The long-run performance of sponsor-backed and non-sponsor backed IPOs

An empirical analysis of the U.S. American stock market

Master Thesis

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Abstract

In our thesis, we examine the stock performance of newly listed firms on the AMEX, NYSE and Nasdaq for the time horizon between 2000 and 2013. Our research lays emphasis on the performance of sponsor-backed and non-sponsor backed companies. We find evidence that IPOs generally underperform in the long-run, while sponsor-backed companies appear to perform at a superior level compared to non-sponsor backed event firms. While the negative abnormal return of non-sponsor endorsed companies does not appear to be statistically different from zero, we find some evidence that sponsor-backed IPOs indeed exhibit statistically significant negative stock performance. For the subgroups of sponsor types, we find statistically significant positive abnormal returns for Private Equity-supported firms. The evidence indicates that this cohort substantially outperforms other groups, including non-sponsored companies. Potential drivers are superior profitability in terms of EBITDA margins and higher leverage. Besides, we suggest that the PE-backed firms' larger size in terms of market capitalization may carry increased media attention and, consequently, larger investor interest. When looking at different exit types for sponsors in the event of the IPO, No Exits consistently outperform the other exit strategies Partial Exit and Complete Exit. Therefore, the analysis reveals that the sponsors' decision not to sell any shares in the IPO seems to serve as a strong signal that companies are of higher quality. In the comparison of IPO performance over time, we find poor significant performance for the sponsor- and non-sponsor backed companies in the IPO year 2000, potentially driven by the aftermath of the Dotcom Bubble and the decrease in the overall equity market valuations. Notably, in this period, we find that non-sponsored companies seem to be more robust to the development in such crises in terms of activity and abnormal returns.

Keywords: Initial Public Offering
Long-run IPO performance
Sponsor-backed IPOs
Private Equity
Venture Capital
Financial sponsor exits

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1. Introduction

Initial public offerings [IPOs] have early on gained attention in the financial literature. The most prevalent phenomenon that has been researched is the anomaly that is widely known as IPO underpricing. Based on the relatively strong performance in the first trading days after the IPO event, Ibbotson (1975) was the first to state that the positive abnormal returns are driven by a relatively low price for the primary issuance of company shares. Another common anomaly is the long-run IPO underperformance, which implies that newly listed firms seem to underperform crucially compared to non-event firms with similar characteristics that have been listed for a more extended period (Ritter, 1991; Ritter & Loughran, 1995).

Our research focus is on the latter with a distinct emphasis on the long-run performance of sponsor- and non-sponsor backed public offerings in the United States in the period from 2000-2013. The research on this specific differentiation received relatively low attention compared to other topics surrounding the IPO event. Notably, when it comes to the comparison of effects of different financial sponsors, for example, a distinction between Venture Capital [VC] and Private Equity [PE], the financial literature remains sporadic. Particularly, Levis (2011) suggests that the effects can vary greatly between these different sponsor types. However, most of the financial literature conduct research where they emphasize only one sponsor type. In this regard, they find evidence that sponsor-backed IPO firms do not appear to underperform as bad as non-sponsor backed IPO firms in the first years after flotation (Brav & Gompers, 1997; Levis, 2011; Minardi et al., 2013).

Besides, the inclusion of ownership retention is a mostly overlooked subject throughout financial literature. With different exit strategies, we try to shed light on whether ownership retention affects the IPO performance of sponsor-backed companies. Besides sponsorship and exit strategy types, we gather information on the comparison between sponsor-backed [SB] and non-sponsor backed [NSB] IPO firms in regards to IPO years and sectors. Our work involves the analysis of abnormal returns [AR] with two different approaches: buy-and-hold abnormal returns [BHAR] and calendar-time-portfolio approach [CTP]. Through our analysis, we present implications for applicable information to interpret our results and solidify our findings. We combine these insights with company data regarding their market capitalization [ME], operating profitability, and leverage. Furthermore, we compare our results to the past and current

literature and show the limitations that our paper inherits. Finally, we give suggestions for further research in the field of sponsor-backed and non-sponsor backed IPOs.

2. Research Question

Our motivation is driven by the search for possible investment strategies that yield abnormal returns in comparison to similar firms. IPOs are often connected to a bad long-run performance, as mentioned above. However, we want to find out whether segmentation of the overall IPO group could help us identify certain IPO types that result in a possible abnormal return, mainly through a buy-and-hold strategy.

The main focus of our thesis is, therefore, based on the following research question:

"Do sponsor-backed IPOs on the U.S. market outperform non-sponsor backed IPOs in terms of the long-run average abnormal returns?"

In order to make a thorough answer to our research question, the following components need to be addressed:

"Do IPOs overall underperform in the long-run?"

"Do companies that are backed by sponsors outperform non-sponsor backed IPOs no matter the sponsor type (Private Equity, Venture Capital, and a combination of the two [Combined]?

"Do sponsor-backed firms outperform non-sponsored companies consistently throughout the sample years (in a yearly comparison of the two cohorts)?"

"Do sponsor-backed firms outperform non-sponsored companies across all industries?"

"Does the retention of ownership by the financial sponsor significantly influence the sponsor-backed companies' performance in the long-run relative to the non-sponsor backed companies?"

We aim to answer the above questions by analyzing the results from our event study with different information theories stated in chapter 3. Besides the general Efficient Market Hypothesis [EMH], the theories comprise the information signaling hypothesis, which states that the company has to credibly signal a superior quality over comparable firms in the event of the IPO. Additionally, we address the information cost hypothesis that states credible IPO information is costly to achieve, and therefore, the presence of a sponsor might positively influence the

investor behavior where information is hard to obtain. Finally, we address the attention hypothesis that states that smaller companies need to gain sufficient media attention to gain the investors' interest. The above is enriched with other information surrounding the public offerings, such as financial company data and market information, to give a holistic explanation of the observed results to the possible extent and to provide evidence for the above stated questions.

Theory

3. Theoretical Framework

3.1. Efficient Market Hypothesis

Our research is focused on finding out whether ARs exist for IPOs in the U.S. market. In case we find evidence for the presence of ARs, it would violate one of the most powerful concepts in the financial literature - the efficient market hypothesis (Fama E. F., 1970). The EMH describes that all available information in the market is already priced in the securities. It is a fundamental assumption for countless financial models.

There are three different variations of the EMH. The weak form implies that only historical prices and returns are priced in the value of a security. This version would lead to the belief that trading strategies based solely on technical analysis are unable to outperform the market. The semi-strong form implies that besides historical prices, all publicly available information is accounted for in the price of a security. Publicly available information cover but is not limited to events such as policy changes, annual earnings reports, or conference calls. In this form of the EMH, it is not possible to outperform the market with fundamental analysis to find mispriced securities. The strong form of the EMH involves all public and non-public information as well as current and historical prices. In this situation, it is not possible to find any abnormal returns, even with exclusive details on securities (Fama E. F., 1970).

One of the central assumptions of the EMH is perfect capital markets. This assumption is only possible by definition with the absence of transaction costs and free access to all information to all market participants. Furthermore, investors must have homogenous expectations towards the present value of a security as well as its future price to make arbitrage impossible. Considering these assumptions, current prices of securities would always reflect all current information. However, the assumption is hard to verify due to the joint-hypothesis-problem. To test for the EMH, one must use an asset pricing model to be able to compare expected returns to

observed returns to calculate abnormal returns. This procedure results in the dilemma that the potentially observed abnormal returns are a result of market inefficiency, an incorrect asset pricing model, or both. Fama (1970) argues that the mentioned assumptions for the EMH must not be fulfilled at all times. For instance, transaction costs do not necessarily prevent market efficiency. Also, unalike expectations of investors do not directly disqualify market efficiency, as long as none of the market participants consistently outperforms the market. However, even if the market can still be efficient with violating some assumptions, these deviations from the norm can be the root of various observed anomalies. The key message of the EMH is that market participants cannot generate continuous abnormal returns, because, by definition, all securities are adequately priced. Therefore, under this framework, over- and undervalued stocks are non-existent, and market participants cannot earn abnormal returns by stock picking or market timing. The only way to generate higher returns is to commit to more risk in their portfolios.

For the topic of this master thesis, the provided explanation of the EMH suggests that abnormal returns for neither IPOs in general nor our defined subgroups of IPOs should be observable on the US market through the whole sample period. Nonetheless, numerous researchers have found evidence of the presence of such negative or positive abnormal returns for post-IPO-performance depending on the sponsor type of the firms (Ritter, 1991; Brav & Gompers, 1997; Levis, 2011). The evidence is also observable in emerging markets, such as the Brazilian market (Hamao, Packer, and Ritter, 2000; Minardi, Ferrari, & Araujo Tavares, 2013). Hess and Frost (1982) analyzed how stock prices react to new issues of seasoned securities. The results show no post-announcement effects of IPOs regarding share price returns and only insignificant short-run excess returns after an IPO. Their findings imply that the EMH is not rejected in their study.

3.2. Information Theories

There are mostly two different groups of hypotheses that try to explain anomalies in financial markets. One of these is information theories. In this subsection, we shed light on some of the most intriguing hypotheses that try to explain abnormal returns from a viewpoint that differs from supply and demand as a primary reason for irregular shifts in prices. Information theories have in common that price reactions are supposed to happen on the event day, and their effect should remain permanently. As the whole ecosystem regarding IPOs has minimal accessibility to certain information and the fact that reliable data for market capitalizations is not available,

information theories could play a crucial role in the discussion of limited/private information. Furthermore, as historical stock prices and the determination of supply and demand or the observation of trading volumes around an event are not available, we argue that information theories bring striking aspects into the discussion of the reasons for abnormal returns.

3.2.1. Information Signaling Hypothesis

One of the most common information theories is the information signaling hypothesis. Mikkelson (1981) and Smith (1986) suggest that information signals to the market lead to persistent stock price movements. For IPOs, it has mostly gained attention in combination with the research on the IPO underpricing puzzle. For instance, Welch (1989) used the signaling hypothesis to suggest that "high-quality" firms underprice their IPOs to distinguish themselves from other firms. This statement indicates that firms with better operating prospects – potentially driven by sponsor involvement – underprice their IPO to differentiate from firms with a less positive outlook. Yet, this measure would lead to a lower exit price for the sponsor's investment, which is unlikely to be the sponsor's interest. Welch (1989) argues that "a higher price at seasoned offerings eventually compensate firms for the intentionally low IPO price." This evidence implies that IPOs with sponsors, withholding some portion of their pre-IPO holdings, may have incentives to underprice the IPO resulting in better stock performance in the time following the IPO. Also, other examples are considered for information signaling, such as the legitimacy of a top-management-team. Reliable management is a fundamental driver of organizational norms and decision-making (Cohen & Dean, 2005). Sponsor-backed firms would potentially have a significant influence on the composition of the C-suite of their sponsored firm.

Furthermore, Downes & Heinkel (1982) developed the information signaling hypothesis in connection with the exit of venture capitalists in the event of an IPO. Their research finds that outsiders require additional signals to trust the entrepreneurs' provided information. Signals must "convince outsiders of [the entrepreneur's] […] 'insider' knowledge and expectations for the future of the venture" (Downes & Heinkel, 1982). This statement implies that the financial and qualitative information presented in the prospectus is often seen as unsupported. Therefore, outsiders require meaningful additional signs that the economic future is as bright as presented. Specifically, Downes and Heinkel offer two powerful signals to the public market: (i) dividend policy and (ii) entrepreneurial ownership retention. Our paper is later going to differentiate between IPOs with a complete, partial, and no exit of the sponsor to address the latter signal in the analysis.

To sum up, the signaling hypothesis is a central proposition for our paper as abnormal returns of sponsor-backed IPOs would mean that the sponsor has credibly signaled that the corporation exhibits a superior company profile compared to non-backed firms, solely based on the sponsor-backing. The main task of our discussion is to analyze whether this signal can be attributed to the sponsor itself or specific firm characteristics such as leverage and profitability. As mentioned, our paper is further going to address whether the sponsor's ownership retention may provide an additional signal to the investors about the future outlook of the underlying firm, which means that exit strategies can also have a crucial impact and explanatory potential for the performance of sponsor-backed firms.

3.2.2. Information Cost Hypothesis

Another essential hypothesis to consider is the information cost hypothesis (also known as liquidity hypothesis). This supposition puts forward that the market equilibrium for securities can diverge from its fair market value if the corresponding information is troublesome to access. The consequence would be an information asymmetry that can be associated with a higher systematic risk (Barry & Brown, 1985). A deviation of the market equilibrium leads to a widened bid-ask spread. The bid-price represents the actual value of a security, including a premium, and the ask-price includes a "fee" for an investor who wants to sell the security immediately. The smaller the spread for an individual security, the more liquid is the asset. The bid-ask range can be seen as the security's trading cost, which leads to a deviation from the correct market value.

IPOs in this regard are characterized as prime targets for information asymmetry. Potential investors have inferior knowledge about the company compared to the owners and underwriters (Cohen & Dean, 2005). It is in question to what extent sponsors, such as private equity firms and venture capitalists, are passively involved in the resulting information asymmetry. Present owners of a company have vast information before an initial public offering in regards to future profitability, management, and employees (Leland & Pyle, 1977). There are multiple aspects of how a gap of information can be created concerning IPOs. Most information that potential investors receive is screened by current owners of a company and underwriters. Both have an incentive to represent the issuing firm in their favor (Downes & Heinkel, 1982). Furthermore, laws do not require the full disclosure of all information of a firm, and owners can show forecasted financials in a more positive light. Additionally, management could try to present their

current financial information more positively. This is a practice that is often referred to as window dressing. However, investors anticipate the opportunistic ex-ante behavior of owners and management and try to observe essential signals, as mentioned in the previous section (Downes & Heinkel, 1982). The consequence is that it is costly for sponsors, underwriters, and firms to close the information gap towards investors.

The topic surrounding the information cost hypothesis can be of concern in our paper, especially in conjunction with the information signaling hypothesis. As potential investors anticipate information asymmetry around IPOs, they could focus on the behavior of more informed participants. In this case, those would be the newly public firm itself and the sponsors. Since the information cost could force the potential investors to look for alternatives than closing the information gap, this implies that signals of more informed participants could be indicators or drivers for the decision making of potential investors. Therefore, we think that in our paper, information cost or information asymmetry amplifies the effects following the information signaling hypothesis.

