks. Following [Agarwal, Gay, and Ling \(2014\)](#) and [Pástor, Stambaugh, and Taylor \(2017\)](#) (and many others), portfolio turnover is defined as the ratio of the minimum of dollar value of buy transactions and 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 the annual median of portfolio turnover, and zero otherwise. *Turnover Buy* is the ratio of the dollar value of buy transactions over assets under management. A buy transaction in our setup requires both an increase in the dollar value of holdings in a firm's stocks and an increase in the percentage ownership of the firm. The increases in the dollar value of firm stocks held by a hedge fund are aggregated into the dollar value of all buy transactions for a hedge fund at the quarterly frequency. *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.

*Turnover Sell* is the ratio of the dollar value of sell transactions over assets under management. A sell transaction in our setup requires both a decrease in the dollar value of holdings in a firm's stocks and a decrease in the percentage ownership of the firm. The decreases in the dollar value of firm stocks held by a hedge fund are aggregated into the dollar value of all sell transactions for a hedge fund at the quarterly frequency. *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.

$I(LargeTrade)_{j,t}$  represents various measures that are employed to describe whether hedge fund  $j$  makes a large trade in year-quarter  $t$ . At the fund-stock-year-quarter level, a trade is of large size if the absolute quarterly change in percentage ownership of a firm's stock by a hedge fund exceeds the 95th percentile of whole sample absolute change in percentage ownership. At the fund-year-quarter level, *Large Trade* is an indicator variable that

equals one if a hedge fund makes at least one large-sized trade among all portfolio firms, and zero otherwise. *Num. Large Trade* is the total number of large-sized trades a hedge fund makes among all portfolio firms. Indicator variables of high portfolio turnover and large trades by hedge funds are the key outcome variables in most of our regressions.<sup>19</sup> *UCCInformation* is an indicator variable that equals one for a UCC hedge fund over the next 6 quarters upon bankruptcy-filing quarter.<sup>20</sup> *UCC Information* is the main explanatory variable in our regressions and has a sample mean of 0.144.  $X_{j,t-1}$  is a set of covariates including hedge fund size, flows, and rate of return, all measured at the previous quarter end.

## 4.2 Arrival of UCC Events

An important identification condition for our main empirical tests is that hedge funds trade large quantity of distressed debt of a portfolio of firms. A bankruptcy filing triggers UCC formation and thus hedge funds' access to information, rather than hedge funds endogenously buying large amount of debt right before or after a bankruptcy filing in order to join the UCC. This assumption is plausible given that UCC is typically formed within few 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 after bankruptcy filing and before UCC is formed. Nonetheless, in this section, we present two pieces of evidence that suggests that UCC arrivals are exogenous to hedge fund trading.

We start with verifying that the arrival of UCC events for hedge funds cannot be statistically significantly predicted by hedge fund characteristics. Specifically, we use as-

---

<sup>19</sup>We use indicator variables of high portfolio turnover because raw measures of portfolio turnover for hedge funds deviate too much from a normal distribution and are severely subject to extreme values.

<sup>20</sup>Observations of UCC hedge funds for the bankruptcy-filing quarter are removed.

sets under management, fund flows, and fund rate of return to predict next-period UCC events. Observations are at the fund level at the quarterly frequency. All independent variables are measured at the previous quarter end. In particular, we employ the following regression equation:

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

where  $X_{j,t-1}$  are assets under management, fund flows, and fund rate of return. 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.

[Insert Table 3 Here]

In Table 3, we use alternative measures to describe the arrival of UCC events. *UCC Event* in column (1) is an indicator variable that equals one if a hedge fund has an 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. Column (3) uses the number of UCC events for a hedge fund within a year-quarter, and column (4) uses the natural log of one plus the number of UCC events for a hedge fund within a year-quarter. Overall, all four columns indicate that hedge funds' observable features do not have predictive power over the arrival of UCC events and its various features.

Next, we compare characteristics of firms with hedge funds on UCC and those not targeted by hedge funds. Online Appendix Table A2 presents the comparison. In particular, there is no statistical significant difference between bankrupt cases with at least

one sample hedge fund and cases with no sample hedge funds but with at least one 13F hedge fund among all observed dimensions. This alleviates concerns on self-reporting biases in commercial databases. On average, a bankrupt company with sample hedge fund as UCC member has \$10.9 billion (median is \$1.4 billion) in book assets, whereas firms with no hedge funds as UCC member have \$4.1 billion (median is \$0.9 billion) in book assets. Despite larger book assets and liabilities than those without hedge fund participation, firms with hedge funds on UCC 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, Li, and Wang \(2012\)](#), 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 many bankruptcy outcomes than those not targeted by hedge funds. The evidence suggests that hedge funds do not strategically target firms with the purpose of information access to facilitate cross-market trading.

### 4.3 Baseline Results

Table 4 examines stock trading activities by hedge funds when accessing UCC private information. UCC is usually formed around two weeks after bankruptcy filing. We argue that hedge funds that are UCC members are highly likely to access UCC private information in the next few quarters upon bankruptcy filings. Specifically, we conjecture that UCC hedge funds are more likely to have high portfolio turnover when accessing UCC private information. We examine the relation between hedge funds' portfolio turnover and their access to UCC private information via the following regression equation:

$$I(HighTurnover)_{j,t} = \beta(UCCInformation)_{j,t} + \Phi'X_{j,t-1} + \delta_j + \theta_t + \epsilon_{j,t} \quad (2)$$

where  $I(HighTurnover)_{j,t}$  represents a set of indicator variables for hedge fund  $j$  in quarter  $t$ ,  $UCCInformation$  is an indicator variable that equals one for a hedge fund that joins the UCC for a bankruptcy-filing firm over the next 6 quarters upon bankruptcy-filing quarter, and zero otherwise.<sup>21</sup>  $X_{j,t-1}$  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 trading activities of all hedge funds. Standard errors are double-clustered at the fund- and year-quarter-level, and t-statistics are reported with coefficients.

[Insert Table 4 Here]

---

<sup>21</sup>Observations of UCC hedge funds for the bankruptcy-filing quarter are excluded from our analyses to avoid the implementation effects. It is feasible to assume that UCC hedge funds have not received material non-public information during the bankruptcy quarter.

Various measures are employed to describe whether hedge fund  $j$  experiences high portfolio turnover in quarter  $t$ . *Turnover* is the ratio of the minimum of dollar value of buy transactions and 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 the annual median of turnover, and zero otherwise. *Turnover Buy* is the ratio of the dollar value of buy transactions over assets under management. A buy transaction in our setup requires both an increase in the dollar value of holdings in a firm's stocks and an increase in the percentage ownership in the firm from quarter to quarter. The increases in the dollar value of firm stocks held by a hedge fund are aggregated into the dollar value of all buy transactions for a hedge fund at the quarterly frequency. *High Turnover Buy* is an indicator variable that equals one if the portfolio turnover results from buy transactions is above the annual median, and zero otherwise.

Similarly, *Turnover Sell* is the ratio of the dollar value of sell transactions over assets under management. A sell transaction in our setup requires both a decrease in the dollar value of holdings in a firm's stocks and a decrease in the percentage ownership in the firm from quarter to quarter. The decreases in the dollar value of firm stocks held by a hedge fund are aggregated into the dollar value of all sell transactions for a hedge fund at the quarterly frequency. *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.

Table 4 presents the regression results for the relation between hedge funds' portfolio turnover and access to UCC private information. Column (1) does not include any control variables or fixed effects, and we use robust standard errors. Column (2) include control variables and fund- and year-quarter-fixed effects, and we double cluster the standard

errors at fund- and year-quarter-levels. We find hedge funds are more likely to exhibit high portfolio turnover when accessing UCC private information, and the probability differential is 13.6 percentage points. The next two columns further explore alternative measures for portfolio turnover, in particular, 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 if compared to the sample mean of these portfolio turnover variables.

Table 5 describes the stock trading patterns of UCC hedge funds from another dimension: making large trades. In this table, we examine the probability of making large trades by hedge funds in response to UCC private information using the following specification:

$$I(LargeTrade)_{j,t} = \beta(UCCInformation)_{j,t} + \Phi'X_{j,t-1} + \delta_j + \theta_t + \epsilon_{j,t} \quad (3)$$

where  $I(LargeTrade)_{j,t}$  represents various measures that are employed to describe the large trades hedge fund  $j$  makes in quarter  $t$ .  $UCCInformation$  and  $X_{j,t-1}$  are the same with Table 4. We define a trade to be of large size if the absolute quarterly change in percentage ownership of a firm's stock by a hedge fund exceeds its whole-sample 95th percentile. For each hedge fund at the quarterly frequency, *Large Trade* is an indicator variable that equals one if a hedge fund makes at least one large trade among all its portfolio firms, and zero otherwise. *Num. Large Trade* is the total number of large trades a hedge fund makes among all portfolio firms at the quarterly frequency.