3.2.3. Attention Hypothesis

The third information hypothesis under consideration is the attention hypothesis based on the research of Merton (1987). In his argumentation, he states that news attracts market attention and potential investors, which can lead to a permanent stock price increase. IPOs and SEOs are generally exposed to broad media coverage. Especially the awareness of foreign investors is enhanced, as they would not know much about small listed or unlisted companies. Bajo et al. (2016) researched the field of IPOs and awareness creation during the process that leads to an IPO. They argue that the network of lead IPO underwriters induce institutions to pay attention to firms. Underwriters with a stronger network appear to be able to obtain more favorable IPO characteristics such as higher IPO valuation. Also, the advantage would result in increased financial analyst coverage, greater institutional investor participation, greater secondary stock market liquidity, and higher long-run stock market returns by raising the awareness of the IPOs they underwrite. Two measures of pre-IPO media coverage of firms going public can be used: Media sources compete to attract readers and revenues from advertising. Therefore, their editors expect reporters to cover potential firms that have received investor attention or are expected to receive notice in the future (Liu, Sherman, & Zhang, 2014). Media coverage itself does not contain any new information to an investor, as the IPO firm is required to disclose it in the IPO prospectus. Journalists usually do not only choose a firm to cover by their judgment, but also

through discussions directly with Wall Street professionals. Therefore, Liu, Sherman, and Zhang (2014) argue that media coverage for IPOs is not just noise. Instead, it covers firms due to short-term demand that is driven by sentiment, but also those which sophisticated investors care about and the ones that reporters expect to do well. They find that objective pre-IPO media coverage increases the long-term stock value. They also find that pre-IPO media coverage has a negative correlation with future expected returns.

The attention hypothesis is a factor that should not be overlooked. The findings of Bajo et al. (2016) could impact the IPO valuation and therefore have a potential effect on the long-run underperformance (cf. chapter 4.2) of IPOs subsequently. Vaster recognition of a firm can increase trading created by potential investors and drive up the prices that would not happen without a sophisticated recognition-creation that is typical to pre-IPO events such as roadshows. Additionally, the presence of a sponsor could ignite increased media coverage and, therefore, increase the overall awareness of this IPO group. This could serve as a potential explanation as to why sponsor-backed IPOs would perform better.

3.3. Demand theories

While focusing on information theories, we also want to present the demand theories, which play a very subordinated role in our paper. As the name indicates, demand theories seek to explain market anomalies by analyzing the demand curve of a stock. Contrary to information theories, demand theories suggest short-term price effects and try to describe its drivers. While demand theories mostly focus on short-term price movements, the movements are sometimes assumed to have a persistent impact, which we address in the following.

As these theories play a subordinate role in our paper, we only briefly describe potential hypotheses that could play a role in regards to IPO events. One of which is the downward-sloping-demand-curve hypothesis. A horizontal demand curve is the assumption of many financial models, such as the CAPM or APT, and is, therefore, a central topic in financial literature. Trades should not typically result in a substantial deviation from the stock's market price. This suggestion stands in line with the assumption of a long-term horizontal demand curve. Nevertheless, Holthausen, Leftwich, & Mayers (1990) find that there are also permanent price effects, which are mainly related to large block trades that increase the permanent equilibrium price. As discussed in the previous section, the initial public offering carries information about the future outlook of the company and is, therefore, not information-free. The knowledge about the

block trades influences the behavior of other investors as these so-called anticipating investors see opportunities of a risk-free profit through the block trade, from, e.g., IPO funds that focus on public offerings. Fundamentally, this also means that the demand curve in the new equilibrium is not perfectly elastic, but somewhat downward sloping as the new equilibrium matches demand and supply (Holthausen, Leftwich, & Mayers, 1990).

The research also suggests that the previously mentioned IPO underpricing could potentially have a permanent effect. Especially, the price support by underwriters, which would usually imply a large trade block, could drive up the price in a permanent manner. However, this stands in contrast with the evidence on the long-run underperformance of IPOs. (Hess & Frost, 1982) state that there is neither a temporary nor a permanent effect of stock issuances in contrast to the views of the Securities and Exchange Commission, who "views that a new issue causes a permanent price decline" and the underwriter who suggests a temporary effect on the stock price.

Another relevant theory is the price pressure hypothesis introduced by Scholes (1972). The hypothesis suggests that only a small quantity of securities is usually traded by a large group of investors. Large trades of security would imply that its price must fall to be purchased by the market/other investors and vice versa. These block trades cannot be covered by the ordinary daily demand and supply of markets (Kraus & Stoll, 1972). In the context of IPOs, it could have some implications. Fields and Hanka (2001) find insights after so-called lockup periods, where shareholders are not allowed to sell their shares right after floatation (typically 180 days). There are large block trades of more than 40% of the usual volume form before, and they observe negative short term abnormal returns in the first three days after the lockup period has ended. This finding could have direct implications for our research. However, our goal is targeted towards long-term performance, and we think that this hypothesis would have a stronger side on IPO underpricing rather than long-run IPO underperformance (cf. chapter 4.2).

Anticipating investors are a thoroughly debated topic within demand theories. During a pre-IPO book building, it is not possible to determine anticipating investors by regarding the offer price and volume traded before such an event is scarce or nonexistent. There has been an attempt to observe this phenomenon through equity carve-outs. Equity carve-outs (as opposed to a spin-off) generally describes a process, where a firm sells a minority part of its subsidiary's shares on the stock exchange (Benveniste, Huijing, Seguin, & Xiaoyun, 2008). However, equity

carve-outs substantially differ from our topic, and as trading volumes cannot be observed before an IPO, this hypothesis is unlikely to give us further guidance for long-run IPO underperformance.

The relevance to our topic is given with certain limitations, as we cannot measure pre-IPO trading volumes and can only include theory assumptions into our discussion that do not require volume tracking. Nonetheless, also without measurable confirmation or denial of these hypotheses, the demand theories might be able to give some insights from a different angle.

4. Literature Review

The literature regarding IPO performance is filled with evidence of positive short-term performance and poor long-term performance after the initial offering. In the following paragraphs, we explain the evident research behind them briefly. As this paper focuses on the long-run stock performance with further respect for the different sponsor-backing a company receives, we put more emphasis on implications in this section.

4.1. Underpricing of IPOs

The most prevalent topic in research on IPOs is the theory of underpricing. IPO underpricing was first investigated by Ibbotson (1975), who finds that public offerings in the United States exhibit a "positive initial performance." Possible explanations brought forward are a too low offer price or the overvaluation of new issues in the aftermarket of the IPO. However, as Ibbotson (1975) finds only minor evidence to support "departures from efficiency in the aftermarket," he concludes that the positive performance can only be attributed to a relatively low initial offer price. Explanations for the phenomenon have early on focused on asymmetric information between the involved parties. For instance, Baron (1982) finds that underpricing is willingly undertaken by the advising investment bank. If issuers are not sure about the appropriate share price in the IPO, they require more advice from the underwriters. The implied asymmetric information can incentivize the underwriters to drive down the price. The reasons for the decision are that (i) it reduces the underwriter's effort to sell the issue and (ii) lowers the chance of unsold shares (Ruud, 1993). Baron's model was later supported by other papers, but explanations shifted. For example, Muscarella & Vetsuypens (1989) find that even self-underwritten IPOs exhibit underpricing, weakening the argument that underwriting investment banks willingly set a lower IPO price. Ruud (1993) suggests that theories ignored the underwriter's price support in the aftermarket. Investment banks regularly intervene in the first days after the

IPO by buying shares to avoid initial negative performance in the issuance. Several other approaches generally confirm that an underpricing phenomenon exists; however, the drivers of the puzzle remain disputed. Underpricing is an essential concept for our thesis as it carries significant implications for performance post-IPO. Unambiguously, a lower offer price means that stocks tend to outperform the market in the time directly after the IPO. Based on the underpricing concept, our paper may find positive abnormal returns that can be attributed to this phenomenon. However, solely underpricing has limited implications for our research as the underpricing puzzle is based on research that looked at short event windows post-IPO, whereas our paper focuses on long-run performance for IPOs.

4.2. Long-run underperformance of IPOs

As described in the section above, there is a definite bias for abnormal returns directly after the IPO. However, there is empirical evidence that, in the long-term, the stock performance exhibits the opposite effect. Ritter and Loughran (1995) analyzed IPOs and seasoned equity offerings [SEOs] and found that the corresponding company shares underperform in the long-run compared to non-issuing control firms. Newly issued securities generated raw returns in a timespan of a five years buy-and-hold period around 16%, while comparable market capitalization-matched firms (control firm) generated 66%. According to the two researchers, this finding delivers evidence that investors of issuing firms are systematically too optimistic about future earnings and prospects. Underperformance is also evident in different markets around the world and for SEOs (Brav & Gompers, 1997). They discuss new flotations in regards to venture capital-backed and private equity-backed more extensively. Ritter and Loughran (1995) observed through the period of 1970-1990 that IPOs (SEOs) had a poor long-run performance (underperforming the benchmark) with an average annual return of 5% (7%) for the first five years. Investing in a non-issuing control firm of the same market capitalization would have yielded in an average yearly return of 12% (15%). The researchers used benchmark firms that controlled for differences in the beta, market capitalization, and book-to-market ratio. They concluded that the most likely reason for the underperformance is the misvaluation of IPOs and the incentive of firms to issue equity when the market exhibits higher valuation in general. Brav and Gompers (1997) argue that the underperformance of small, low book-to-market [BE/ME] firms could be explained by exogenous shocks during the 1980s. They propose a significantly higher performance of sponsor-backed IPOs versus regular IPOs and suggest that there are multiple reasons for a long-run underperformance of IPOs. There are (i) periodical IPO waves or so-called hot

issue markets, for example during the Dotcom Bubble in the late 1990s/early 2000s, (ii) windows of opportunities[1] when a market-wide high valuation level makes it more promising for managers to go public to secure a high amount of offering proceeds, and (iii) the possibility that initial underpricing leads to a positive over-reaction in the stock performance in the first trading days. This, however, leads to a long-run downward-correction of the stock. In contrast, a different study finds contradicting evidence on the matter. Jaskiewicz, González, Menéndez, & Schiereck (2005) analyzed IPOs of family-owned businesses on the German and Spanish markets. Their research did not result in any significant indication that long-run underperformance is a cause of the points (i)-(iii). The evidence holds for both family-owned and stand-alone companies.

Moreover, Schultz (2003) conducted research to test whether IPO underperformance is a cause of pseudo market timing, which would be in line with point (ii). He finds that equity is issued at higher stock prices and when offering clusters occur at high market levels. The researcher argues that the observed IPOs and SEOs have a long-run underperformance in comparison to their ex-ante expectations. With a calendar time approach, he proposes evidence that the offerings at peak market levels and the sharp reduction of offerings when the prices go down are a sign of pseudo market timing.

Long-run IPO underperformance can also be explained from a behavioral finance perspective. Kahneman and Tversky (1982) showed that investors or individuals often disregard rational choice when they are faced with uncertainty. There are no newer sources in the financial literature that substantially change this view. Their findings illustrate that investors overweight the importance of recent results and hypothesize too strong on current trends. This behavioral bias leads to overly optimistic investors who opt-out of an initial investment earlier and decrease subsequent returns further.

Furthermore, it appears to be evident that buying past losers and selling previous winners is a simple and efficient trading strategy (De Bondt & Thaler, 1987). La Porta (1996) added evidence to this observation by analyzing forecast earnings growth. He finds that selling stocks with high forecasted earnings growth and buying shares with low projected earnings growth

[1] The window of opportunity theory describes the situation that firms can time their IPO during generally high valuation periods. This implies that the firm overprice their issuances in these periods and create subsequently low returns for investors in the long run (Ritter, 1991; Loughran & Ritter, 1995).

yield an abnormal return. This approach follows a similar scheme as buying losers and selling winners since the predicted future earnings should already be included in the current price of a security. With these findings, one can argue that investors are too optimistic about stocks that have performed well and pessimistic about poorly performing stocks.

Due to IPO underpricing that typically leads to high short-term initial returns, an investor may be tempted to regard these newly issued securities as well-performing companies and neglect the possibility of a fundamental mispricing issue. The underperformance by Loughran and Ritter (1995) and Brav and Gompers (1997) could be observed on multiple indices such as the S&P 500, Nasdaq value-weighted composite index, NYSE/AMEX value-weighted index and NYSE/AMEX equal-weighted index. Even through comparison to Fama-French (1996) industry portfolios and ME/book-to-market matched portfolios, the underperformance across industries can be observed. A side note of more recent research is that the investment banks' underwriting service quality influences the probability of subsequent seasoned equity offerings for the issuing firm. Additionally, the same underwriter may demand higher fees from satisfied decision-makers (Ljungqvist & Wilhelm, 2003). In our further analysis, we consider the effect of long-run underperformance.

4.3. Sponsor-backing and long-run ex-IPO performance

As mentioned above, the first research of measuring long-run IPO performance was conducted by Ritter (1991) and Loughran and Ritter (1995), where they found that IPO underpricing is a short-run phenomenon and that issuing firms crucially underperform in the long-run. There are several reasons, according to the authors, as to why the long-run performance of IPOs delivers excellent insights. One of which is that a longer window may deliver (i) insights into price patterns from an investor viewpoint. Furthermore, the finding of (ii) nonzero abnormal returns directly challenges the information efficiency of the IPO market. They also mention again the (iii) windows of opportunity, which indicate that IPOs show significant fluctuation over time. If high-valuation periods are associated with worse long-run performance, it would suggest that issuers successfully timed their IPO and took advantage of these windows of opportunity. The last reason mentioned is the (iv) costs of external equity capital. This cost does not only depend on transaction costs but also on the returns that investors may receive in the aftermarket. In their data set between 1970 to 1990, they find that IPO-firms performed lower than comparable non-event firms. However, they do not distinguish between VC-backed, PE-backed, or any other sponsor backing, which we discuss in detail in our results. They calculate buy-and-hold returns

for a three- and five-year window of around 4753 CRSP-listed companies. The researchers use control firms as a benchmark for newly issuing firms (IPO sample). The control firm is a "seasoned" firm, meaning that it has not issued any new equity for more than five years. The matching firms should have the closest market capitalization to the IPO-firm, but strictly having a higher value than the latter. If the seasoned firm gets delisted within five years after the corresponding IPO, the second closest firm is determined as the control firm and so on. The researchers found that for IPOs and SEOs, the annual returns are 16% and 33%. Yet, the performances of their control firms are significantly higher for each year (Loughran & Ritter, 1995). This marks the beginning of research on IPO long-run underperformance. Interestingly, the researchers found no evidence for underperformance in the first six months following the public offering, which could be a hint for a longer-lasting effect of the IPO-underpricing-phenomenon mentioned above.

There are further implications that are found in this research. It seems that the effects of long-run IPO underperformance are the highest in years of high IPO activity. Also, more recent observations find that underperformance is enhanced in years with more IPOs (Levis, 2011). Lerner (1994) also identifies that the mentioned windows of opportunity can affect the cycle of IPO volume and the valuation of IPOs. He finds that IPO activity is highly correlated with the "inflation-adjusted price" that investors are willing to pay.

Further studies had the aim to analyze this topic in a categorized fashion that is very comparable to our research. Brav and Gompers (1997) compared 934 venture capital-backed IPOs to 3407 non-backed IPOs between 1972-1992, which made their results comparable to the ones of Loughran and Ritter (1995). They criticized that the underperformance found in Loughran and Ritter (1995) may come primarily from small non-sponsor backed IPOs and wanted to split up the IPOs into groups to show this. The researchers used an approach in which they assigned each stock a reference portfolio, sorted by ME and BE/ME quintiles. In total, 25 different buckets were created to analyze the consequence of the sponsor backing in a detailed manner. The goal was to investigate variances in abnormal long-run returns between the two mentioned groups in comparison to the respective benchmark. They find that venture capital-backed IPOs outperform non-backed IPOs. However, their Fama-French Three-Factor regression suggests that the venture capital-backed portfolio still underperforms compared to the benchmark. When using value-weighted returns instead of equally-weighted returns, the differences decrease substantially. These results are evident in almost all the indices observed for value- and equally-

weighted buy-and-hold returns. Venture-backed IPOs earned 44.6% of 5-years compounded return on average, while non-venture-backed IPOs earn 22.5% over five years. The benchmarks' average return amounts to 53.7% during the observed period. There are two interpretations of the industry results. Firstly, Brav and Gompers (1997) argue that the industry returns for the venture-backed sample are lower than for their non-backed counterparts. This finding leads to the assumption that venture-backed IPOs are concentrated in industries with lower risk and, therefore, with lower expected returns. The other interpretation of the evidence provided could be that Venture Capital-backed companies can time overpricing better than non-backed firms. Brav and Gompers (1997) see that when they exclude IPOs and SEOs from their ME and BE/ME portfolios, venture-backed IPOs outperform their benchmarks, while non-backed IPOs perform similarly to the reference. Therefore, the researchers criticize the findings in Loughran and Ritter (1995) that the underperformance of (non-backed) IPOs is due to their small and low BE/ME characteristics and not the mere fact that they are newly issuing firms. This piece of evidence shows that, according to the researchers, IPO firms should not be treated as a separate group, and investors should look more broadly at the characteristics of firms because they perform very similarly to firms with comparable market capitalization and book-to-market values. Besides, one can observe a time difference in abnormal returns. In the late 1980s and early 1990s, a five-year-returns increase in general. However, the venture-backed sample's surge is more substantial. Brav and Gompers (1997) use a calendar time portfolio approach

, as the event time results could be misleading about the actual number of years, where IPOs underperform, due to potential IPO firm correlations. In their Fama-French three-factor regression, they state that non-venture-backed IPOs underperform significantly with an intercept of -0.52% for equally-weighted returns. In contrast, the intercepts for venture-backed IPOs are insignificant. In the CTP, the intercepts represent the abnormal returns. IPOs have a high chance of falling into the categories of small, low BE/ME firms. The underperformance of these categories has multiple explanations. The time interval may include external effects, as unexpected shocks have damaged small growth companies in the 1980s. Those small companies could not recover as fast as large firms did (Fama & French, 1995). The researchers argue that smaller firms had more unanticipated constraints in the capital and product markets after the recession. Another reason is investor sentiment, as for small non-backed IPOs usually, individuals hold those equities. Institutions instead hold a stake in venture-backed firms after an IPO compared

to non-backed ones. This discrepancy may occur due to the assumption that institutional investors have more information on small venture-backed firms through their investments in venture capital funds (Megginson & Weiss, 1991). There is even evidence that long-run IPO performance is positively related to institutional holdings in those IPO firms (Fields, 1996). Asymmetric information, in this case, can also be a crucial factor, as for small firms, individual investors put in less effort to track returns compared to institutional investors. In this field, too, media coverage and underwriters play a role as mentioned earlier (Barry, Muscarella, Peavy, & Vetsuypens, 1990). Better VC-backed stock performance is confirmed by (Krishnan, Ivanov, Masulis, & Singh, 2009), where they find that Venture Capital invests in firms that generally are attributed to better management teams and governance structures. Also, VCs invested in their sample in firms with significantly better long-run post-IPO performance.

VC-backed performance outside of the USA, withal experiences mixed results. Hamao, Packer, and Ritter (2000) observed a sample of 355 IPOs on the Japanese market between 1989 and 1994. They find that the performance of VC-backed IPOs is not significantly better than non-backed IPOs. Only by investigating the affiliation of the Venture Capital firm, crucial differences are coming to light, according to Hamao et al. (2000). If the VC is foreign-owned or independent, it improves the stock price performance of the IPO firm, while local VCs do not seem to improve the long-run underperformance of IPOs. In Japan, many VCs are subsidiaries of securities companies or banks and could, therefore, face a conflict of interest during the underwriting process. They report on three years a wealth relative of 0.85. The wealth relative is calculated as a ratio between the average gross return on IPOs starting from the first closing market price and the average gross return on ME- and industry-matched reference portfolio of non-issuing companies (Hamao, Packer, & Ritter, 2000).

There are different kinds of "sponsorships" a company can have when entering into the financial market through an IPO. Levis (2011) analyzes not just VC-, but also private equity-backed issues on the London Stock Exchange between 1992-2005. The study tries to highlight the influence of Private Equity on the firms they are backing. The outcomes comprise operational efficiencies as a result of closer monitoring of the management and higher levels of leverage. Even if a PE firm exits the issuing firm after the IPO, structural, managerial, and financial practices can be maintained by the issuing firm for a certain time (Jensen, 1989). Levis (2011) states that in his sample, PE-backed firms tend to have larger market capitalization than VC-

backed or non-backed firms at the time of floating. This observation is consistent with the relatively lower underperformance of PE-backed issues due to larger market capitalization and maturity, hence the lower risk of such issues. However, Levis (2011) finds that due to the significant and positive intercepts of PE-backed IPOs, not only ME and BE/ME effects are a driver of their outperformance compared to their other counterparts in the whole observed period. Other powerful characteristics comprise the stakes withheld by PE-firms and the leverage level after the IPO. There is contradicting evidence for the relation between the level of leverage and stock returns. For example, Dimitrov and Jain (2008) express in their studies that financial leverage provides information about the performance of a firm beyond the informative content provided by earnings and cash flow. Leverage has a negative correlation with future firm performance, and hence this would be reflected in negative market returns. On the other hand, Bhandari (1988) and Hou and Robinson (2006) find a positive correlation between the level of a firm's leverage and stock returns. All papers used data from the U.S. American stock markets such as AMEX, NYSE, and NASDAQ. More recent studies indicate that one cannot look at leverage without differentiating how debt is issued and used for what kind of investment opportunities (Gomes & Schmid, 2010). For the period between 1992 to 2005, Levis (2011) observes consistent abnormal returns on the UK market. The three years BHAR abnormal returns are negative and statistically different from zero, which confirms IPO long-run underperformance for the British market. He also finds crucial differences between the IPO groups. The overall negative long-run performance is predominantly manifested for non-backed IPOs. VC-backed IPOs are not significantly different from zero with a magnitude of 0.4% (0.4%) for equally weighted (value-weighted) abnormal returns, while PE-backed IPOs outperform the benchmark significantly. Similar to Ritter (2010) and Loughran and Ritter (1995), he observed value- and equally-weighted returns. Based on the Fama-French (1996) three-factor regressions, Levis (2011) finds a significantly positive abnormal return for PE-backed firms of 0.8% (0.7%) for equal-weighted (value-weighted) returns. By grouping the data sample into 14 different cohorts (one cohort represents one year), Levis (2011) argues that there is a clear pattern in the long-run performance of IPOs. He shows that strong issuing activity is correlated with the heaviest underperformance of IPOs in the aftermarket.[2] Especially the Dotcom Bubble in

[2] Strong issue activity in the UK market was particularly apparent in the years between 1993 and 1996 as a result of the buyout wave in the late 1980s. Furthermore, in 2000 the technology IPO wave culminated with 224 IPOs, 41 of which were sponsor-backed IPOs (Levis, 2011).

the data sample has a significant impact on the estimates in the long-term performance.[3] Levis (2011) compares the equally and value-weighted three-years performance of the different IPO subgroups such as VC-, PE-, and non-backed IPOs. His results show interesting patterns since PE-backed IPOs outperform the benchmark of the FTSE All Index in 10 out of 14 years. VC-backed IPOs initiated between 1999 and 2000 suffered greatly in the following three years in equally weighted returns as well as value-weighted returns. With the split-up of the data into cohorts, the researcher shows that on the UK market, PE-backed firms seemed to outperform its VC-backed counterparts constantly. It shows that the positive performance of PE-backed firms is not solely due to their market timing or that the overall positive return would be because of a small group of exceptionally well-performing cohorts. However, Levis (2011), as well as Brav and Gompers (1997), express caution, when evaluating annual cohort results, regarding the magnitude of the respective underperformance, because the returns between successive IPO-firms may be correlated. Extraordinary events such as the Dotcom Bubble, for example, could have a great influence on the results and the further interpretation of them. Levis (2011) makes his robustness check of sponsored and non-sponsored IPO performance in the aftermarket by giving a floor limitation for ME (more than £40 million) of assets and sales (more than £10 million). He finds that the largest PE-backed IPOs still outperform their counterparts, but the small proportion of large VC- and non-backed IPOs in terms of market capitalization perform far better than the average in their respective sponsor type subgroup. The performance for these three subgroups changes in a great manner, when compared under the same asset and revenue restriction mentioned above. The majority of PE-backed firms fulfill the requirement and have, therefore, only minor changes in the stock performance profile. However, only around 39% of VC-endorsed firms have sales above £10 million. Those firms generate an average cumulative abnormal return of 30.9%, compared to 0.4% without the restriction. This subgroup even outperforms their PE-backed counterparts. Also, non-backed IPOs with the same restriction have improved performance. Levis (2011) implemented a third robustness check with shedding light on the financial leverage and compares IPOs with total debt to total assets higher than 10%. The contrast between the three subgroups is even more distinct than the restrictions in ME and sales showed previously. PE-backed firms outperform their counterparts with similar leverage. Looking at the information received from the three robustness checks,

[3] The Dotcom Bubble had a strong effect on the underpricing of IPOs during 1999 and 2000 and these years saw a steep rise in IPO activity in particular (Ljungqvist & Wilhelm, 2003).

Levis (2011) concludes that PE-backed positive performance is consistent across different measuring dimensions of operational characteristics as well as different years. Nonetheless, the underperformance of VC-backed and non-backed counterparts is, to a certain extent, contributable to their smaller ME and sales at the time of the IPO. Firms of the same ME and sales potentially perform as well as PE-backed firms but seem to have differences in utilization of their debt in the long-run performance. It also shows that PE-backed IPOs are typically larger and have the tendency to be more conservatively priced at the time of an IPO and certainly outperform their counterparts in the time-windows after issue. In summary, Levis (2011) displays that PE-backed IPOs are generally larger in market capitalization, sales, and also focus more on industries related to consumer services and consumer goods. The evidence gives a hint that they are also considered to demonstrate less exposure to underpricing than their VC-backed and non-backed counterparts and were not affected strongly by the special market conditions between 1999-2000. The lower underpricing is driven by more conservative pricing to increase their return on investment. By using different measures and benchmarks for the long-run performance of IPOs, PE-backed issues achieve positive, significant cumulative abnormal returns in a three-year time window. In contrast, VC-backed and non-backed IPOs show poor aftermarket performance, which is in line with less recent research done on this topic. Levis (2011) argues that parts of the positive performance of PE-backed IPOs are due to their leverage and the sponsors' withheld shares after an IPO.

The topic regarding sponsor- and non-sponsor-backed IPOs is an exciting topic not solely bounded to developed markets. Minardi et al. (2013) compare the performances of PE, VC, and non-backed IPOs on the Brazilian market between 2004 and 2008. Brazil experienced an IPO wave that started in 2004 and had its peak in 2007 with 64 IPOs, while the total of IPOs during the years from 2004 to 2008 amounts to 108. They argue that in Brazil, in particular, PE firms have the potential to act as "quality stamps" for IPOs due to their preparation of the sponsored firms to go public, superior transparency standards and their reputation, which companies want to preserve (Minardi, Ferrari, & Araujo Tavares, 2013). Minardi et al. (2013) only considered one year (262 business days) for the measurement of cumulative abnormal returns. Therefore, the comparison of this paper with others must be taken with caution, as the short event window could enhance the effect of the underpricing-phenomenon and bias proper comparison of the results. Interestingly, the researchers found that for the Brazilian market, PE-backed firms had on average lower book-to-market ratios and a lower debt to equity ratio in comparison to non-

PE-backed IPOs. This finding opposes the market environment that Levis (2011) found for the British market. PE-backed IPOs in Brazil also have a smaller percentage of independent board members and more investors at issue-time than non-PE-backed IPOs. Minardi et al. (2013) divided their sample into issues from 2004 to 2006 and 2007 to 2008 due to the financial crisis. They measured cumulative abnormal returns that are value-weighted and, therefore, put more emphasis on larger companies and less weight on the smallest companies. In both cases, PE-backed IPOs perform better than non-PE-backed IPOs one year after floatation. The researchers also find that both backed and non-backed IPOs were, on average, more affected by the financial crisis in 2008 than the corresponding market benchmark IBOVESPA. In addition to the excellent performance of PE-backed IPOs, their results show that the offer size is significantly and positively correlated to the performance in all regressions. Also, the governance level that is determined by different market levels is an essential factor, according to Minardi et al. (2013).[4] Financial leverage negatively influences the performance of the different backed and non-backed IPOs. In this case, since PE firms are as mentioned less leveraged than non-backed ones, it gives the investor another good performance indicator of the respective IPOs. In conclusion, the researchers find a one-year CAR for PE-backed firms with IPO between 2004 and 2006 that amounts to 13.72%, whereas non-PE-backed firms had an abnormal share price performance of -3.23%. For the years between 2007 and 2008, the returns overall are unsurprisingly grim with a backed (non-backed) performance of -38.45% (-44.87%). In sum, the results are mostly in line with Brav and Gompers (1997) and Levis (2011) that PE-backed firms perform better than their counterparts. Minardi et al. (2013), however, lack information about VC-backed firms, and their different time window of 1-year (in contrast to 3-year and 5-year performance) makes it difficult to compare results across markets on a profound level. Also, we have to take into account that they used a different measurement method for abnormal returns. Minardi et al. (2013) use cumulative abnormal returns, while Levis (2011) uses buy-and-hold abnormal returns and calendar time performance. Nonetheless, an essential key takeaway is that in the period of the financial crisis, they find that PE-backed firms performed even worse than their benchmark, showing that those firms are not immune to strong exogenous shocks (Minardi, Ferrari, & Araujo Tavares, 2013). This result is mostly due to small IPOs, considering

[4] The different market levels in Brazil provide various stronger or weaker property protection for investors. BDR and Level 1 for example are weaker than New Market and Level 2 (Gilson, Hansmann, & Pargendler, 2010).

that the market-capitalization-adjusted CAR outperformed the benchmark in the same period by 11.44%.

Data

5. The business model of sponsor types

As our research substantially evolves around the comparison of different sponsor types, we want to dedicate this chapter to describe them briefly. Therefore, we introduce the conventional business models for VCs and PEs.