[Insert Table 5 Here]

Column (1) in Table 5 shows that the probability differential in making large trades between UCC and non-UCC hedge funds is 13.8 percentage points. Column (1) does not

include any control variables or fixed effects, and we use robust standard errors. After including control variables and fund- and year-quarter-fixed effects, the probability differential remains positive and statistically significant at the 1% level, and its magnitude shrinks slightly into 10.9 percentage points. The economic significance of these coefficients is substantial if compared to the sample mean of *Large Trade*. To further differentiate between hedge funds making one large trade and those making multiple large trades, the last two columns of Table 5 employ the natural log of one plus the number of large trades for a hedge fund as the outcome variable. We find that UCC hedge funds are making a greater number of large trades when accessing UCC private information.

To sum up, we find that UCC hedge funds are more likely to have high portfolio turnover when accessing UCC private information. They are more likely to make large trades and tend to make a greater number of large trades when accessing such information.

#### 4.4 Additional Tests

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 UCC private information but also to the public information released upon the bankruptcy-filing event.<sup>22</sup> In particular, one may question which of these two events, bankruptcy or UCC, is essentially driving our results. We conduct additional analyses to explore whether it is their access to UCC information or their ability to process public information that drives hedge funds

---

<sup>22</sup>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 identities of the largest unsecured debt holders, terms of DIP financing, retention of professionals, and testimonials made by financial advisors, etc.



to trade more and make large trades.<sup>23</sup> We first focus on bankruptcy-filing cases where no UCC is formed. Specifically, we run the following regression:

$$I(TradingOutcome)_{j,t} = \beta(PseudoUCC)_{j,t} + \Phi'X_{j,t-1} + \delta_j + \theta_t + \epsilon_{j,t} \quad (4)$$

where *PseudoUCC* is an indicator variable that represents the occurrence of bankruptcy-filing but without any UCC being formed. If the results in Tables 4 and 5 are not driven by UCC private information but driven by the bankruptcy-filing cases per se, then we should expect to observe a higher probability for hedge funds to have high portfolio turnover and make large trades upon bankruptcy-filing with no UCC being formed. However, Table 6 shows that this is not the case. We observe no abnormal stock trading activities by hedge funds upon announcing bankruptcy-filing cases with no UCC being formed. This finding is consistent across all columns.

[Insert Table 6 Here]

We conduct another test for the absence of UCC private information. We conjecture that UCC hedge funds are expected to exhibit no abnormal stock trading activities if we parallel-shift the UCC timing in an arbitrary way. Specifically, we examine whether UCC hedge funds are more likely to have high portfolio turnover and make large trades 6, 8, 10, or 12 months away from the bankruptcy-filing quarter. In Table 7, *PseudoUCC* represents parallel-shifting UCC events by 12 months.<sup>24</sup> Overall, our results across alternative measures of trading activities suggest that UCC hedge funds do not exhibit abnormal stock trading activities should we parallel-shift the UCC timing in an arbitrary way.

<sup>23</sup>13F institutional investors have been documented to make profitable trades regarding public information releases in Ke and Ramalingegowda (2005), Bushee and Goodman (2007), and many others.

<sup>24</sup>Results for parallel-shifting UCC timing by other numbers of months are available in Table A5 of Online Appendix

[Insert Table 7 Here]

Another perspective to re-examine our results in Tables 4 and 5 is on the “attention-grabbing” effects of public information: bankruptcy-filing events and UCC formation. That is, we need to confirm that our main results are not driven by hedge funds’ abnormal attention to the arrivals of such public information.<sup>25</sup> One approach is to zoom in on bankruptcy cases where UCC is formed but no hedge funds are UCC members. That is, we empirically explore how hedge funds may “react”, in terms of stock trading activities, to bankruptcy-filing cases with non-hedge-fund UCC members having access to UCC private information. We conjecture the absence of hedge funds being more likely to have high portfolio turnover and make large trades.

We empirically explore the stock trading behavior of hedge funds upon UCC events where no UCC members are hedge funds using the following specification:

$$I(TradingOutcome)_{j,t} = \beta(Non - HFUCC)_{j,t} + \Phi'X_{j,t-1} + \delta_j + \theta_t + \epsilon_{j,t} \quad (5)$$

where *Non - HFUCC* is an indicator variable that equals one for the bankruptcy-filing quarters where no hedge funds are UCC members and non-hedge-fund investors are UCC members. Table 8 presents the results that confirm such absence. The evidence does not indicate that hedge funds being more likely to have high portfolio turnover and make large trades. Interestingly, columns (2), (4), and (5) indicate that hedge funds even avoid having high portfolio turnover or making large trade when they know that non-hedge-

---

<sup>25</sup>The arrival of public information may attract institutional investors’ attention and affect their trading and eventually share price patterns. For example, [Hirshleifer, Lim, and Teoh \(2009\)](#) 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. [Kempf, Manconi, and Spalt \(2017\)](#) argue that industry-wide abnormal returns will cause shareholder attention temporarily shifted away from the focal firm. They find that firms facing distracted institutional shareholders are more likely to announce value-destroying acquisitions and cut dividends, and less likely to fire CEO due to poor performance.

fund UCC members have access to UCC private information. This evidence suggests that hedge funds may intentionally avoid trading when they know other 13f institutional investors may possess superior information.

[Insert Table 8 Here]

Following the empirical setup in Table 8, one may wonder whether these non-hedge-fund UCC members, for example mutual funds, may exhibit abnormal stock trading activities.<sup>26</sup> We focus on non-hedge-fund 13F institutional investors upon joining UCC of the bankruptcy-filing firm in Table 9. We find such 13F institutional investors are not more likely to have high portfolio turnover or make large trades when having access to UCC private information. The absence of abnormal stock trading activities by non-hedge-fund 13F institutional investors may not be surprising for the following reasons.

First, traditional 13F institutional investors may not have the skills or instruments to exploit their UCC private information in trading intensely the equity of other firms. Second, those institutions face much tighter restrictions and regulations than hedge funds and thus face stricter scrutiny by regulators. For example, mutual funds, by regulation, would need to maintain a well-diversified portfolio. Last, those non-hedge-fund institutional investors do not have strong incentives to intensely trade upon such information due to their pay for performance structure, compared to hedge funds managers who face high-powered incentive structures to deliver outperformance.

[Insert Table 9 Here]

---

<sup>26</sup>Actively managed equity mutual funds have been documented to have skills to time the aggregate market and pick individual stocks in [Kacperczyk, Van Nieuwerburgh, and Veldkamp \(2014, 2016\)](#).

## 4.5 Economic Linkage

So far, we have argued that UCC hedge funds exhibit abnormal stock trading activities upon joining UCC. However, little is known on what stocks are being traded based on UCC private information and what economic linkage they could have with the bankruptcy-filing firm. Motivated by prior literature examining the spillover effects of financial distress<sup>27</sup>, we study what stocks UCC hedge funds intensively trade while having access to UCC private information using the following specification:

$$I(LargeTrade)_{i,j,t} = \beta(EconLink)_{i,j,t} + \delta_{i,t} + \theta_{j,t} + \epsilon_{i,j,t} \quad (6)$$

*Large Trade* in this section is defined at the stock-fund level at the quarterly frequency that is equal to one if the absolute value of the quarterly change in a fund's percentage ownership in a stock ranks in the top 5 percentile for the whole sample (i.e. greater than or equal to the 95th percentile), and zero otherwise.

*Econ Link FF12Ind* is an indicator variable that equals one if a portfolio firm of an UCC hedge fund is within the same Fama-French 12 Industry with the bankruptcy-filing firm.

*Econ Link Universal* is an indicator variable that equals one if a portfolio firm of an UCC

---

<sup>27</sup>Early work from [Lang and Stulz \(1992\)](#) document both contagion effect (negative price reaction) and competitive effect (positive price reaction) on equities of rivalry firms in the same industry as the bankrupt firm upon bankruptcy announcements. Depending on the level of industry concentration and industry leverage ratio, rivalry firms' stock react differently to bankruptcy announcements. Broadening the scope of related parties with distressed firms, [Hertzel, Li, Officer, and Rodgers \(2008\)](#) provide new evidence that suppliers of distressed firms experience significantly negative abnormal returns around both of 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, suggesting that industry-wide financial distress is contagious and its influence on individual firm varies by risk exposure. A recent study on bankruptcy spillovers is from [Bernstein, Colonnelli, Giroud, and Iverson \(2019\)](#) providing evidence that the liquidation of bankrupt establishments causes reduction in local employment and business establishments compared with reorganized establishments. Their findings are consistent with the notion that bankruptcy liquidations disrupt agglomeration complementarities in the local economy. From a different lens, our paper finds that sophisticated institutional investors exploit the spillovers of financial distress and make informed trades accordingly.

hedge fund has one of the following three types of economic linkage with the bankruptcy-filing firm: Within the same Fama-French 12 Industry; having supplier-big-customer relationship for the current year or any of the previous three years; having similar product descriptions and therefore within the same industry classification as established in [Hoberg and Phillips \(2010, 2016\)](#).