VCs deliver a form of purely private equity financing, which targets companies in their early stages and sometimes also distribute seed capital. Furthermore, in practice, it can be observed that VCs sometimes invest in late-stage companies. Their target is to identify companies with high growth or the potential of such through unique innovative technology or business models of the target company. Investments in early-stage companies bear an enormous amount of risk and imply a high probability of failure. Therefore, VCs usually invest in multiple firms to diversify the risk. The exit strategy of VCs is made up of two possible options. Firstly, VCs can hold on to their stake until the company is placed into the public market through an IPO. Secondly, VCs can try to sell their share of the company on the private equity market (trade sale). The most common acquirers comprise either another VC company in case the company is still in an early stage or a PE company when the target already reached a later stage in the maturity stages of the firm.

PEs, on the other hand, usually operate in different ways than VCs. Their goal does not involve early-stage investments. In contrast, the typical business model often involves the restructuring of companies that may have efficiency issues. PEs buy larger and more mature companies that are established in their field and often exhibit steady cash flows. In the course of the acquisition, the PEs often take on large amounts of debt to leverage the company to a great extent. Furthermore, PEs are also involved in growth capital investments. Accordingly, the PEs' main objective lies in streamlining operations and restructuring of larger companies that could possibly flourish through an injection of capital. Typical exit strategies for PEs comprise trade sales, IPOs, and secondary buyouts, leveraged recapitalization, and dual-track processes. (Liu L. , 2017).

The main difference between Private Equity firms and Venture Capital firms is that PEs are interested in buying majority ownership of equity in order to be able to successfully control and change a company. In contrast, for VCs, it is infrequent to buy more than 50% of the equity, as their strategy also comprises the diversification of risks across multiple firms as mentioned above. Their investment horizon is often very similar, and both of the firm types are more short-term directed. Especially, PEs are often criticized for the practice of "squeezing" out profits in the short-term while often neglecting long-term oriented capital expenditures. The description above is held in a generalized manner and is not meant as set boundaries between the two. VCs and PEs often work in very similar ways. Therefore, they overlap in their strategies, and it becomes difficult to distinguish them consistently. The most explicit distinct feature is the investment stage mentioned above, in which the two invest.

6. Sample selection

Our analysis is based on data from all companies in the United States of America that went public on the AMEX, NYSE, and Nasdaq stock exchanges in the period between 2000 and 2013. Our primary data source was Capital IQ [CIQ], while we consulted several other data sources that helped us for the manual classification of sponsors and exit strategies. Even though much manual work was required, which is generally susceptible to human error, we find that the classification is well thought through and gives us high confidence about the gathered data. Therefore, we find that the result is a reliable data source for the analysis of our paper. The sample selection is described in the following and further illustrated in figure 1.

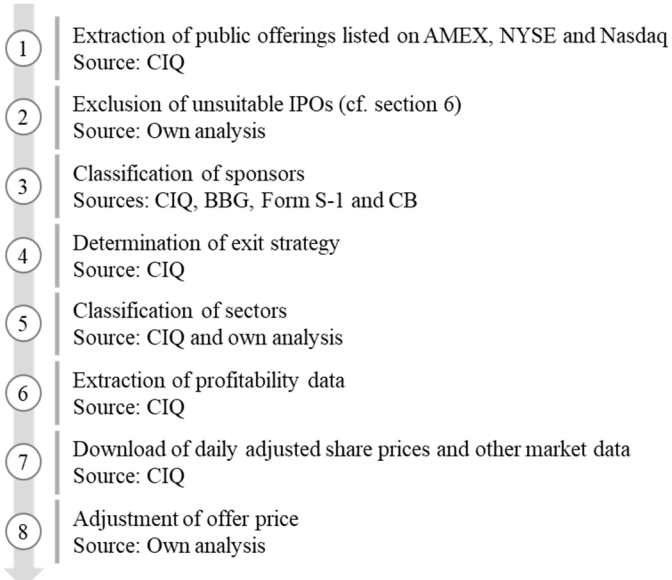

***Figure 1**: Data selection process*

The initial data extract from CIQ included the classification of whether or not the company's efforts to go public were sponsor-backed. However, the differentiation between VC- and PE-backed sponsors was not directly retrievable through CIQ. Therefore, we initially obtained the corresponding information from Bloomberg [BBG]. Since BBG and CIQ have different definitions of a sponsor-backed IPO, we had to manually categorize sponsorship specifications for 386 companies that carried a sponsor tag only in CIQ. We based our decisions on how to allocate those non-tagged firms on their Form S-1. It represents the company's registration of the shares that are offered in the IPO with the Securities and Exchange Commission. The form includes an overview of the beneficiary owners of the company before the IPO. The financial sponsors that we identified in these filings were then classified as either venture capital or private equity or a combination of both.

This designation tag is primarily based on the sponsor's defined investment focus. For sponsors that are hedge funds by nature, we dug more profound for the origin of the funding. Hedge funds often publish their investment style, indicating the type of company they invest in. Based on this investment style, we were able to determine the preferred investment cases (PE or VC). For example, a hedge fund that focused on early growth companies would be classified as a Venture Capital firm for our analysis. Our primary databases for the described sponsor type allocation were Crunchbase [CB] and CIQ. If the corresponding Form S-1 did not deliver sufficient information, such as a list of shareholders, about the pre-IPO investors, we took the private shareholders according to our primary source, CIQ. An additional complication was that some of the sponsors provide both Venture Capital and Private Equity. In these cases, we checked whether or not our firms belonged to one of the investor's active and inactive PE/VC-funds. In cases where we had no further and clarifying information about the investment type, we assumed the sponsor to be a combination of both [Combined]. For instances where we found Private Equity and Venture Capital as financial investors, we also classified the sponsor as Combined. This leaves us with three different financial sponsor types that we use in our analysis – *Private Equity*, *Venture Capital,* and *Combined*.

Furthermore, we conducted research to identify the different exit strategies of the sponsors. The challenge was to identify whether and how many shares a sponsor sold in the process of the IPO. As private companies and the sponsors are generally reluctant to share this type of information before the IPO, this step required manual work again through CIQ. CIQ publishes quarterly updates on the shareholdings of public companies, which we could access to classify the

different exit strategies. While there are cases that are straight-forward in which sponsors sold or kept all their shares, we also found a lot of newly public companies that tried to refrain sponsors from selling their equity directly. The corresponding mechanism is a so-called lock-up agreement, in which the selling company and the shareholder (sponsor) determine that a certain fraction of the shares cannot be sold in a pre-specified time after the IPO. For instance, we find that a widespread lock-up period amounts to 180 days. After the lock-up period, the investor can unrestrictedly decide whether to sell its shares on the public market or not. Substantially, this means that a sponsor's retention of shares following an IPO does not necessarily mean that they want to remain a long-term shareholder. Thus, we classified the exit strategies in three different ways. We looked at a 3-months window starting from the last day of the lock-up period to determine whether PEs or VCs sold any shares on the public market. This time window takes into account that most sponsors and shareholders generally sell their stakes in tranches. A *Complete Exit* [CEx] represents cases where the sponsors entirely sold their stakes in the target company after the IPO or within 3 months after the lock-up period has ended. In cases where the sponsor ownership was marginal in comparison to the stake prior to the IPO, we applied a rule of thumb. Sponsors that sold above 90% of their previous ownership in the company were considered to have exited completely. *No Exit* [NEx] occurred when sponsors sold their holdings neither after the IPO nor after the end of the lock-up period. *Partial Exits* [PEx] represent the sale of parts of the ownership of sponsors before the IPO. Instances, where one sponsor sold their stakes, but another one retained (some of) their shares in the target company ought to be Partial Exits.

Daily adjusted close prices for the period between 2000 and 2019 were retrieved through the CIQ Excel Add-In. The share prices are adjusted for several corporate actions that took place in the company's history. Share price adjustments comprise stock splits, rights offerings, and dividend payments. The quantitative effect of these corporate actions is used to reflect the actual value of the firm over time. The adjusted close prices and the corresponding adjustment factors were readily available through CIQ. However, the offer prices for the IPO were unadjusted. Therefore, we accustomed the offer price to reflect these adjustments retrospectively. To reveal all future corporate actions, we made use of the alterations for the first-day closing prices. Our calculation is based on the assumption that there are no corporate actions on the first trading day. The procedure to adjust the offer price allows us to calculate accurate returns for the event period. The adjusted offer price is consequently defined as:

$$P_{o,0}^{adj} = P_{o,0}^{unadj} * \frac{P_{c,1}^{adj}}{P_{c,1}^{unadj}}$$

Where:

$P_{o,0}^{adj}$ – Adjusted offer price

$P_{o,0}^{unadj}$ – Unadjusted offer price

$P_{c,1}^{adj}$ – Adjusted first-day close price

$P_{c,1}^{unadj}$ – Unadjusted first-day close price

Based on the adjusted rates, we then calculated the daily returns of the securities. The first-day return is calculated by taking the percentage change between the offer price $P_{o,0}^{adj}$ and the first-day close price $P_{c,1}^{adj}$. All subsequent returns are then based on the daily adjusted close prices of the individual securities. In some cases, we encountered so-called shelf registrations before the public offering. Shelf registrations allow companies to attract public investors before the actual IPO, which is why share prices were registered. However, these shares are, in most instances, very illiquid and reserved to only a certain number of investors. Therefore, we excluded the share prices and defined the opening price after the IPO as the first day of trading. In other exemptions, the first trading day was lagging the offer date by more than one day. The difference was accepted without any further adjustment, as it is common practice for investment banks to delay IPOs if it does not receive the required investors' attention.

Additionally, we retrieved profitability and leverage data for our sample. This is essential for our analysis as we plan to base part of the discussion on the financial data of the sample companies. Our choices of variables for profitability data are the gross margin, which is the gross profit divided by the total revenues according to CIQ and the EBITDA margin, which is calculated using the EBITDA divided by the total revenues. We also extract data about the Debt/Equity ratios to be able to analyze the impact of leverage.

All data, including share prices and financial data, is also extracted for a comparable benchmark, where we use the matching firms that we identified in our BHAR approach. These control firms represent comparable non-event firms based on ME and BE/ME (cf. section 11.2.2).

We also obtained the companies' sectors to be able to analyze abnormal returns per industry. The initial industry tags consisted of the following sectors: Consumer Discretionary, Consumer Staples, Financials, Real Estate, Communication Services, Information Technology, Health

Care, Energy, Utilities, Industrials, and Materials. To achieve a sufficiently high number of IPOs per sector and to facilitate analysis across sector data, we aggregated some of the segments, such as Financials and the Real Estate area. This left us with seven distinctive industry classifications: Consumer Goods [CG], Financials & Real Estate [F&RE], Communication Services [CS], Information Technology [IT], Health Care [HC], Energy & Utilities [E&U] and Industrials & Materials [I&M].

7. Survivor bias and exclusions

We aim to analyze companies that went public in the before-mentioned period. While this definition is extensive, we also observed the behavior of the stock prices in terms of liquidity (measured by daily volume) and noise. Our examination concluded that a lot of so-called over-the-counter [OTC] companies do not meet our quality requirements. Therefore, we cleansed our sample from all companies that were listed on OTC stock exchanges such as Pink Sheet or the Over-the-Counter Bulletin Board [OTCBB] stocks. This drastic measure was taken based on a thorough analysis of the availability of stock prices on our primary data source CIQ and, generally, the stock price fluctuations, which often signaled little trading and stocks that were reserved to a small number of market participants. This is in line with the research literature (Levis, 2011; Brav & Gompers, 1997; Loughran & Ritter, 1995).

Brown, Goetzmann, Ibbotson & Ross (1992) suggest that the survivorship bias leads to substantial drawbacks "in first and second moments and cross-section of return, including β." Furthermore, they conclude that elimination results in a "spurious relationship between volatility and return" (Brown, Goetzmann, Ibbotson, & Ross, 1992). Based on our data, we deduce that there is room for survivorship bias by, for instance, excluding stocks from companies in distress or undergoing restructuring processes. The treatment of such cases is discussed in the following.

Our sample and the benchmark data for the BHAR approach comprises several firms that were de-listed due to bankruptcy or mergers. Notably, an exclusion of the bankrupt companies would harm the meaningfulness of our analysis due to the previously described survivor bias. Therefore, we decide to include distressed companies with a return of a negative 100% on the day of bankruptcy. In the days following the de-listing, the performance is held at 0%. There are other instances in which a company is de-listed due to a merger or other events that do not lead to an end of operations. As these stocks would theoretically still generate a return when they are not listed, we decided to use a different approach. Instead of keeping the return at 0% as for the

companies in default, the more realistic resolution is that the stocks achieve returns close to a benchmark. Thus, we extracted reference portfolios[5] based on the respective market capitalization of the stock with which we filled the remaining returns in the event window. The breakpoints allocate a firm to a portfolio that is closest to the respective market capitalization, and we then used the returns for the filling. This standard was applied to the sample as well as the benchmark used for comparing returns in the section Descriptive Statistics and used for calculation of the abnormal returns in the BHAR approach.

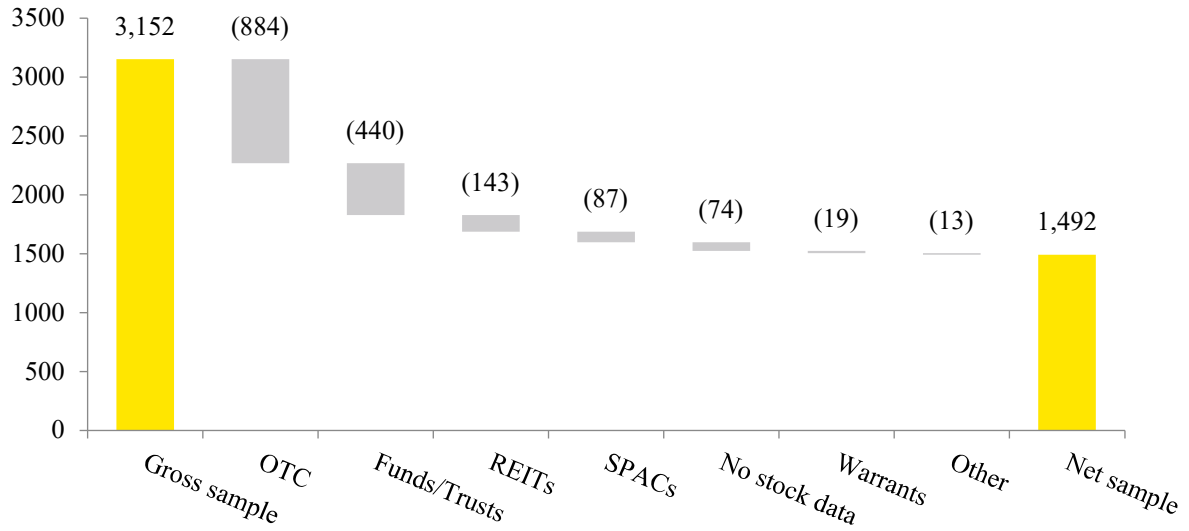

***Figure 2**: Bridge of exclusions for the final sample size*

Another specific group of IPOs concerns special funds and other companies that deviate from our definition of an operating company. Based on Barber and Lyon (1997) stating that the analysis should be based on "long-run returns focus on the common stock performance of corporations," we exclude returns that do not fit the definition of common stock from our analysis as well. Affected IPOs are attributable to American Depository Receipts [ADRs], closed-end funds, foreign-domiciled companies, special purpose acquisition corporations [SPACs], also known as blank check blind pool companies, real estate investment trusts [REITs] and IPOs that mainly consisted of equity warrants instead of free float. Last but not least, we excluded companies that did not have any share data available on CIQ. The corresponding number of exclusions amounts to 1,660 (cf. figure 2). Based on our dataset, we find that this exclusion represents a cross-section of our data without an extraordinary amount of exceptional cases

[5] The categorization of the company in terms of market capitalization is conducted through the breakpoints provided by Kenneth French. We retrieved the corresponding data from his data library (https://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html).

such as defaults or mergers. Therefore, we conclude that no survivor bias results from the exclusions. Again, this standard of exclusion was applied to the sample as well as to the benchmark of matching firms (further specified in section 11.2.2).

8. Descriptive Statistics

8.1.1. IPOs by count and value

In our analysis of long-run IPO underperformance, we focused our research on the period from 2000 to the end of 2013. As shown in section 7, the final sample size amounts to 1,492 IPOs. Table 1 illustrates the development of total public offerings during that period and divides it into respective subgroups non-sponsor backed and sponsor-backed. Furthermore, we show the respective numbers of IPOs for the PEs, VCs, and Combined [CO]. Over the whole sample, non-sponsor backed IPOs account for 797 of the IPOs, while sponsors endorse 695 companies going public.

Table 1: Number of IPOs per year of IPO

This table shows the annual composition of our sample. We display sponsor-backed, and non-sponsor backed IPOs for the years 2000 to 2013. Sponsor-backed IPOs are further split up between PE-backed, VC-backed, and IPOs backed from both Private Equity and Venture Capital firms [Combined].

IPOs per year	Total	Non-sponsor backed	Sponsor-backed	PE-backed	VC-backed	Combined
2000	268	202	66	14	14	38
2001	69	65	4	4	0	0
2002	64	56	8	6	1	1
2003	57	38	19	6	8	5
2004	148	101	47	21	7	19
2005	134	99	35	21	2	12
2006	138	69	69	29	17	23
2007	135	41	94	29	28	37
2008	24	12	12	5	1	6
2009	35	8	27	18	3	6
2010	84	15	69	32	8	29
2011	84	30	54	17	7	30
2012	100	23	77	33	27	17
2013	152	38	114	42	41	31
Total	**1492**	**797**	**695**	**277**	**164**	**254**

The most active year in regards to initial public offerings is the year 2000, with a total number of 268 IPOs. This high amount is mostly carried by the unprecedented growth in internet-related businesses in the late 1990s/early 2000s. The increase was accompanied by a massive wave of IPOs. This development can also be seen in our data with 124 IT IPOs in 2000 alone (cf. Appendix B – table 1). The Tech IPOs led to a sharp rise and subsequent sell-off of mainly Nasdaq-listed firms as a consequence of the Dotcom Bubble. Internet-related IPOs had strong first-day returns during that period, which led to more IPOs as a result (Ljungqvist & Wilhelm, 2003). After the repercussions of the Dotcom Bubble with low subsequent IPO activity, it picked up again in the year 2004. The total number of IPOs on the AMEX, NYSE, and Nasdaq increased sharply from 2003 to 2004 from 57 to 148 IPOs. The year 2003 marks the single year with more VC-backed IPOs than PE-backed IPOs. In the period between 2004 and 2007, the total number of IPOs remained at a relatively stable and high level in comparison to the previous periods. However, the compositions of the subgroups changed drastically in that period. In 2004 and 2005, non-sponsor backed IPOs represented 68% and 74% of the whole sample. In the years 2006 and 2007, that subgroup's portion of the total decreased to approx. 50% and 30%, respectively. The increase of sponsor-backed IPOs is a result of increased activity from Venture Capital and Combined sponsors, while Private Equity divestments through public offerings already increased in the year 2004. In the course of the Great Recession in the late 2000s, the IPO activity diminished drastically, with only 24 and 35 initial offerings per year. In 2009, PE-backed IPOs were responsible for the majority of sponsorships. The subperiod of all future years from 2007 onwards shows that number of non-sponsor backed IPOs never managed to account for more than 50% of annual IPOs again and declined even more for the years between 2010 to 2013. After the year 2009, the U.S. market experienced another IPO wave where the IPOs surged again. In summary, we can observe roughly three IPO waves in 2000, 2004-2007, and 2012-2013.

The described IPO activity over our sampling period is illustrated in figure 3. Non-sponsor backed IPOs decline in the percentage of the total offerings over the sample period. This trend began after the year 2003. However, it remained mostly the preferred way to go public until after 2007. After the financial crisis, we observe that non-sponsor backed offerings never came back to similar popularity. Instead, sponsor-backing is observed to drive IPOs in the following.

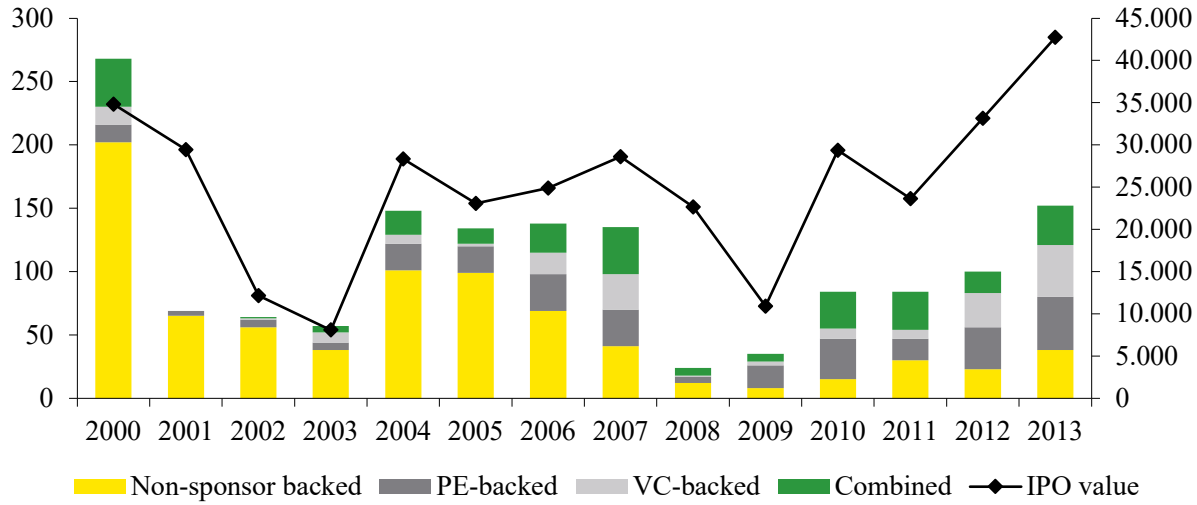

***Figure 3**: Number of IPOs per year including offer value in USDm*

Throughout the sampling period, the most popular sponsor to offer equity was Private Equity firms. Venture Capital was the least popular sponsor to go public with Combined even accounts for more than 50% of all sponsor-backed IPOs in 2000 and 2011. Furthermore, we observe that Venture Capital activity seems to be very cyclical. While there is much activity in 2006 and 2007 as well as 2012 and 2013, VCs almost do not support IPOs in the period in-between and before that with the exception of the year 2000. This stands in contrast to the other two sponsor types that pick up activity relatively quickly after the two crises within our sample period (Dot-com Bubble and Great Recession).

Table 2: Number of IPOs per industry

This sample shows all sponsor-backed, and non-sponsor backed IPOs for the years 2000 to 2013 divided into seven industries. Sponsor backed IPOs are furthermore split up among PE-backed, VC-backed and Combined IPOs.

IPOs per industry	Total	Non-sponsor backed	Sponsor-backed	PE-backed	VC-backed	Combined
CG	172	83	89	61	9	19
F&RE	229	182	47	32	2	13
I&M	162	72	90	63	8	19
CS	90	46	44	13	11	20
IT	373	163	210	51	70	89
HC	325	147	178	29	61	88
E&U	141	104	37	28	3	6
Total	**1492**	**797**	**695**	**277**	**164**	**254**

Table 2 shows the split of the sample into the seven different industries, as mentioned in section 6. While the overall sample size of non-sponsor backed and sponsor-supported public offerings deviates by 102 IPOs in total, we observe that the difference is not equally distributed amongst the industries. On the one hand, the data displays some industries where sponsor-backed offerings overweight the non-sponsored counterparts such as in the sectors CG, I&M, IT, and HC. On the other hand, we find that there are industries that have a penchant for sponsor-less offerings. Instances are the Energy & Utilities sector as well as Communication Services and Financials & Real Estate. The differences vary widely since some industries almost exhibit similar numbers in industry-specific IPOs while other sectors show a clear preference (e.g., E&U).

Interestingly, there are also preferred industries for some of the sponsors. For instance, the IPOs of Venture Capital manifest a higher interest in Information Technology and Health Care companies. A similar pattern with the same industries is illustrated for the Combined IPOs. A clear outline for industries is less straightforward for Private Equity firms. While it seems evident from the overall numbers that Private Equity favors the sectors I&M, CG, and IT, we see a recent uptick in interest towards the companies in Financials & Real Estate as well as Energy & Utilities. Each sector manifests 20 IPOs in the recent period after 2009 (cf. Appendix – table 5). Recently, the amount of IPOs is, therefore, relatively close to the ones that we observe as favorites in table 2.

Table 3: Number of IPOs per exit strategy

This sample shows all sponsor-backed, and non-sponsor backed IPOs for the years 2000 - 2013 divided into three different exit strategies. No exit is the case when sponsors do not sell any or only a marginal amount of their stake of the issuing firm. Partial exits represent situations when sponsors sell substantial parts of their shares, and complete exits are cases where the sponsor sells all or keep only a marginal amount of their shares related to the IPO firm. Sponsor backed IPOs grouped into different exit strategies are furthermore split up among PE-backed, VC-backed, and IPOs sponsored by Combined sponsors.

IPOs per industry	Total	PE-backed	VC-backed	Combined
No exit	210	85	46	79
Partial exit	395	160	94	141
Complete exit	90	32	24	34
Total	**695**	**277**	**164**	**254**

As mentioned, we additionally conduct research on the exit strategy of sponsor-backed firms. As table 3 shows, out of the 695 Sponsor backed IPOs, 395 sponsors quit their investment

partially in the course of the IPO. This strategy alone represents more than half of the subsample. Furthermore, 210 IPOs experienced no sponsor divestment at all. Only 90 cases resulted in a Complete Exit for the sponsor after the IPO or the lock-up period.

The distribution of the exit strategies among the sub-sponsor types is somewhat homogeneous. All three sponsor types favor a partial exit of their investment through the IPO. The second most used strategy is not to divest at all for the three sponsors. Finally, we find that a complete exit is not favored for the sponsors. Furthermore, we observe that the complete exit was even less preferred after the year 2000. While we observe a total number of 90 complete exits, 47 total divestments took place in the year 2000, most of them in the Information Technology sector and backed by a Combined sponsor (cf. Appendix B – table 7).

After the in-depth description of IPO counts, we want to show the relative values of the offers across the sample and a comparison of market capitalization to a benchmark. The composition of the benchmark is further described in section 11.2.2.

We observe that the overall sample is smaller in market capitalization compared to the benchmark (cf. table 4). The average ME of our sample firms is USD 1.2bn, which is partially influenced by large firms such as General Motors and Facebook. The vast majority of our firms are smaller companies in terms of ME, according to the breakpoints of French[6]. In terms of market capitalization, we see that Private Equity-backed firms appear to be the largest, which is in line with their investment focus compared to VC. While PE-backed firms are large across all industries, the VC-backed cohort exhibits large fluctuations among industries as their Communication Services stocks are larger than the PE-backed ones. Combined stocks even exceed the ME of VC-backed CS stocks. Also, CG stocks from Combined sponsorship appear to be very large in market capitalization on average (cf. Appendix B – table 8).

In terms of offer size and the float percentage, PE-backed firms again "outperform" the other cohorts. Only non-sponsor backed firms appear to be close in terms of percentage of shares offered, and Combined sponsorship has the second highest market capitalization on average. Again, VC-backed firms have the lowest value for the public offerings, as well as the lowest

[6] We used the breakpoints provided on the website of French (https://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html) to classify our sample firms into specific size quintiles.

percentage of shares offered in the IPO. The aggregation does not display that figures concerning the value of shares offered of Combined companies are mostly driven up by a high offer value in the Communication Services industry. Throughout our sample period, the offer values fluctuate alongside the IPO count, as shown earlier in table 4.

Table 4: Avg. Market capitalization and offer value

This sample shows the market capitalization (ME) and the Offer Value (OV) for sponsor-backed, and non-sponsor backed IPOs for the years 2000-2013 divided into the respective subgroups. Furthermore, we show the respective average float percentage after the IPO, which is the offer value divided by market capitalization. The numbers are shown in USDm.

	Overall	**NSB**	**SB**	**PE**	**VC**	**CO**	**BM**
ME	1,217	1,164	1,278	1,494	895	1,290	1,708
OV	236	245	226	330	102	192	n.a.
Float	19.4%	21.0%	17.7%	22.1%	11.4%	14.9%	n.a.

8.1.2. Profitability and leverage

In this section of our descriptive analysis, we exhibit the profitability and leverage ratios that the IPO sample displays (cf. table 5). While the overall two groups show that the non-sponsored public offerings are generally more profitable in terms of gross margin and EBITDA margin, we have to take a closer look at how the sub-sponsors behave in this context. We observe that the Venture Capital and Combined cohorts manifest higher gross margins compared to NSB. This finding implies that the lower gross margin of Private Equity-endorsed IPOs has a large impact on the average of sponsor-backed groups in total. In terms of EBITDA margin, this finding reverses as the higher profitability of PE-backed firms drags up the average of the sponsored cohort. Private Equity companies even show a larger median than the sample of IPOs without a financial sponsor. In comparison to the benchmark, represented by the matching firms of our BHAR approach, we observe that despite comparably lower gross margin, the benchmark has higher profitability on EBITDA with an average substantially higher (20.7% compared to 19.1% overall).