[Insert Table 10 Here]

Column (1) in Table 10 shows that UCC hedge funds are more likely to make large trades among firms within the same Fama-French 12 industry with the bankruptcy-filing firm. The probability differential is 0.98 percentage points and statistically significant at the 1% level. Column (2) extends the definition of economic linkage and shows that UCC hedge funds are more likely to make large trades among firms with underlying economic linkage with the bankruptcy-filing firm by 1.04 percentage points. This probability differential is not only statistically significant at the 1% level but economically meaningful as well if compared to the sample mean of *Large Trade*, 5.40 percentage points. Overall, the evidence indicates that our baseline results are well-justified: Large trades are more likely to happen among firms to which UCC information is more relevant and useful via underlying economic linkage.

#### **4.6 Profitability of Large Trades by UCC Hedge Funds**

Our baseline results show that UCC hedge funds are more likely to have high portfolio turnover, more likely to make large trades and tend to make a greater number of large trades. So far, however, it is not clear how profitable it is to trade upon access to UCC private information. This section compares the performances of two ad-hoc portfolios by UCC hedge funds that are consistent with the empirical setup for our baseline results.

We define a hedge fund that is an UCC member for a bankruptcy-filing firm as an UCC hedge fund in six quarters after the bankruptcy-filing quarter. Among all stock holdings of an UCC hedge fund, we form two ad-hoc portfolios, namely, the large-trade portfolio and the small-trade portfolio. The large-trade portfolio consists of stocks that have experienced intensive trading by the UCC hedge fund: The absolute value of the quarterly change in the UCC hedge fund's percentage ownership in the stock is greater than or equal to its 95th percentile).

We first calculate the DGTW-adjusted return for each stock in the large-trade portfolio of each UCC hedge fund at the quarterly frequency, and then calculate the value-weighted average to obtain a portfolio-level DGTW-adjusted return.<sup>28</sup> Then, we compile the large-trade portfolio of each UCC hedge fund at quarter  $t$  into an aggregate large-trade portfolio and obtain the value-weighted average of portfolio-level DGTW-adjusted returns. We compare the performance of this aggregate large-trade portfolio with that of a similarly constructed aggregate small-trade portfolio over time. We consider various horizons from one quarter to six quarters to evaluate performance differentials between the large-trade and small-trade portfolios.

[Insert Table 11 Here]

In Table 11, we find that the DGTW-adjusted returns for the aggregate small-trade portfolio over all horizons are statistically insignificantly different from zero. This indicates that even UCC hedge funds do not generate positive returns in the small trades they make. Most importantly, we compare the performance differential between the aggregate large-trade and small-trade portfolios and find positive differentials over all horizons.

---

<sup>28</sup>See Daniel, Grinblatt, Titman, and Wermers (1997) for how to construct characteristics adjusted portfolio returns.

The positive differentials are statistically significantly different from zero when return horizons are three quarters or longer. These differentials are essentially the returns for a long-short strategy where an investor may take a short position in the aggregate small-trade portfolio and a long position in the aggregate large-trade portfolio.<sup>29</sup>

## 5 Concluding Remarks

This paper empirically examines whether hedge funds exploit a special source of material non-public information as debt-claim holders for bankruptcy-filing firms. Specifically, we document abnormal stock trading activities upon hedge funds joining unsecured creditors' committee (UCC) for bankruptcy-filing firms. We find UCC hedge funds are more likely to have high portfolio turnover and make large trades. We have conducted a number of checks to mitigate concerns that such abnormal stock trading activities of UCC hedge funds may be driven by the release of public information. We also find that UCC hedge funds are more likely to use private information to make informed trades among firms with underlying economic linkage with the bankruptcy-filing firms. Overall, our findings jointly suggest that hedge funds are sophisticated investors who may use private information from the distressed debt markets and exhibit abnormal trading activities in stock markets. We bring this special form of common ownership across debt and equity assets into discussions with regulators and practitioners to ensure market integrity in a broad sense.

---

<sup>29</sup>When comparing these two aggregate portfolios, we essentially construct a rule-based strategy that passively observes what the UCC hedge funds holds and incorporates no further information for portfolio management purposes.

## References

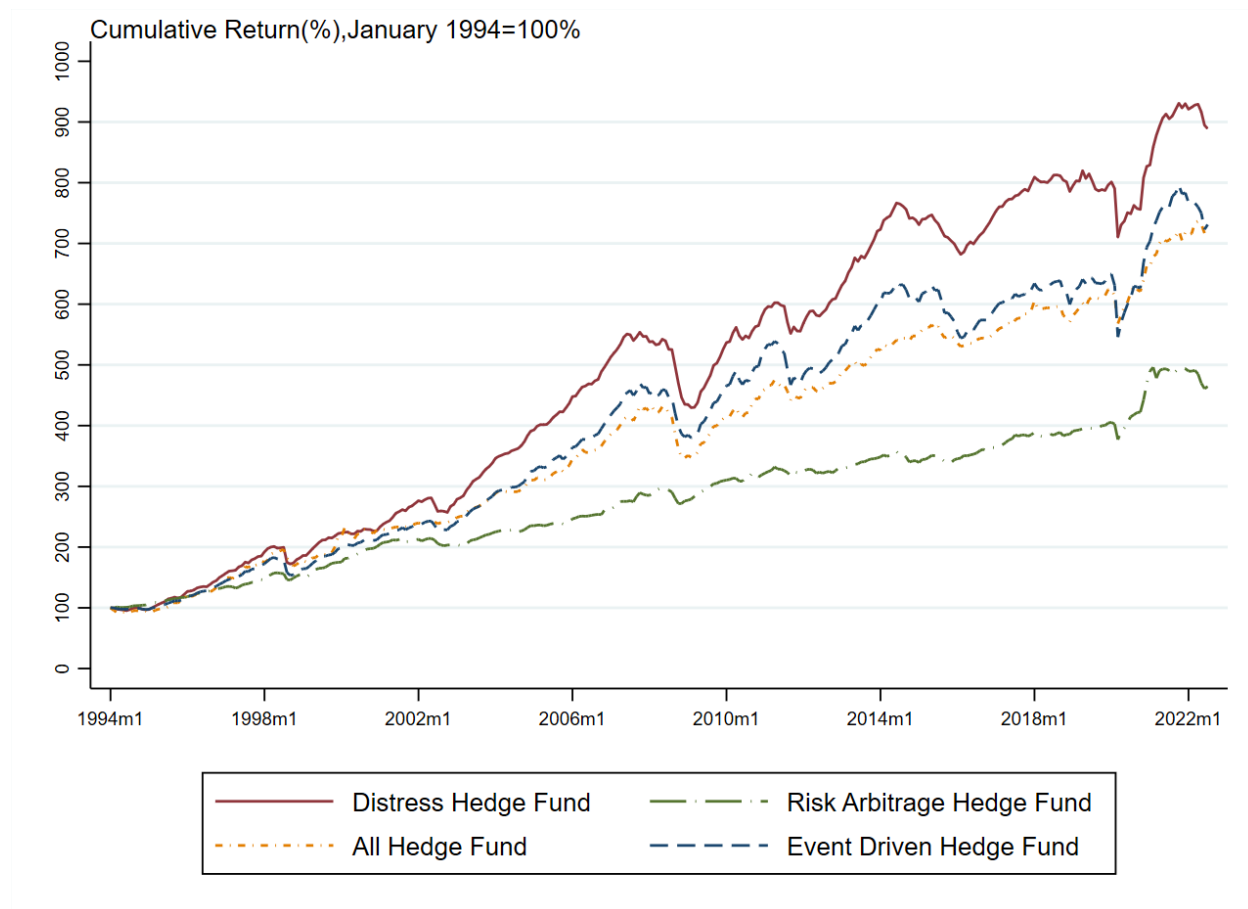
- Agarwal, V., V. Fos, and W. Jiang (2013). Inferring reporting-related biases in hedge fund databases from hedge fund equity holdings. *Management Science* 59(6), 1271–1289.
- Agarwal, V., G. D. Gay, and L. Ling (2014). Window dressing in mutual funds. *The Review of Financial Studies* 27(11), 3133–3170.
- Agarwal, V., W. Jiang, Y. Tang, and B. Yang (2013). Uncovering hedge fund skill from the portfolio holdings they hide. *The Journal of Finance* 68(2), 739–783.
- Bernstein, S., E. Colonnelli, X. Giroud, and B. Iverson (2019). Bankruptcy spillovers. *Journal of Financial Economics* 133(3), 608–633.
- Bushee, B. J. and T. H. Goodman (2007). Which institutional investors trade based on private information about earnings and returns? *Journal of Accounting Research* 45(2), 289–321.
- Bushman, R. M., A. J. Smith, and R. Wittenberg-Moerman (2010). Price discovery and dissemination of private information by loan syndicate participants. *Journal of Accounting Research* 48(5), 921–972.
- Chen, L., D. A. Lesmond, and J. Wei (2007). Corporate yield spreads and bond illiquidity. *The Journal of Finance* 62(1), 119–149.
- Daniel, K. D., M. Grinblatt, S. Titman, and R. Wermers (1997). Measuring mutual fund performance with characteristics-based benchmarks. *The Journal of Finance* 52(1), 1035–1158.
- Elias, J. A. (2016). Do activist investors constrain managerial moral hazard in chapter 11? Evidence from junior activist investing. *Journal of Legal Analysis* 8(2), 469–547.
- Eshmoili, E. D. (2008). Big boy letters: Trading on inside information. *Cornell L. Rev.* 94, 133.
- Gao, M. and J. Huang (2016). Capitalizing on capitol hill: Informed trading by hedge fund managers. *Journal of Financial Economics* 121(3), 521–545.
- Gargano, A., A. G. Rossi, and R. Wermers (2017). The freedom of information act and the race toward information acquisition. *The Review of Financial Studies* 30(6), 2179–2228.
- Hertzel, M. G., Z. Li, M. S. Officer, and K. J. Rodgers (2008). Inter-firm linkages and the wealth effects of financial distress along the supply chain. *Journal of Financial Economics* 87(2), 374–387.
- Hirshleifer, D., S. S. Lim, and S. H. Teoh (2009). Driven to distraction: Extraneous events and underreaction to earnings news. *The journal of finance* 64(5), 2289–2325.
- Hoberg, G. and G. Phillips (2010). Product market synergies and competition in mergers and acquisitions: A text-based analysis. *The Review of Financial Studies* 23(10), 3773–3811.
- Hoberg, G. and G. Phillips (2016). Text-based network industries and endogenous product differentiation. *Journal of Political Economy* 124(5), 1423–1465.
- Ivashina, V. and Z. Sun (2011). Institutional stock trading on loan market information. *Journal of Financial Economics* 100(2), 284–303.
- James, C. and A. Kizilaslan (2014). Asset specificity, industry-driven recovery risk, and loan pricing. *Journal of Financial and Quantitative Analysis* 49(3), 599–631.