Table 5: Overall gross margin, EBITDA margin and Debt/Equity ratio

This table the gross margin, EBITDA margin, and D/E ratio of the cohorts overall (OVR), non-sponsor backed (NSB), and sponsor-backed (SB). The sponsor-backed group is further split into the subgroups of PE-backed (PE), VC-backed (VC), and Combined (CO). Furthermore, we show figures for the predefined benchmark (BM). We show the mean, median, maximum, and minimum of the gross margin, EBITDA margin, and Debt/Equity ratio for the groups as mentioned above. Also, we show the total amount of firms *N* that offer figures for the type of financial ratio.

	OVR	**NSB**	**SB**	**PE**	**VC**	**CO**	**BM**
				Gross margin in %			
μ	53.0	54.5	51.3	45.4	54.7	56.8	49.6
Mdn	50.1	50.4	49.8	38.7	58.2	55.9	41.9
Max	100.0	100.0	100.0	100.0	100.0	100.0	102.9
Min	0.1	0.1	0.3	2.9	0.3	0.9	1.8
N	1,305	617	688	273	130	214	725
				EBITDA margin in %			
μ	19.1	20.1	18.1	20.1	12.5	17.4	20.7
Mdn	13.9	14.0	13.8	15.0	9.3	14.1	15.1
Max	100.8	99.9	100.8	100.8	54.7	75.2	99.3
Min	0.0	0.1	0.0	0.0	0.0	0.1	0.2
N	847	424	423	239	69	115	725
				Debt/Equity ratio			
μ	3.6	3.0	4.4	7.3	2.8	2.1	1.0
Mdn	0.4	0.4	0.4	1.4	0.1	0.2	0.3
Max	868.5	497.3	868.5	868.5	296.9	201.8	263.2
Min	0.0	0.0	0.0	0.0	0.0	0.0	0.0
N	1,250	560	690	227	126	207	725

In terms of leverage, which is described by the Debt/Equity ratio at the time of the IPO, it makes more sense to look at the median as outliers distort the averages. We can again observe the interesting role of PE-backed companies as they drag up the median of sponsor-backed companies. In contrast, VC-backed and Combined firms exhibit substantially lower median D/E-ratios at the time of the IPO. The comparison to our benchmark shows that IPO companies generally manifest higher leverage in comparison to our benchmark except for when they are backed by either a Combined sponsor or by Venture Capital firms.

The outliers that show 100% gross margin mostly relate to Financial & Real Estate companies that do not exhibit any cost of goods sold. We could have used a similar industry-specific measure to the gross profit, such as net interest income. However, we did not want to deviate from the use of gross profit as it might distort the overall picture and make our descriptions a bit less reliable. In terms of the 100.8% EBITDA margin, it refers to Antero Resources Corporation. Antero reported commodity fair value gains, an extraordinary income, in the year of the IPO, which drew EBITDA up. As we did not adjust for extraordinary items in this paper, the outlier remains in the overview. The second outlier in EBITDA margin (NSB – 99.9%) refers to NuStar GP Holdings, LLC. NuStar does generally not seem to occur many operating expenses due to their business model of transportation of petroleum products.

The comparison of profitability and leverage among our sponsor groups, and the benchmark is further illustrated in figure 4. An additional component that we throw into the mix is a measure of size – in this context, we use revenues as an indicator for it, which represents the size of the respective bubbles in figure 4. The visualization suggests that there is a slight positive linear relationship between profitability and leverage. Furthermore, we observe that in our sample, larger companies in terms of revenue also have relatively higher leverage and profitability. However, this stands in contrast to the relatively low leverage in our benchmark, while the benchmark is, on average more substantial in size. Another observation is that Private Equity stands out in the crowd with high leverage at the time of the IPO and high profitability while being more extensive in terms of sales than the rest of our sample.

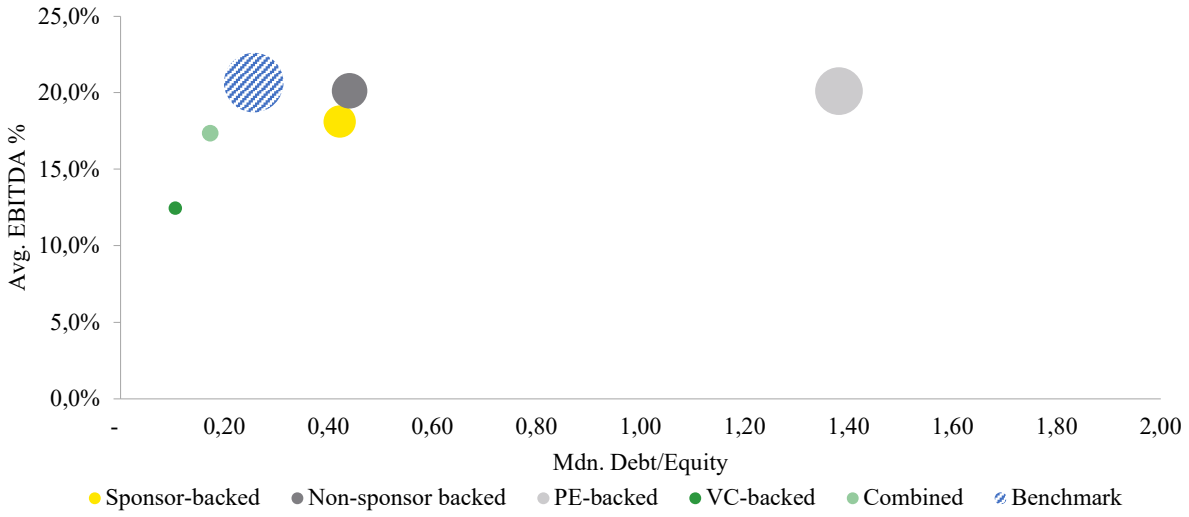

***Figure 4**: Comparison of average profitability and leverage data to benchmark*
Note: The EBITDA margin is shown on average, while we use median data for the D/E ratio. The bubble sizes represent the average revenue per group.

While the insights for profitability and debt levels are valuable, the average and medians on an aggregated basis can often be misleading. Different sectors exhibit differing profitability profiles. Therefore, a divergent industry mix could potentially drag up or down the profitability of, for instance, the PE-backed companies. As an example, we observe that F&RE, CS, and E&U exhibit higher EBITDA margins on average than all other industries (cf. table 6). A finding that becomes visible in all IPO groups except for the VC. We recall that Venture Capital, in our sample, focuses on the two industries, IT and HC. Two groups that are very low in profitability on average, according to table 6. As mentioned before, Combined focuses on the same two sectors. However, for Combined, the two sectors perform comparably well with 15.7% and 18.0% EBITDA margin, respectively. PEs were found to concentrate on multiple industries. Most notably, Private Equity went public with CG, I&M, and IT companies. Each of these sectors performs relatively well in comparison to the other sponsor groups. We also mentioned that Private Equity recently raised more capital in the industries E&U and F&RE. In both sectors, we observe that there is high profitability for the PE-backed companies with 22.8% and 41.3% EBITDA margin, respectively. In comparison to the benchmark, we observe that the benchmark's profitability deviates from the findings in our overall sample. We find substantially higher EBITDA margins in the F&RE, HC, and E&U industry. On the other hand, we also find that some benchmark industries exhibit less profitable behavior such as CS and I&M. The remaining two sectors CG and IT, are in line with our sample overall.

For the leverage, we observe that Private Equity generally seems to proceed IPOs with companies that incorporate higher debt levels than their peers. For instance, the PE-backed IPOs in the CS industry exhibit debt 2.9 times higher than the equity, which is much higher than in any other sponsor group. While VC-backed offerings are generally accompanied by low leverage levels, they have the highest D/E-ratio in the F&RE sector compared to other sponsors in the same industry. In general, we can say that sponsor-backed IPOs' debt levels are substantially carried up through the Private Equity sponsors. The debt levels of the benchmark, in comparison to our overall sample and the sub-groups, are usually lower. This was already discussed in relation to the figure 4. However, the industry insights provide further observations on this.

Table 6: Average EBITDA margins and median Debt/Equity ratio per industry

This table shows the average EBITDA margins and the median of the Debt/Equity ratio for the overall (OVR), non-sponsor backed (NSB), and sponsor-backed (SB) cohorts. The sponsor-backed group is further split into the subgroups of PE-backed (PE), VC-backed (VC), and Combined (CO). The rightmost column represents the benchmark (BM). We show the numbers split up among the seven predefined industries.

	OVR	**NSB**	**SB**	**PE**	**VC**	**CO**	**BM**
	Avg. EBITDA margin in %						
CG	14.2	14.1	14.3	15.3	11.5	11.7	14.2
F&RE	25.0	26.4	22.2	22.8	14.2	23.2	37.6
I&M	16.8	15.5	17.9	18.1	22.1	15.2	14.3
CS	24.4	27.8	22.1	26.6	15.4	23.0	19.0
IT	14.4	14.7	14.2	16.5	9.5	15.7	15.3
HC	16.2	16.1	16.3	15.6	13.7	18.0	21.0
E&U	32.7	30.3	38.7	41.3	19.6	35.0	40.9
	Mdn. Debt/Equity ratio						
CG	0.98	0.95	1.06	1.46	0.16	0.33	0.34
F&RE	0.68	0.75	0.44	0.57	1.01	0.25	0.54
I&M	1.82	0.94	2.43	2.88	0.66	1.16	0.28
CS	0.40	0.45	0.39	2.86	0.07	0.19	0.39
IT	0.13	0.12	0.15	0.72	0.05	0.10	0.03
HC	0.17	0.20	0.16	0.98	0.10	0.12	0.07
E&U	0.89	0.78	1.02	1.03	0.97	1.11	0.49

Last but not least, we want to address the difference in profitability and leverage observed for the specific exit strategies. The first observation in table 7 is that the profitability decreases in the opposite direction than the level of divestment. This means that IPOs, where the sponsors exited their investment completely, seem to have lower profitability in comparison to partial exits. Moreover, Partial Exits have relatively low EBITDA margin compared to No Exits. Therefore, we observe a linear relationship of profitability with the willingness of sponsors to divest. This observation is suggested for sponsor-backed offerings in total, PE-backed, and VC-backed IPOs. However, we find that Combined IPOs are not in line with this remark. Partial Exits show a relatively high EBITDA margin compared to the other two exit strategies. Nevertheless, No Exits outperform Complete Exits, which confirms the previous finding again.

Concerning leverage, it is hard to find a pattern as it depends on the sponsor type. While Private Equity-backed IPOs exhibit decreasing leverage alongside the level of divestment, the other two groups show a completely different picture. In Venture Capital-backed offerings, Partial Exits have the lowest level with 0.06 times equity on a median, while Complete Exits have the highest leverage with 0.17 times equity. For the Combined equity offerings, it is the other way around with D/E-ratios of 0.18 and 0.12 for PEx and CEx, respectively.

Table 7: Average EBITDA margins and median Debt/Equity ratio per exit strategy

This table shows the average EBITDA margins and the median of the Debt/Equity ratio for the overall (OV), non-sponsor backed (NSB), and sponsor-backed (SB). The sponsor-backed group is further split into the sub-groups of PE-backed (PE), VC-backed (VC), and Combined (CO). The rightmost column represents the benchmark (BM). We show the numbers split up among the three predefined exit strategies.

	SB	**PE**	**VC**	**CO**
		Avg. EBITDA margin in %		
NEx	19.7	22.1	14.7	16.0
PEx	17.9	19.4	12.7	18.7
CEx	15.3	18.4	7.6	13.0
		Mdn. Debt/Equity ratio		
NEx	0.39	1.39	0.12	0.16
PEx	0.48	1.37	0.06	0.18
CEx	0.34	1.35	0.17	0.12

8.1.3. Statistical properties of event and portfolio return data

In this section of Descriptive Statistics, we observe the behavior of the raw daily return data that we have retrieved from CIQ.

Our first observation relates to the statistical properties of the whole sample and the different sub-cohorts (cf. table 8). To make the data more comparable, we include again the benchmark represented by the stock that we use in order to calculate the BHAR approach.

We observe that the benchmark has a higher average return than any of our sample groups. Partly, this could be driven by the extreme outlier of close to 300,000%. The extreme return relates to Chicago Rivet & Machine Co., an industrial machinery company, whose stock went close to zero on 21/10/2003 to bounce back the day after. In-sample, we find that Venture Capital-backed stocks perform at a superior level with an average daily return of 0.10%, followed

by non-sponsor backed companies with an average daily return of 0.09%. For all sub-groups and the benchmark, we find the median return to be 0.00%.

Volatility, measured by the average standard deviation of the single-stock returns, indicates that all cohorts fluctuate similarly. The only exception is the PE-backed group of companies, which exhibit a low standard deviation of 3.30%. The highest volatility is manifested in Combined stocks with σ equal to 4.57%. Compared to our benchmark, the standard deviation is, however, low. Again, the benchmark seems to be affected by its large outlier. With regard to the sample's outliers, we find that the non-sponsor backed cohort exhibits a large one that exceeds the other groups' outliers by far. The corresponding company is SharpSpring, which incurred a first-day IPO return of 3,060%. The day following the IPO, the price was reversed close to its initial offering level. The negative outliers that are -100% for our sample and the benchmark relate to stocks that went bankrupt.

In addition to the mean and standard deviation, we observe the skewness and kurtosis of our sample statistic. The skewness is a measure of the asymmetry of the underlying distribution. An example of a non-skewed distribution is the normal distribution. In return, the kurtosis describes the sample distribution's "tailedness" (Jondeau, Poon, & Rockinger, 2007). Our sample displays high positive skewness and, simultaneously, high kurtosis. Distributions that show high kurtosis is often referred to as a leptokurtic distribution. It means that the underlying distribution reveals fat tails and high outliers. Not only our sample exhibits this behavior across all groups, but also the benchmark suffers from this deviation from the normal distribution.

Table 8: Descriptive statistics of the raw returns of sample and benchmark

This table illustrates the descriptive properties of the raw returns for the IPO sample, its subgroups, and the benchmark. We show the mean (μ), median (Mdn.), standard deviation (σ), maximum (Max), minimum (Min), skewness ($Skew$), and kurtosis ($Kurt$) for each group.

	Overall	**NSB**	**SB**	**PE**	**VC**	**CO**	**BM**
μ	0.09%	0.09%	0.08%	0.08%	0.10%	0.08%	0.21%
$Mdn.$	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
σ	4.3%	4.5%	4.1%	3.3%	4.8%	4.6%	10.7%
Max	3060.0%	3060.0%	355.7%	287.1%	282.9%	355.7%	272268.5%
Min	-100.0%	-100.0%	-100.0%	-60.8%	-100.0%	-82.2%	-100.0%
$Skew$	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%
$Kurt$	39.51	38.05	41.18	30.82	60.35	40.11	129.89

Due to the observations made in this section, we establish a severe need for a method that removes or alters the outliers in our data set in order to keep the distorting influence of the outliers low. The boxplots of our full event portfolio and the reference portfolio composed of the BHAR match firms are further illustrated in figures 5 and 6. Both the benchmark and our sample exhibit fat tails and a positive skewness with multiple extreme outliers, as also demonstrated in conjunction with table 8. These flaws give us the base of further data treatment in terms of skewness and outliers, as shown in chapter 8. Based on all our findings on the statistical properties, we find that a procedure such as the winsorization of our data is unavoidable to facilitate the analysis.

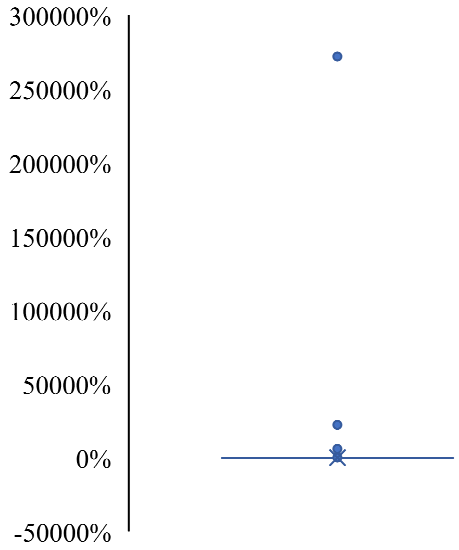

***Figure 5**: Boxplot of raw returns for the benchmark*

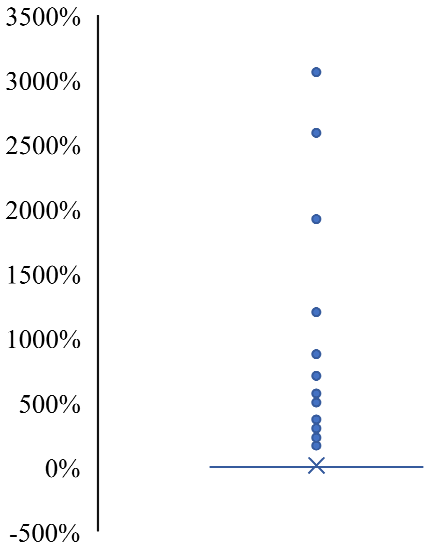

***Figure 6**: Boxplot of raw returns for IPO sample*

Methodology

9. Scientific approach

The analysis in our paper is based on previous literature on sponsor-backed offering performances, IPO underpricing, and long-run underperformance of IPOs. To come to the correct conclusions that meet the requirements of a scientific paper, we follow the specifications provided by research on experimental methods in business from, e.g., Bell, Bryman, & Harley (2018). According to Thornhill, Saunders & Lewis (2009), scientific papers vary by nature. The most fundamental distinction between empirical and quantitative research papers is whether an inductive or deductive approach is taken. In our master thesis, we apply a deductive approach. This methodology is "the most common view of the relationship between theory and research"

(Bell, Bryman, & Harley, 2018). The deductive approach is presented in figure 7, where the primary goal is the test of the hypotheses, which we target in our discussion in section 13. The test of hypothesis is based on the previous sections theory, data collection, and findings, while the hypothesis is also defined in an early section of the thesis.

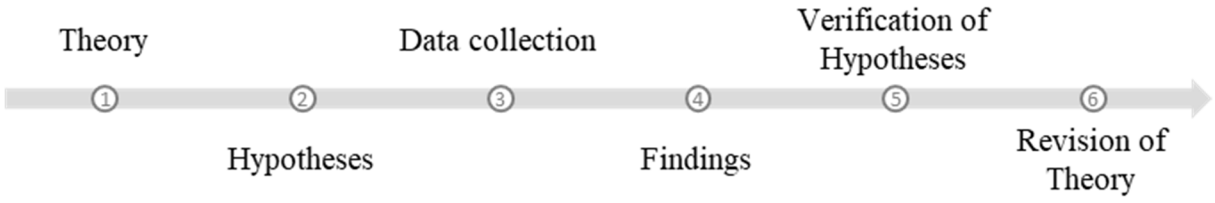

***Figure** 7: The process of deduction (Bell, Bryman, & Harley, 2018)*

10. Winsorization

Not only for our sample, it is common practice to treat extreme outliers either by excluding or altering them to keep biases created by outliers to a minimum. Instead of the winsorization, we could also use another approach, such as trimming extreme negative and positive outliers in our data set. The advantage of this method would be the simple and clear implementation. However, this would simply remove valuable information and reduce the explanatory content from our sample. Since we want to minimize the effects and biases created by outliers but keep as much information as possible, we decided to proceed with the above-mentioned winsorization method. We choose a winsorization of the 1^{st} and 99^{th} percentile since we want to keep the manipulation of our data at a minimum. A winsorization of larger percentiles (e.g., 5^{th} and 95^{th} or 10^{th} and 90^{th} percentile) would affect too many returns and potentially distort the picture. A lot of the higher returns in our sample come with the nature of the IPO event and the corresponding event-induced volatility. Therefore, these returns do not necessarily have to be considered as extreme as such, but just as common in the context of our event study. This treatment is in line with the corresponding findings from Hastings et al. (1947). We decide to winsorize our stock return data, which is a method to limit extreme values by changing their value towards the next larger or lower value that is closer to the central part of the distribution (Hastings, Mosteller, Tukey, & Winsor, 1947). The winsorized returns are usually more robust to outliers.

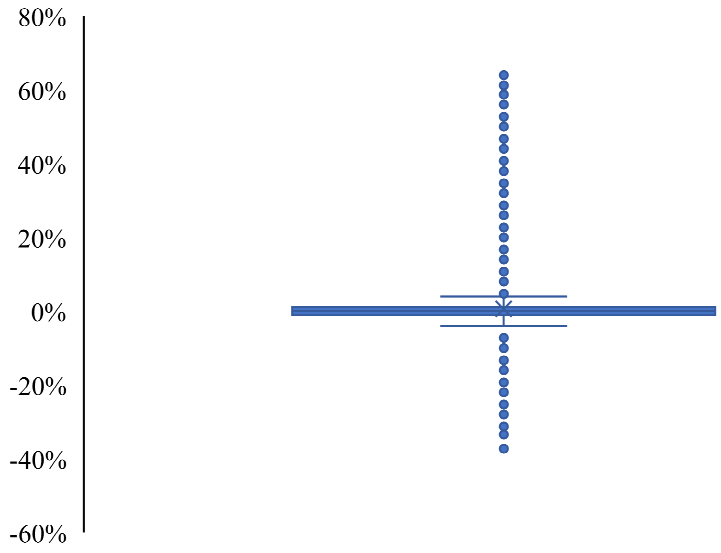

***Figure 8**: Boxplot of winsorized returns for benchmark and IPO sample*

In our case, we have substantial raw returns of up to 3,060% in the sample and even 272,200% (cf. figures 5 and 6), which would potentially interfere in our further analysis and calculation of abnormal returns and testing. Therefore, keeping the information, but "squeezing" the values of these returns further to the center is the right approach in our case. We do not want to justify to delete or to disregard returns only because they are "too high or too low." However, to keep the impact of these values to a minimum, we winsorize these cases as explained above. In the boxplot (cf. figure 8), we show the impact for our winsorized returns for all returns, including the benchmark.

Table 9 shows the descriptive statistics of our winsorized returns of the IPO sample and the benchmark. After treating our data by winsorizing at the 1st and 99th percentile, we adjust all extreme negative values at -33.52% for the 1st percentile and all extreme positive values at 61.19% for the 99th percentile. We observe in the treated sample visualized by table 9 compared to table 8 of the raw returns that the extreme values are pushed closer to the center of our distribution. In all subgroups, the previous minima between -60.78% and -100% changed to the new minimum of -33.52%. Similarly, the preceding maxima between 282.88% and 272,200% now amount to the latest global maximum of 61.19%.

Table 9: Descriptive statistics of the winsorized returns of sample and benchmark

This table illustrates the descriptive properties of the winsorized returns for the IPO sample, its subgroups, and the benchmark. We show the mean (μ), median (Mdn.), standard deviation (σ), maximum (Max), minimum (Min), skewness ($Skew$), and kurtosis ($Kurt$) for each group.

	Overall	NSB	SB	PE	VC	CO	BM
μ	0.02%	0.01%	0.02%	0.04%	0.02%	0.01%	0.06%
$Mdn.$	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
σ	3.0%	3.4%	3.1%	2.7%	3.4%	3.4%	3.1%
Min	-33.5%	-33.5%	-33.5%	-33.5%	-33.5%	-33.5%	-33.5%
Max	61.2%	61.2%	61.2%	61.2%	61.2%	61.2%	61.2%
$Skew$	0.15	0.47	0.12	0.15	0.09	0.11	0.25
$Kurt$	0.47	0.78	0.11	0.21	0.03	0.06	2.48

Furthermore, the means of all groups have been pushed towards the median, which is still zero in all subgroups. The benchmark experienced the changes with the most significant magnitude, where the mean was lowered to 0.06%. PE-backed winsorized returns underwent the lowest changes from 0.08% to 0.04%. Still, this change means that our mean was halved. All other subgroups had similar changes in absolute values of around 6-7 bps that meant a very substantial shift towards zero.

Furthermore, the standard deviation throughout the cohorts is lower compared to our raw returns. The overall sample exhibits a standard deviation of 2.95%. Amongst, the sub-groups, the VC-backed offerings manifest the biggest change where standard deviation now amounts to 3.39% from previous volatility of 4.77%. Additionally, the benchmark, used for the BHAR approach, decreased its standard deviation from 10.71% to 3.09%, which shows a substantial change through the winsorization method. This is due to the alteration of the extreme outliers of up to 272,000%. PE-backed and the sponsor-backed experienced the lowest changes in standard deviation but still exhibit substantial shifts in their statistical behavior (from 3.30% to 2.66% and 4.11% to 3.12%, respectively).

Also, the skewness throughout the sample and benchmark exhibit values that are closer to the normal distribution (the skewness of a normal distribution should be 0). They went from up to 2.97 to a maximum of 0.47, respectively. The comparison between the raw returns (cf. table 8) and the winsorized returns (cf. table 9) shows the benefits of treating outliers. The skewness within the subgroups is now well below 1.

The largest difference between the properties shown above is not just the skewness but also the kurtosis. Its initially largest value from 129.81 has been substantially lowered to 2.48 through the winsorization method. Following the winsorizing, the sample shows a kurtosis that is well below 1 and skewness values between 0.09 and 0.47. The winsorization shows reliable results for the skewness of our data in comparison to the raw returns. The new values indicate a better approximation of a symmetric distribution. The platykurtic (kurtosis of less than 3) distribution is an indication of a shorter distribution and thinner tails while inhibiting only a few outliers. We did not expect the results to be very close to a normal distribution with zero skewness and kurtosis of 3 because of the shorter tails and a distribution that has two tiny peaks on the 1st and 99th percentile followed by a little valley inwards and having the majority of returns between $\pm$ 5%. Based on the superior statistical properties of the winsorized data, these returns are exclusively utilized as the basis of our abnormal return calculations.

11.Estimation procedure and testing

11.1. Study design and long-run event windows

Our event study aims at observing the difference between the cross-sectional distributions of event firms and their anticipated returns given by either a control firm or an asset pricing model in the buy-and-hold and calendar time portfolio framework, respectively (cf. table 10). As mentioned before, our thesis focuses on the difference of mean abnormal returns between sponsored and non-sponsored firms to give insights on the impact that the sponsor type has on a newly offered firm in the long-run. For this purpose, we designed a thorough method to measure these abnormal returns and also, to give insights on the robustness of the results through the several measurement approaches, which are explained throughout section 11.

Table 10: Methodology overview

This table represents the different forms of measurement our paper takes into account to deliver a well-designed event study with an appropriate and well-specified testing framework. Further specifications of the various components are provided in the following sections. We divide the two AR model specifications to show differences in their characteristics, abnormal return (AR) measure, test statistics, and event windows.

AR model	Characteristic	AR measure	Test statistic	Event window(s)
Buy-and-hold abnormal return [BHAR]	Security-specific (aggregated after measurement)	Control firm (Matching criteria: ME, BE/ME & Industry)	Bootstrapped skewness-adjusted test statistic	3 and 5 years
Calendar-time portfolio approach [CTP]	Portfolio-based	Fama French Three-Factor Model [FF3]	Student's t-test	3 years

Long-run event studies are widespread in the finance literature. Long-run event research observes abnormal returns in usually a period of one to five years (Lee & Lee, 2015). In this regard, Fama (1998) argues that abnormal returns diminish over time, which would render any observable abnormal returns in long-run event studies impossible. This statement is in line with the previously mentioned EMH. Furthermore, he argues that "most long-term return anomalies tend to disappear with reasonable changes in technique." This further indicates that while we might be able to observe ARs, a "reasonable change in technique," meaning a better event study design would render the observed abnormal returns insignificant. Consequently, we aim to deliver an event study design that provides meaningful evidence on whether abnormal returns are possible in our setting.

Generally, long-run event studies face a latitude of issues that need to be taken into account (Khotari & Warner, 2006). These issues include "risk adjustment and expected/abnormal return modeling, the aggregation of security-specific abnormal returns, and the calibration of the statistical significance of abnormal return" (Khotari & Warner, 2006). The risk adjustment of returns is concerned with the correct model choice. While in short-run event studies, the choice has only minor effects according to the researchers, the economic implications from the wrong model in the setting of long-run event windows are large. A substantial driver in the errors in risk adjustment is a sample of stocks with extreme characteristics (e.g., small cap), which is

exhibited in our own sample. A very crucial point is that the measurement of the abnormal returns is based on post-event, not historical estimates. This is something that we address in both estimation procedures, and therefore, we see that our study design is robust in this regard. This brings us to the second point, which is the expected/abnormal return modeling. The choice of our models and the address of possible issues in our sample is extensively explained in the following section. The third issue concerns the aggregation of security-specific abnormal returns, which mainly relates to cross-section and time-series aggregation. This refers to the fact that we might see security-specific significant abnormal returns, while on the aggregated level (e.g. sponsor-backed IPOs) we lose the significance (Kothari & Warner, 2006). However, in order to reveal meaningful analysis, this issue is something that we must take into account, and that is in the DNA of our analysis, which tries to reveal the difference in abnormal returns within two groups. The "calibration of the statistical significance" refers to the often misspecified test statistics. This issue is also discussed throughout the entire section.

In sum, Khotari & Warner (2006) suggest that long-horizon event studies must still be treated with particular caution and often lack reliability. They find that these methods are exposed to the joint test problem and low power. The joint hypothesis problem was first specified by Fama (1991), which we mentioned earlier in the thesis. Furthermore, Lyon, Barber & Tsai (1999) suggest that long-run event windows can be "treacherous." They find that test statistics are often misspecified, which results in three main biases to overcome in the design of a long-run event study – the new listings or survivor bias (partly mentioned earlier), the rebalancing bias, and the skewness bias (Lyon, Barber, & Tsai, 1999).