- Jiang, W., K. Li, and P. Shao (2010). When shareholders are creditors: Effects of the simultaneous holding of equity and debt by non-commercial banking institutions. *The Review of Financial Studies* 23(10), 3595–3637.
- Jiang, W., K. Li, and W. Wang (2012). Hedge funds and Chapter 11. *The Journal of Finance* 67(2), 513–560.
- Kacperczyk, M. and E. S. Pagnotta (2019). Chasing private information. *The Review of Financial Studies* 32(12), 4997–5047.
- Kacperczyk, M., S. Van Nieuwerburgh, and L. Veldkamp (2016). A rational theory of mutual funds' attention allocation. *Econometrica* 84(2), 571–626.
- Kacperczyk, M., S. V. Van Nieuwerburgh, and L. Veldkamp (2014). Time-varying fund manager skill. *The Journal of Finance* 69(4), 1455–1484.
- Ke, B. and S. Ramalingegowda (2005). Do institutional investors exploit the post-earnings announcement drift? *Journal of Accounting and Economics* 39(1), 25–53.
- Kempf, E., A. Manconi, and O. Spalt (2017). Distracted shareholders and corporate actions. *The Review of Financial Studies* 30(5), 1660–1695.
- Kumar, N., K. Mullally, S. Ray, and Y. Tang (2020). Prime (information) brokerage. *Journal of Financial Economics* 137(2), 371–391.
- Lang, L. H. and R. Stulz (1992). Contagion and competitive intra-industry effects of bankruptcy announcements: An empirical analysis. *Journal of Financial Economics* 32(1), 45–60.
- Lhabitant, F.-S. (2007). *Handbook of Hedge Funds*, Volume 332. John Wiley & Sons.
- Lim, J. (2015). The role of activist hedge funds in financially distressed firms. *The Journal of Financial and Quantitative Analysis* 50(6), 1321–1351.
- Longstaff, F. A., S. Mithal, and E. Neis (2005). Corporate yield spreads: Default risk or liquidity? New evidence from the credit default swap market. *The Journal of Finance* 60(5), 2213–2253.
- Massoud, N., D. Nandy, A. Saunders, and K. Song (2011). Do hedge funds trade on private information? evidence from syndicated lending and short-selling. *Journal of Financial Economics* 99(3), 477–499.
- Pástor, L., R. F. Stambaugh, and L. A. Taylor (2017). Do funds make more when they trade more? *The Journal of Finance* 72(4), 1483–1528.
- Solomon, D. and E. Soltes (2015). What are we meeting for? The consequences of private meetings with investors. *The Journal of Law and Economics* 58(2), 325–355.
- Wang, W. (2022). The costs of bankruptcy restructuring. *Oxford Research Encyclopedia in Economics and Finance August*.

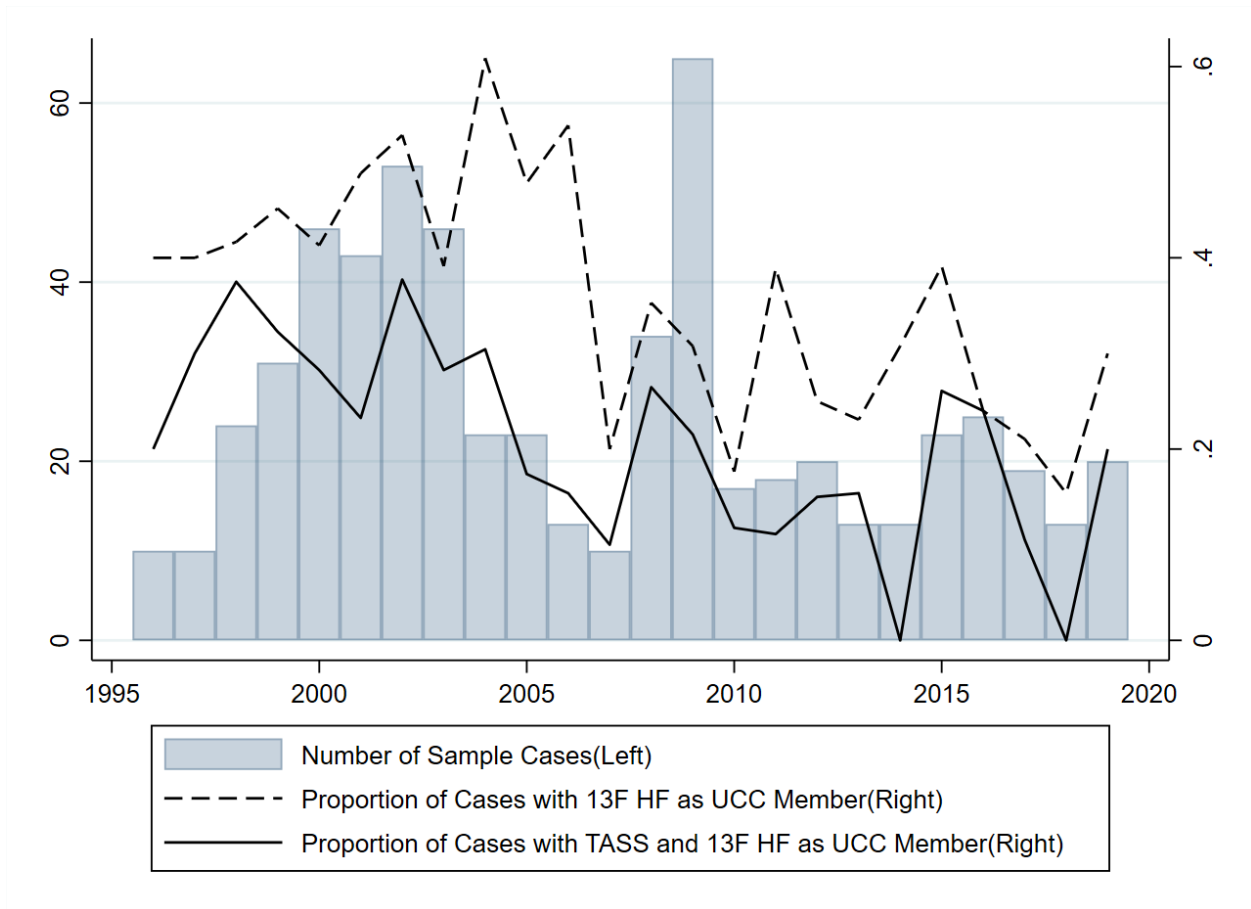
### Figure 1: Cumulative Returns to Distress Hedge Fund and Other Indices

This figure plots the Credit Suisse Distress Hedge Fund Index from January 1994 to July 2022. As a 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: Hedge Funds on Unsecured Creditors' Committee**

This figure presents the time series of Chapter 11 bankruptcy cases from 1996 to 2019. These cases include bankrupt firms with 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 the official committee of unsecured creditors. The left y-axis represents the number of bankruptcy filings, and the right y-axis shows the percentage of cases with hedge funds as members of unsecured creditors' committee over total sample cases each year.



**Table 1: Key Variable Definitions**

This table presents definitions for key variables in this study. Data sources for bankruptcy cases and bankrupt firm characteristics are from the Florida-UCLA-LoPucki Bankruptcy Research Database (BRD), supplemented by the Compustat, Capital IQ, and BankruptcyData.com. Bankruptcy court dockets and notices of the appointment of Unsecured Creditors' Committee are obtained from the Public Access To Court Electronic Records Database (PACER). Data sources for trading information of hedge funds and other institutional investors are from the Thomson Reuters Institutional Holdings Database (13F) and the Lipper Hedge Fund Database (TASS).

<b>Variable</b>	<b>Definition and Construction</b>
<b>A. Bankruptcy Characteristics</b>	
<i>Delaware</i>	Dummy variable indicating whether the firm files bankruptcy in Delaware.
<i>DIP</i>	Dummy variable indicating whether the firm obtains debtor-in-possession financing.
<i>Prepack</i>	Dummy variable indicating whether the bankruptcy filing is prepackaged or pre-negotiated.
<i>Amendment</i>	Dummy variable indicating whether there is an order approving the amendment of the official unsecured creditors' committee.
<i>Duration</i>	The number of months between bankruptcy filing date and the date on which the bankruptcy court entered its order approving the plan of re-organization, the dismissal of the case, or the conversion of the case to Chapter 7.
<i>Days BKUCC</i>	The number of days between bankruptcy filing date and the date on which the U.S. Trustee appointed the official committee of unsecured creditors.
<i>Days BKAUCC</i>	The number of days between bankruptcy filing date and the date on which the U.S. Trustee amended the official committee of unsecured creditors.
<i>Days UCCAUCC</i>	The number of days between the date on which the U.S. Trustee appointed the official committee of unsecured creditors and the date on which the U.S. Trustee amended the official committee of unsecured creditors.
<i>UCC Event</i>	Dummy variable that is equal to one when the U.S. Trustee appoint an Unsecured Creditors' Committee (UCC) for a hedge fund-year-quarter observation, and zero otherwise.
<i>Multiple UCC</i>	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.
<i>Num. UCC</i>	The number of UCC events for a hedge fund-year-quarter observation, starting from zero.
<i>Ln(1 + Num. UCC)</i>	The natural log of one plus the number of UCC events for a hedge fund-year-quarter observation.
<i>UCC Information</i>	Dummy variable indicating whether a hedge fund has access to UCC information.

**Table 1: Key Variable Definitions (Continued)**

<b>Variable</b>	<b>Definition and Construction</b>
<i>UCC Shift 8Month</i>	Dummy variable that is equal to one for eight months before an UCC event, and zero otherwise.
<i>UCC Shift 10Month</i>	Dummy variable that is equal to one for ten months before an UCC event, and zero otherwise.
<i>UCC Shift 12Month</i>	Dummy variable that is equal to one for twelve months before an UCC event, and zero otherwise.
<i>Non-HF UCC</i>	Dummy variable indicating whether there is an UCC event but no hedge fund serves as UCC member for a hedge fund-year-quarter observation.
<i>BK-No UCC</i>	Dummy variable indicating whether there is a bankruptcy filing but no UCC is appointed for a hedge fund-year-quarter observation.
<i>Econ Link Universal</i>	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 includes non-bankrupt firms that are customers or suppliers of the bankrupt company, operate at the same Fama-French 12 industry as the bankrupt company, or has the same Text-based Network Industry Classifications (TNIC) (Hoberg and Phillips, 2010, 2016).
<b>B. Trading Variables</b>	
<i>Fund Size</i>	The weighted average of Assets Under Management (AUM) of each fund product aggregated to the fund company level, in millions. Lag fund size equals the natural log of one plus fund size at the prior quarter-end.
<i>Fund Flows</i>	Change in Assets Under Management (AUM), scaled by last-period Assets Under Management (AUM).
<i>Fund Return</i>	The weighted average of return rate of each fund product aggregated to the fund company level, in percentage.
<i>High Turnover</i>	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 amount, scaled by Assets Under Management (AUM).
<i>High Turnover Buy</i>	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 Assets Under Management (AUM).
<i>High Turnover Sell</i>	Dummy variable that is equal to one if portfolio turnover is greater than median each year, and zero otherwise. Turnover is the sell transactions in dollar amount scaled by Assets Under Management (AUM).
<i>Large Trade</i>	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 95 percentile of trade size across the whole sample. Trade size is measured as the absolute change in investor i's percentage ownership in stock j.

**Table 1: Key Variable Definitions (Continued)**

<b>Variable</b>	<b>Definition and Construction</b>
<i>Num. Large Trade</i>	The number of large trades for a hedge fund within a quarter, starting from zero.
<i>Ln(#Large Trade)</i>	The natural log of one plus the number of large trades for a hedge fund within a quarter.
<b>C. Firm Characteristics</b>	
<i>Assets</i>	Total assets from the last 10-K filed before bankruptcy, in millions of constant 2019 dollars.
<i>Liabilities</i>	Total liabilities from the last 10-K filed before bankruptcy, in millions of constant 2019 dollars.
<i>Sales</i>	Sales from the last 10-K filed before bankruptcy, in millions of constant 2019 dollars.
<i>Employees</i>	The number of persons employed by the firm as of the last 10-K before bankruptcy filing.
<i>ROA</i>	Ratio of the earnings before interest, taxes, depreciation, and amortization over total assets.
<i>Tangibility</i>	Ratio of total property, plant, and equity over total assets.
<i>Leverage</i>	Ratio of total liabilities over total assets.
<i>Secured debt/Assets</i>	Ratio of total secured debt over total assets.

**Table 2: Summary Statistics**

This table presents descriptive statistics of sample firms and hedge fund trading activities. Panel A provides a summary of 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 mean, standard deviation, fifth 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, 5th percentile, 25th percentile, median, 75th percentile, and 95th percentile are reported. The sample firms are defined in section 3. Continuous financial variables are winsorized at the 1% and 99% levels to remove outliers. Detailed variable definitions can be found in Table 1.

**Panel A. Firm Characteristics**

	N	Mean	SD	P5	P25	Median	P75	P95
<b>Size:</b>								
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
<b>Performance:</b>								
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
<b>Bankruptcy Characteristics:</b>								
Delaware	144	0.444	-	0	0	0	1	1
DIP	144	0.646	-	0	0	1	1	1
Prepack	144	0.292	-	0	0	0	1	1
Amendment	144	0.417	-	0	0	0	1	1
Duration	144	483	485	87	197	379	578	1177
Days BKUCC	141	17	29	6	9	14	16	35
Days BKAUCC	60	303	404	20	70	173	340	1154
Days UCCAUC	60	284	404	2	55	151	317	1140

**Table 2: Summary Statistics (Continued)****Panel B. Stock Trading Activities and Characteristics: Hedge Funds**

	N	Mean	SD	P5	P25	Median	P75	P95
High Turnover	3144	0.446	0.497	0	0	0	1	1
High Turnover Buy	3144	0.461	0.499	0	0	0	1	1
High Turnover Sell	3144	0.454	0.498	0	0	0	1	1
Large Trade	3144	0.575	0.494	0	0	1	1	1
ln(1+Num Large Trade)	3144	1.702	1.776	0	0	1.386	3.178	4.883
UCC Information	3144	0.144	0.351	0	0	0	0	1
Lag HF Size	3082	19.269	1.918	16.023	17.881	19.397	20.694	22.139
Lag HF Flow	3058	-0.608	4.357	-5.344	-1.829	-0.766	0.410	4.191
Lag HF Return	3082	0.793	3.362	-3.830	-0.300	0.815	1.881	5.410



**Table 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.  $I(UCCEvents)_{j,t}$  represents various measures to describe the arrivals of UCC events across the columns. *UCC Event* is an indicator variable that equals one if a hedge fund is appointed as an 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 assets under management, fund flows, and rate of return. All explanatory variables are measured at the previous quarter end. All variables are defined in Table 1. The model is estimated using ordinary least squares (OLS). 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 are reported with coefficients. \*\*\*, \*\*, and \* stand for statistical significance at the 1%, 5%, and 10% level, respectively.

	(1) UCC	(2) Multiple UCC	(3) Num. UCC	(4) Ln(1 + Num. UCC)
Lag HF Size	0.002 (0.572)	0.001 (0.403)	0.003 (0.576)	0.002 (0.575)
Lag HF Flow	0.000 (-0.982)	0.000 (-0.395)	0.000 (-0.957)	0.000 (-0.982)
Lag HF Return	0.000 (-0.332)	0.000 (0.045)	0.000 (-0.042)	0.000 (-0.179)
Fund Comp. FE	Y	Y	Y	Y
Year Quarter FE	Y	Y	Y	Y
Standard Errors	Double Clustered	Double Clustered	Double Clustered	Double Clustered
Observations	3,056	3,056	3,056	3,056
Adj. R-squared	0.043	0.018	0.045	0.045

**Table 4: Hedge Fund Trading upon UCC Events — High Turnover**

This table examines the relation between hedge funds’ access to UCC private information and their portfolio turnover using the following specification:

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

Summary statistics are provided in Panel B of Table 2. Various measures are employed to describe whether hedge fund  $j$  experiences high portfolio turnover in year-quarter  $t$ .  $I(HighTurnover)_{j,t}$  represents a set of indicator variables for hedge fund  $j$  in year-quarter  $t$ .  $Turnover$  is the ratio of the minimum of dollar value of buy transactions and 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 the annual median of portfolio turnover, and zero otherwise.  $Turnover Buy$  is the ratio of the dollar value of buy transactions over assets under management. A buy transaction in our setup requires both an increase in the dollar value of holdings in a firm’s stocks and an increase in the percentage ownership of the firm. The increases in the dollar value of firm stocks held by a hedge fund are aggregated into the dollar value of all buy transactions for a hedge fund at the quarterly frequency.  $High Turnover Buy$  is an indicator variable that equals one if the portfolio turnover due to buy transactions is above the annual median, and zero otherwise.  $Turnover Sell$  is the ratio of the dollar value of sell transactions over assets under management. A sell transaction in our setup requires both a decrease in the dollar value of holdings in a firm’s stocks and a decrease in the percentage ownership of the firm. The decreases in the dollar value of firm stocks held by a hedge fund are aggregated into the dollar value of all sell transactions for a hedge fund at the quarterly frequency.  $High Turnover Sell$  is an indicator variable that equals one if the portfolio turnover due to sell transactions is above the annual median, and zero otherwise.  $UCCInformation$  is an indicator variable that equals one for a UCC hedge fund over the next 6 quarters upon bankruptcy-filing quarter. Observations of UCC hedge funds for the bankruptcy-filing quarter are removed.  $X_{j,t-1}$  is a set of covariates including hedge fund size, flows, and rate of return, all measured at the previous quarter end. All variables are defined in Table 1. Fund-fixed effects and year-quarter-fixed effects are included to absorb fund-specific time-invariant characteristics and aggregate time trends in hedge funds’ stock trading activities. Standard errors are double-clustered at the fund- and year-quarter-level, and t-statistics are reported with coefficients. \*\*\*, \*\*, and \* stand for statistical significance at the 1%, 5%, and 10% level, respectively.

	(1) High Turnover	(2) High Turnover	(3) High Turnover Buy	(4) High Turnover Sell
UCC Information	0.160*** (6.381)	0.136*** (3.843)	0.124*** (3.892)	0.131*** (3.926)
Covariates	N	Y	Y	Y
Fund Comp. FE	N	Y	Y	Y
Year Quarter FE	N	Y	Y	Y
Standard Errors	Robust	Double Clustered	Double Clustered	Double Clustered
Observations	3,144	3,056	3,056	3,056
Adj. R-squared	0.012	0.495	0.472	0.466

**Table 5: Hedge Fund Trading upon UCC Events — Large Trade**

This table examines the probability of making large-sized trades of hedge funds in response to UCC private information using the following specification:

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

Summary statistics are provided in Panel B of Table 2.  $I(LargeTrade)_{j,t}$  represents various measures that are employed to describe whether a hedge fund company  $j$  makes a large trade in year-quarter  $t$ . At the fund-stock-year-quarter level, a trade is of large size if the absolute quarterly change in percentage ownership of a firm's stock by a hedge fund exceeds the 95th percentile of whole sample absolute change in percentage ownership. At the fund-year-quarter level, *Large Trade* is an indicator variable that equals one if a hedge fund makes at least one large-sized trade among all portfolio firms, and zero otherwise. *Num. Large Trade* is the total number of large-sized trades a hedge fund makes among all portfolio firms. *UCCInformation* is an indicator variable that equals one for a hedge fund that joins the UCC for a bankruptcy-filing firm over the next 6 quarters upon bankruptcy-filing quarter. The fund-year-quarter observations 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 1. The model is estimated using ordinary least squares (OLS). Fund-fixed effects and year-quarter-fixed effects are included to absorb fund company-specific time-invariant characteristics and time trends in hedge fund trading activities upon UCC events. Standard errors are double-clustered at the fund- and year-quarter-level, and t-statistics are reported with coefficients. \*\*\*, \*\*, and \* stand for statistical significance at the 1%, 5%, and 10% level, respectively.

	(1) Large Trade	(2) Large Trade	(3) ln(#Large Trade)	(4) ln(#Large Trade)
UCC Information	0.138*** (5.806)	0.109*** (2.882)	0.378*** (4.155)	0.345*** (3.282)
Covariates	N	Y	N	Y
Fund Comp. FE	N	Y	N	Y
Year Quarter FE	N	Y	N	Y
Standard Errors	Robust	Double Clustered	Robust	Double Clustered
Observations	3,144	3,056	3,144	3,056
Adj. R-squared	0.009	0.546	0.005	0.670

**Table 6: Hedge Fund Trading around Bankruptcies without UCC Appointment**

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

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

Various measures are employed to describe the trading activities of hedge fund  $j$  as employed in the previous tables, namely, *HighTurnover*, *HighTurnoverBuy*, *HighTurnoverSell*, *LargeTrade* and *Ln(#LargeTrade)*. We empirically explore the stock trading activities of sample hedge funds (distressed hedge funds) after bankruptcy filing but no UCCs are formed; that is, *PseudoUCC* presents *BK – NoUCC*. 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 1. Fund-fixed effects and year-quarter-fixed effects are included across all columns. Standard errors are double-clustered at the fund- and year-quarter-level, and t-statistics are reported with coefficients. \*\*\*, \*\*, and \* stand for statistical significance at the 1%, 5%, and 10% level, respectively.

	(1) High Turnover	(2) High Turnover Buy	(3) High Turnover Sell	(4) Large Trade	(5) ln(#Large Trade)
BK - No UCC	-0.008 (-0.598)	0.018 (1.169)	0.002 (0.107)	0.003 (0.314)	-0.005 (-0.186)
Covariates	Y	Y	Y	Y	Y
Fund Comp. FE	Y	Y	Y	Y	Y
Year Quarter FE	Y	Y	Y	Y	Y
Standard Errors	Y	Y	Y	Y	Y
Observations	3,056	3,056	3,056	3,056	3,056
Adj. R-squared	0.496	0.472	0.467	0.549	0.672

**Table 7: Parallel-Shift UCC Event**

This table examines whether hedge funds appointed as UCC members (UCC hedge funds) trade on private information of bankrupt firms. The analysis is examined using the following specification:

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

Various measures are employed to describe the trading activities of hedge fund  $j$  as employed in the previous tables, namely, *HighTurnover*, *HighTurnoverBuy*, *HighTurnoverSell*, *LargeTrade* and *Ln(#LargeTrade)*. In this table, *PseudoUCC* represents parallel-shifting UCC events by 12 months. All dependent variables are defined in Tables 4 and 5 . 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 1. Fund-fixed effects and year-quarter-fixed effects are included across all columns. Standard errors are double-clustered at the fund- and year-quarter-level, and t-statistics are reported with coefficients. \*\*\*, \*\*, and \* stand for statistical significance at the 1%, 5%, and 10% level, respectively.

	(1) High Turnover	(2) High Turnover Buy	(3) High Turnover Sell	(4) Large Trade	(5) ln(# Large Trade)
UCC Shift 12Month	0.026 (0.543)	0.029 (0.538)	0.049 (0.998)	-0.058 (-1.209)	-0.108 (-0.828)
Covariates	Y	Y	Y	Y	Y
Fund Comp. FE	Y	Y	Y	Y	Y
Year Quarter FE	Y	Y	Y	Y	Y
Standard Errors	Y	Y	Y	Y	Y
Observations	3,056	3,056	3,056	3,056	3,056
Adj. R-squared	0.496	0.472	0.468	0.550	0.673

**Table 8: Hedge Fund Trading upon 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:

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

Various measures are employed to describe the trading activities of hedge fund  $j$  as employed in the previous tables, namely, *HighTurnover*, *HighTurnoverBuy*, *HighTurnoverSell*, *LargeTrade* and *Ln(#LargeTrade)*. *Non - HFUCC* 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. 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 1. Fund-fixed effects and year-quarter-fixed effects are included across all columns. Standard errors are double-clustered at the fund- and year-quarter-level, and t-statistics are reported with coefficients. \*\*\*, \*\*, and \* stand for statistical significance at the 1%, 5%, and 10% level, respectively.

	(1) High Turnover	(2) High Turnover Buy	(3) High Turnover Sell	(4) Large Trade	(5) Ln(#Large Trade)
Non-HF UCC	0.006 (0.405)	-0.065** (-2.210)	-0.003 (-0.113)	-0.033** (-2.612)	-0.130** (-2.435)
Covariates	Y	Y	Y	Y	Y
Fund Comp. FE	Y	Y	Y	Y	Y
Year Quarter FE	Y	Y	Y	Y	Y
Standard Errors	Y	Y	Y	Y	Y
Observations	3,056	3,056	3,056	3,056	3,056
Adj. R-squared	0.495	0.473	0.467	0.549	0.672

**Table 9: Other Institutions Trading upon UCC Events**

This table explores the stock trading activities of non-hedge-fund institutional investors upon joining UCC of the bankruptcy-filing firm using the same specifications as Tables 4 and 5:

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

Various measures are employed to describe the trading activities of non-hedge-fund institutional investor  $j$  as employed in the previous tables, namely, *HighTurnover*, *HighTurnoverBuy*, *HighTurnoverSell*, *LargeTrade* and  $\ln(\#LargeTrade)$ . *UCC Information* is an indicator variable that equals one for a hedge fund that joins the UCC for a bankruptcy-filing firm over the next 6 quarters upon 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 1. Fund-fixed effects and year-quarter-fixed effects are included across all columns. Standard errors are double-clustered at the fund- and year-quarter-level, and t-statistics are reported with coefficients. \*\*\*, \*\*, and \* stand for statistical significance at the 1%, 5%, and 10% level, respectively.

	(1)	(2)	(3)	(4)	(5)
	High Turnover	High Turnover Buy	High Turnover Sell	Large Trade	ln(#Large Trade)
UCC Information	0.026 (1.075)	-0.005 (-0.193)	0.015 (0.711)	-0.019 (-1.397)	0.088 (1.605)
Covariates	Y	Y	Y	Y	Y
Fund Comp. FE	Y	Y	Y	Y	Y
Year Quarter FE	Y	Y	Y	Y	Y
Standard Errors	Y	Y	Y	Y	Y
Observations	8,947	8,947	8,947	8,947	8,947
Adj. R-squared	0.327	0.210	0.224	0.459	0.860

**Table 10: Hedge Fund UCC Information Access: Evidence from Economic Linkage**

This table explores the relation between stock trading activities of UCC hedge funds and economic linkages of portfolio stocks with the bankruptcy-filing firm 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 the 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 5 percentile for the whole sample (i.e. greater than or equal to the 95th percentile), and zero otherwise. *Econ Link FF12Ind* is an indicator variable that equals one if a portfolio firm of an UCC hedge fund is within the same Fama-French 12 Industry with the bankruptcy-filing firm. *Econ Link Universal* is an indicator variable that equals one if a portfolio firm of an UCC hedge fund has one of the following three types of economic linkage with the bankruptcy-filing firm: Within the same Fama-French 12 Industry; having supplier-big-customer relationship for the current year or any of the previous three years; having similar product descriptions and therefore within the same industry classification as established in [Hoberg and Phillips \(2010, 2016\)](#). Detailed variable definitions are in Table 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-level, and t-statistics are reported with coefficients. \*\*\*, \*\*, and \* stand for statistical significance at the 1%, 5%, and 10% level, respectively.

	(1)	(2)
	Large Trade	Large Trade
Econ Link FF12Ind	0.0098*** (3.271)	
Econ Link Universal		0.0104*** (3.425)
Fund Comp.-Year Qtr FE	Y	Y
Firm-Year Qtr FE	Y	Y
Observations	223,546	223,546
Adj. R-squared	0.128	0.128



**Table 11: Profitability of Hedge Fund Trading upon UCC Information**

This table explores the profitability of hedge funds' stock trading activities upon access to UCC information. We define a hedge fund that is an UCC member for a bankruptcy-filing firm as an UCC hedge fund in the next 6 quarters upon the bankruptcy-filing quarter. Among all stock holdings of an UCC hedge fund, we form two ad-hoc portfolios, namely, the large-trade portfolio and the small-trade portfolio. The large-trade portfolio consists of stocks that have experienced intensive trading by the UCC hedge fund: The absolute value of the quarterly change in the UCC hedge fund's percentage ownership in the stock ranks in the top 5 percent for the whole sample (i.e. greater than or equal to the 95th percentile). We first calculate the DGTW-adjusted return for each stock in the large-trade portfolio of each UCC hedge fund at the quarterly frequency, and then calculate the value-weighted average to obtain a portfolio-level DGTW-adjusted return. We then compile the large-trade portfolio of each UCC hedge fund at quarter  $t$  into an aggregate large-trade portfolio and obtain the value-weighted average of portfolio-level DGTW-adjusted returns. We compare the performance of this aggregate large-trade portfolio with that of a similarly constructed aggregate small-trade portfolio over time. We consider various horizons from one quarter to six quarters when evaluating performance differentials between the large-trade and small-trade portfolios. The performance differential between the large-trade and small-trade portfolios is presented with t-stat reported. \*\*\*, \*\*, and \* stand for statistical significance at the 1%, 5%, and 10% level, respectively.

Return Horizon	Portfolio: Small Trade	Portfolio: Large Trade	D(Large-Small)	t-stat
1 Qtr	0.0004	0.0064	0.0060	0.650
2 Qtr	-0.0003	0.0096	0.0100*	1.142
3 Qtr	0.0010	0.0128	0.0118**	2.435
4 Qtr	0.0003	0.0167	0.0164***	2.332
5 Qtr	0.0010	0.0192	0.0182***	2.730
6 Qtr	0.0052	0.0165	0.0113**	1.714

**Online Appendix**  
**“Do Hedge Funds Exploit Material Nonpublic Information? Evidence  
from Corporate Bankruptcies”**

Wei Wang

Yan Yang

Jingyu Zhang

April 20, 2023

This Online Appendix explains the procedure of sample construction in detail and provides additional empirical results. The goal is to check the robustness of the main results presented in the paper. The intuition and summary of these results are in main body of the paper with corresponding references.

## **A1 Name Matching Procedures**

We conduct the following two steps to match UCC members with 13F institutional investors.

First, we match UCC members and 13F institutions by name, supplemented by cross-checking the address and the representative of an 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 Thomson Reuters Institutional Holdings Database (13F). This dataset is arranged by the MGRNAME-MGRNO pair and tracks name changes of a particular investment company that has ever filed a Form 13F with the SEC on a quarterly basis.<sup>1</sup> We first remove punctuations 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",

---

<sup>1</sup>MGRNO is the manager number for a particular investment company assigned by 13F. Note that the MGRNO identifiers are reused. According to the data manual of 13F, 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 occurred. 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 of these data details in our name-matching process.

"LLC", "PTNR", "SVCS.", and any variant thereof are removed. We then use 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 an UCC member with the 13F filings of the same entity in the quarter of UCC formation.<sup>2</sup> 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 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 formation.<sup>3</sup>

Second, we examine UCC members that 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 names of 13F institutions are at the management company-level.<sup>4</sup> We proceed by searching each UCC member that we fail to find a match after the first step in EDGAR, supplemented by Web 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 an UCC member with the 13F filings of the

---

<sup>2</sup>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 an UCC event. We include these institutions in our sample because we are interested in hedge funds that have ever appeared on UCC (we define these funds as distressed hedge funds.). Section 4.4 relies on all of our in-sample distressed hedge funds and presents supporting evidence of our main results.

<sup>3</sup>Samson resources corporation files bankruptcy on September 16, 2015, and 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](https://www.sec.gov/Archives/edgar/data/1425851/000114036115041820/xslForm13F_X01/primary_doc.xml) for detail.

<sup>4</sup>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.

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 an UCC member from the Securities Data Company (SDC) Platinum M&A database. To illustrate one example on banks, the Fleet Financial Group merge with BankBoston to form Fleet Boston Corporation on March 14, 1999. The merged entity continues to use the MGRNO 38260 until Fleet Boston is acquired by the Bank of America on October 27, 2003. We use the MGRNO 62890 of the Bank of America for all UCC member names associated with Fleet Boston or the Fleet Financial Group after the merger date. Another example is about Allied Capital Corporation, a private equity firm. On April 1, 2010, Allied Capital Corporation is acquired by Ares Capital Management, a hedge fund company. However, the bankruptcy case in which Allied Capital Corporation serves as UCC member is 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 does not happen at the time of the UCC formation.

We follow similar procedures to match UCC members with hedge funds in the Lipper TASS Database.<sup>5</sup>

---

<sup>5</sup>We thank Yuehua Tang for sharing with us the link-file of Lipper Tass hedge fund Database and 13F filings.

## A2 Appendix Figures

### Figure A1: Sample UCC Notice

An example of UCC notice filed by U.S. Trustee William K. Harrington appointed seven members for UCC of the bankrupt company Sun Edison, Inc. on April 29, 2016. The representative and the address of an UCC member are instrumental in matching with 13F and 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  
3<sup>rd</sup> Floor  
Denver, CO 80202  
Contact: George F. Kubin  
Telephone: (303) 864-7206
2. AQR DELTA Master Account, L.P.  
2 Greenwich Plaza, 4<sup>th</sup> 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 Schluskel  
Telephone: (914) 714-0531
4. D.E. Shaw Composite Holdings, LLC  
1166 Avenue of the Americas, 9<sup>th</sup> Floor  
New York, NY 10036  
Contact: Martin Lebwahl  
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

## A3 Appendix Tables

**Table A1: Most Active Hedge Funds on UCC**

This table presents top ten hedge funds appointed as UCC members in Chapter 11 Bankruptcy. SEC filings, company official website, 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 13F identifier (mgrno number) and TASS identifier (companyid). For reference, Panel B presents hedge funds that have 13F identifier but without 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 A2: Firm Characteristics by UCC Hedge Fund**

This table provides comparisons among bankrupt firms with at least one sample hedge fund as UCC member, bankrupt firms with at least one 13F hedge fund but not sample hedge funds as UCC member, and bankrupt firms with no hedge funds as UCC member (*Other Ins*) 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. Detailed variable definitions can be found in Table 1.

	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 (2+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
<b>Size:</b>														
Assets	6,018	1,054	10,921	1,375	6,265	1,230	4,096	932	0.536	0.875	0.078	0.036	0.112	0.002
Liabilities	5,932	1,081	10,114	1,342	5,784	1,185	4,379	924	0.545	0.888	0.121	0.022	0.185	0.002
Sales	2,875	839	2,853	925	3,714	966	2,686	819	0.576	0.998	0.978	0.424	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	0.839	0.076	0.837	0.099
<b>Performance:</b>														
ROA	0.009	0.045	0.007	0.048	0.048	0.048	0.000	0.041	0.154	0.366	0.931	0.952	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	0.008	0.012	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	0.041	0.923	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	0.046	0.090	0.005	0.009
<b>Bankruptcy Characteristics:</b>														
Delaware	0.444	-	0.444	-	0.416	-	0.451	-	0.669	-	1.000	-	0.669	-
DIP	0.704	-	0.646	-	0.730	-	0.720	-	0.181	-	0.079	-	0.267	-
Prepack	0.270	-	0.292	-	0.292	-	0.256	-	0.994	-	0.496	-	0.332	-
Duration	514	364	483	379	566	442	513	344	0.296	0.353	0.441	0.690	0.973	0.761



**Table A3: 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 public information of bankrupt firms using different event windows. In particular, Panel A and Panel B examines trading activities of distressed hedge funds in the five quarters and seven quarters after the bankruptcy event, respectively. All dependent variables are defined in Tables 4 and 5. Covariates include hedge fund size, flows, and rate of return, all measured at the previous quarter end. All variables are defined in Table 1. 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 are reported with coefficients. \*\*\*, \*\*, and \* stand for statistical significance at the 1%, 5%, and 10% level, respectively.

**Panel A: Hedge Fund Trading Upon UCC Events: 5 Quarters**

	(1) High Turnover	(2) High Turnover Buy	(3) High Turnover Sell	(4) Large Trade	(5) ln(#Large Trade)
UCC Information	0.127*** (3.495)	0.108*** (3.397)	0.122*** (3.528)	0.098** (2.622)	0.314*** (3.125)
Covariates	Y	Y	Y	Y	Y
Fund Comp. FE	Y	Y	Y	Y	Y
Year Quarter FE	Y	Y	Y	Y	Y
Standard Errors	Y	Y	Y	Y	Y
Observations	3,056	3,056	3,056	3,056	3,056
Adj. R-squared	0.493	0.470	0.465	0.544	0.670

**Panel B: Hedge Fund Trading Upon UCC Events: 7 Quarters**

	(1) High Turnover	(2) High Turnover Buy	(3) High Turnover Sell	(4) Large Trade	(5) ln(#Large Trade)
UCC Information	0.136*** (3.938)	0.125*** (3.901)	0.142*** (4.102)	0.110*** (2.822)	0.354*** (3.179)
Covariates	Y	Y	Y	Y	Y
Fund Comp. FE	Y	Y	Y	Y	Y
Year Quarter FE	Y	Y	Y	Y	Y
Standard Errors	Y	Y	Y	Y	Y
Observations	3,056	3,056	3,056	3,056	3,056
Adj. R-squared	0.495	0.472	0.468	0.546	0.671

**Table A4: Hedge Fund Trading Upon UCC Events: From Filing to Confirmation**

This table examines whether hedge funds appointed as UCC members (UCC hedge funds) trade on public information of bankrupt firms from the bankruptcy-filing quarter to the plan of organization confirmation quarter. In particular, *UCCInformationAlt* is an indicator variable that equals one for a hedge fund that joins the UCC for a bankruptcy-filing firm from the bankruptcy-filing quarter to the plan of organization confirmation quarter. All dependent variables are defined in Tables 4 and 5. Covariates include hedge fund size, flows, and rate of return, all measured at the previous quarter end. All variables are defined in Table 1. 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 are reported with coefficients. \*\*\*, \*\*, and \* stand for statistical significance at the 1%, 5%, and 10% level, respectively.

	(1) High Turnover	(2) High Turnover Buy	(3) High Turnover Sell	(4) Large Trade	(5) ln(#Large Trade)
UCC Information Alt	0.0873** (2.414)	0.0742** (2.363)	0.0988*** (3.023)	0.0619 (1.453)	0.219* (1.844)
Covariates	Y	Y	Y	Y	Y
Fund Comp. FE	Y	Y	Y	Y	Y
Year Quarter FE	Y	Y	Y	Y	Y
Standard Errors	Y	Y	Y	Y	Y
Observations	3,056	3,056	3,056	3,056	3,056
Adj. R-squared	0.490	0.468	0.463	0.542	0.668

**Table A5: Parallel-Shift UCC Event - Robustness Tests**

This table presents additional evidence of parallel-shifting UCC events. Panel A, Panel B, and Panel C examines trading activities of distressed hedge funds if parallel-shifting UCC events by 8 months and 10 months, respectively. All dependent variables are defined in Tables 4 and 5. Covariates include hedge fund size, flows, and rate of return, all measured at the previous quarter end. All variables are defined in Table 1. 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 are reported with coefficients. \*\*\*, \*\*, and \* stand for statistical significance at the 1%, 5%, and 10% level, respectively.

**Panel A: Parallel-Shift UCC Appointment Event: 8 months**

	(1)	(2)	(3)	(4)	(5)
	High Turnover	High Turnover Buy	High Turnover Sell	Large Trade	ln(# Large Trade)
UCC Shift 8Month	0.036 (1.201)	0.045 (1.273)	0.050 (1.548)	-0.039 (-1.042)	-0.012 (-0.117)
Covariates	Y	Y	Y	Y	Y
Fund Comp. FE	Y	Y	Y	Y	Y
Year Quarter FE	Y	Y	Y	Y	Y
Standard Errors	Y	Y	Y	Y	Y
Observations	3,056	3,056	3,056	3,056	3,056
Adj. R-squared	0.496	0.473	0.468	0.549	0.672

**Panel B: Parallel-Shift UCC Appointment Event: 10 months**

	(1)	(2)	(3)	(4)	(5)
	High Turnover	High Turnover Buy	High Turnover Sell	Large Trade	ln(# Large Trade)
UCC Shift 10Month	0.024 (0.666)	0.041 (1.013)	0.047 (1.033)	-0.037 (-0.943)	-0.054 (-0.479)
Covariates	Y	Y	Y	Y	Y
Fund Comp. FE	Y	Y	Y	Y	Y
Year Quarter FE	Y	Y	Y	Y	Y
Standard Errors	Y	Y	Y	Y	Y
Observations	3,056	3,056	3,056	3,056	3,056
Adj. R-squared	0.496	0.473	0.468	0.549	0.672