The new listings bias arises in case the event study uses a benchmark to calculate abnormal returns in their buy-and-hold-abnormal return [BHAR] model. The AR is then determined by $R_i - R_B$ where R_i describes the security's return in a specific period and R_B represents the benchmark's or reference portfolio's return in the same period. As some stocks that are part of the parameter begin trading after the actual event, this results in an upward bias in the specified test statistic (Lyon, Barber, & Tsai, 1999). The rebalancing bias stems from the fact that reference portfolios are usually compounded, assuming a periodic rebalancing of the portfolio while our sample firms are exacerbated without a similar measure. The magnitude of this effect is often a negatively biased test statistic (Lyon, Barber, & Tsai, 1999). Last but not least, the skewness bias emerges due to the positive skewness of long-run abnormal stock returns, which

represents a negative bias to the testing framework (Lyon, Barber, & Tsai, 1999). In sum, the recent literature concludes that the result of these biases is that "empirical rejection levels exceed theoretical rejection levels" (Lyon, Barber, & Tsai, 1999). This evidence shows that primarily, the testing framework must be carefully selected in order to avoid the two error types in statistical testing (Lee & Lee, 2015). The Type I error refers to the rejection of a true null hypothesis, while the Type II error is the failure to reject a false null hypothesis (Khotari & Warner, 2006). The three biases are further addressed when we discuss the choice of our benchmark in the section of the BHAR model (cf. section 11.2).

In sum, our event study could take a substantial hit in terms of meaningfulness if we do not address all of those mentioned above. A cautious and diversified approach with different measurement methods is chosen to respond adequately to this challenge. Specifically, this means the we selected two means for the measurement of abnormal returns – the BHAR approach and CTP approach. These two are the most common procedures in long-run event studies to-date (Lee & Lee, 2015), while they differ substantially. BHAR is a security-specific approach that can provide us with information on the different 1492 events, while the CTP method is based on portfolios, which only allows us to give evidence on a portfolio basis (such as PE-backed). Both approaches come with different kinds of issues and choices we have to face. While for BHAR, it is crucial to choose an adequate benchmark and decide on the use of parametric and nonparametric tests, the CTP requires a well-specified asset pricing model and a fitting estimation technique (Lee & Lee, 2015). All of these issues with regards to the two models are clarified in the following sections. The reason for the use of these two methods over CAR is evidence about the lack of reliability of CARs in long-run event studies. According to Barber & Lyon (1997), CARs are "a biased predictor of BHARs" and can lead to substantially wrong inferences in an event study. They specify that CARs often suggest positive abnormal returns, while the BHAR method finds no corresponding evidence. Furthermore, even if the specified magnitude of the CARs was found to be accurate, the abnormal returns do not lead to a similar return when pursuing a buy-and-hold investment strategy as the CARs are calculated in a simplified manner and ignore the compounding of returns (Barber & Lyon, 1997).

11.2. Buy-and-hold abnormal returns

11.2.1. Model

As mentioned, there are two very dominant approaches to measure and test abnormal returns in long-run event studies. Both our methods are based on the notations of Lee & Lee (2015). The first method is the use of BHARs, which employs a benchmark to measure abnormal returns, also known as the "characteristic-based matching approach" (Khotari & Warner, 2006). According to Mitchel & Stafford (2000), the BHAR is "the average multiyear return from a strategy of investing in all firms that complete an event and selling at the end of a prespecified holding period versus a comparable strategy using otherwise similar non-event firms." Lee & Lee (2015) denote the BHAR method as:

$$AR_i = R_i - BR_i,$$

where R_i signifies the long-term buy-and-hold return of firm i and BR_i is the long-term counterpart on a particular benchmark of firm i. Subsequently, the buy-and-hold returns of firm i over τ days are, according to Lee & Lee (2015), then generated through compounding the daily returns, that is,

$$R_i = \prod_{t=1}^{\tau} (1 + r_{it}) - 1$$

where r_{it} is the company i's return on day t. The benchmark's return BR_i is calculated equally. It estimates "the return that an event firm would have had if the event had not happened" (Lee & Lee, 2015).

11.2.2. Matching firm

The corresponding benchmark can be computed in two ways. Either a reference portfolio or a non-event control firm can be applied. Supported by recent financial literature, Lee & Lee (2015) state that "long-term abnormal returns are very sensitive to [the] choice of benchmarks." Barber & Lyon (1997) find that "the use of reference portfolios […] is subject to the measurement, new listing and skewness biases". Their implementation appears to yield negatively biased test statistics (Barber & Lyon, 1997). Based on this evidence, the testing framework would then need to account for the three biases. Barber & Lyon (1997) suggest that the method of delivering the most reliable results is the control firm approach. According to their findings, the control firm approach erases all biases that would be exhibited by the reference portfolios. The

new listings bias is eliminated "since the sample and control firm must be listed in the identified event month" (Barber & Lyon, 1997). The rebalancing bias is removed through the absence of portfolio rebalancing, and the skewness problem in the abnormal returns is also obliterated since both the sample and control firm "are equally likely to experience large positive returns" (Barber & Lyon, 1997). Consequently, the control firm approach "is robust to virtually all sampling situations" (Barber & Lyon, 1997). Ang & Zhang (2004) suggest further that the problem of biased estimates with the reference portfolios is "particularly severe with small firms," which would be detrimental to our event study that contains a large amount of comparably small firms (cf. section 8).

After we established the comparison between the event firm's return with a non-event control firm, it is essential to establish the matching criteria of the benchmark firm. Fama & French (1992) found evidence that the cross-sectional variation in stock returns is best explained by the two criteria size (based on the market capitalization) [ME] and book-to-market (book value of equity divided by market capitalization) [BE/ME]. For matching firms in an event study, Barber & Lyon (1997), alongside others, made use of the findings. In general, Lee & Lee (2015) summarize that it is common to "utilize a benchmark that matches the event firm on size and BE/ME". This claim is further supported by Ang & Zhang (2004), who suggest that another factor such as the stock's market beta does not add value to the event study and that the double sort based on ME and BE/ME yields the most potent results. The use of ME and BE/ME is, also, in line with the use of our Fama-French three-factor model [FF3] in the context of the CTP approach and makes our results more comparable to one another.

In our paper, we use three sorting items. In addition to ME and BE/ME, the industry serves to match the event firms to a suitable non-event counterpart. In practice, we defined the ME and BE/ME at the close of the first trading month after the respective IPO. To match the firms to a control firm, we took an extract of all AMEX, NYSE, and Nasdaq-listed stocks as of April 2020, including all inactive stocks to avoid survivorship bias. The control firms have to meet two essential criteria to make the shortlist to be a possible match for our event firms. Firstly, control firms have to be listed five years before our first event in 2000. That means firms with IPO in 1995-2000 were excluded as potential control firms. Secondly, the event firms themselves cannot serve as a matching firm to one of our sample firms. For the remaining firms, we extracted monthly ME and BE/ME data and matched them subsequently to our sample firms. The matching was executed by minimizing the percentage difference of ME and BE/ME per

sample firm vs. control firm with the prerequisite being that the two firms are in the same industry. In case the firms did not have meaningful BE/ME data, for instance, due to the negative book value of equity, we matched the firms with a sort based on market capitalization and industry.

11.2.3. Testing framework

As mentioned before, the specification of the test statistic is essential, as in every research in order to evaluate the significance of the results. In the setting of long-run event windows, researchers often observed that misspecified test statistics are common due to the nature of the event study (cf. section 11.1). Therefore, we thoroughly went through the several considerations the corresponding current literature has to offer. A fundamental question is whether to use parametric or non-parametric tests in the testing framework, which is discussed in the following. Based on this discussion, we present the test statistic, which we found the most fitting to the nature of long-run events and especially, our data.

Parametric vs. non-parametric tests

Parametric test statistics are considered to be based on strong assumptions concerning one or more population parameters (Sheshkin, 2003). Campbell, Lo, & MacKinlay (1997) specify that the premises are often related to (i) randomness and independency of samples from the population; (ii) normal distribution of abnormal returns; (3) stationary returns, i.e., finite first and second-order moments μ and σ^2.

While non-parametric tests are often called “distribution-free tests” and considered to have no assumptions that come close to those of parametric tests, it is more appropriate to use the term “assumption freer” (Sheshkin, 2003). The main distinction, according to Sheshkin (2003), is the “level of measurement.” This term specifies that inferential statistics that are based on tests with “categorical/nominal data, as well as ordinal/rank-order data, are categorized as nonparametric tests” (Sheshkin, 2003). On the other hand, parametric tests emphasize “interval data or ratio data” (Sheshkin, 2003).

While most researchers conclude that parametric tests shall be used where possible, and the level of measurement allows, it is crucial to be cautious as soon as one of the central assumptions of parametric tests is violated. In this case, Sheshkin (2003) supposes that nonparametric tests should at least be used to verify the results. The main reason for the

reluctancy to use nonparametric tests can be understood as an unwillingness to lose informational content. The transformation of interval or ratio data to a database that suits nonparametric tests usually goes along with sacrificing important research information (Sheshkin, 2003). Generally, the financial literature suggests that non-parametric tests are superior in comparison to parametric tests (Campbell & Wasley, 1996), even for returns following a distribution not significantly different from normality (Corrado, 1989).

Mainly, nonparametric tests are useful in settings where returns deviate from the normal distribution. An empirical finding is that a time-series of financial returns usually displays fatter tails and higher peaks compared to the Gaussian distribution. Therefore, the return series often exhibits higher probabilities around the mean and for extreme returns (Jondeau, Poon, & Rockinger, 2007).

In sections 8.1.3 and 10, we elaborated on the statistical properties of our raw return and, subsequently, the winsorized return data. While these are necessary means to treat long-run returns, they do not fundamentally remove the problem and handle the distribution issues for individual returns for the sample and the benchmark. The calculation of the abnormal returns using both the sample and the reference for our comparison and a subsequent exhibition of abnormal returns can also bear other substantial statistical issues that deviate from the normal distribution. In our case, the skewness problem was reversed through a two-fold approach so far through the earlier mentioned winsorizing process and the use of the benchmark. However, as we still observe deviations from the normal distribution after winsorization (cf. section 10), we find that a test statistic that bases on a symmetrical or even a normal distribution would be substantially misspecified in our case. Based on all these findings, we decide to use a test statistic that assumes an asymmetrical distribution by nature and is ideally suited to the data that we observe.

Bootstrapped Johnson's skewness-adjusted t-test

As mentioned, one of our central problems is the return's exhibition of skewness. For this purpose, Johnson (1978) established a test statistic that uses a skewness adjustment to the Student's t-statistic in case the population distribution is particularly skewed. As financial returns like ours are known to exhibit asymmetrical behavior in the long-run, Johnson's test statistic was an appropriate measure to address this problem. Johnson's test statistic is denoted as follows (Lee & Lee, 2015):

$$J = t + \frac{1}{3\sqrt{n}}t^2\gamma + \frac{1}{6\sqrt{n}}\gamma$$

where t stands for the Student's t-statistic and γ is the estimated skewness coefficient (Lee & Lee, 2015) given by:

$$t = \frac{\overline{AR}}{\frac{s(AR)}{\sqrt{n}}}$$

$$\gamma = \sum_{i=1}^{n} \frac{AR_i - \overline{AR}}{s(AR)^3 n}$$

where AR_i is the abnormal return for event firm i and $\overline{AR}$ is the average abnormal return of all event firms. Johnson's skewness-adjusted test statistic is used to test the null hypothesis H_0 that the mean abnormal returns "under the assumption that abnormal returns are mutually independent and follow the same continuous distribution" equal zero (Lee & Lee, 2015). According to Johnson (1978), the null for a nonzero mean is subsequently rejected if $J > t\left(\frac{\alpha}{2}, v\right)$ or $J < t\left(\frac{\alpha}{2}, v\right)$.

For the test statistic that we applied, one little component is missing – the bootstrapping. Bootstrapping is generally used in the case of small samples and severe skewness, as in our example (Lee & Lee, 2015). The first one to apply the computation-intensive bootstrapping method to Johnson's skewness-adjusted test statistic was Sutton (1993). The approach is further backed by Lyon et al. (1999), who find well-specified test statistics with this setting, mostly, however, when a reference portfolio is used to measure BHARs.

The bootstrapping method follows again the notations and processes described by Lee & Lee (2015). The approach consists of multiple resampling within our row of event firms. In this case, we resample our events 250 times. For these 250 resamples, we draw a certain proportion of sample firms from the 1492 IPOs. We follow Lyon et al. (1999) and draw $m = 50$ firms from our list for each resample. Subsequently, we calculate the respective 250 J values for Johnson's test statistic ($J_1, \dots, J_{250}$). In the next step, new critical values C_1 and C_2 are defined to test the null hypothesis. For a predetermined significance level of α, C_1 and C_2 are chosen so that the percentage of J values less than C_1 are $\frac{\alpha}{2}$ and the portion of J values higher than C_2

equals $\frac{\alpha}{2}$. The null hypothesis that the mean abnormal return is nonzero is then rejected in case $J_0 < C_1$ or $J_0 > C_2$. While the bootstrapping is processed once for our whole sample, we get multiple J_0's, which correspond to the respective sub-sample, such as PE-backed and VC-backed. Based on the comparison with the critical values, we then report the values' significance for the confidence intervals 90%, 95%, and 99%.

The critical values that we found for our analysis of the 3-year and 5-year average buy-and-hold abnormal returns [ABHAR] are presented in the table below.

Table 11: Critical values from the bootstrapping procedure of *J* values

The table presents the result for the bootstrapping method that we used for Johnson's skewness-adjusted test statistic. The values represent the respective critical values and are displayed for each significance level and are based on 250 resamples with 50 random sample firms.

	Significance levels (3-year ABHAR)		
	1%	**5%**	**10%**
C_1	-2.39	-1.85	-1.70
C_2	3.13	2.50	2.11
	Significance levels (5-year ABHAR)		
C_1	-2.36	-1.84	-1.54
C_2	3.06	2.77	2.12

11.2.4. Reflections on the BHAR method

Despite the frequent use in settings of long-run event windows, the BHAR method exhibits some drawbacks in the measurement and the required testing framework necessary to account for biases (Barber & Lyon, 1997).

The choice of an adequate benchmark remains disputed (Ang & Zhang, 2004). While the reference portfolio approach that exhibits all three biases (skewness, new listings, and rebalancing) suffers from low power and misspecification, the control firm approach seemingly is more robust to these issues. Still, the reference portfolio remains widely spread in the financial literature with reputable advocates such as Lyon et al. (1999).

Generally, the discussion around power arises of great interest. Lyon et al. (1999) promote heavily that the bootstrapped-based test statistic (mentioned above) is supposed to be more potent than other tests. Furthermore, Lee & Lee (2015) summarize that the use of non-parametric

tests exhibits higher power in testing for abnormal returns. Ang and Zhang (2004) suggest that most testing procedures result in low power, which is why long-run abnormal returns are hardly interpretable. The problem of power gets even worse when mostly small firms make up the sample. According to Ang and Zhang (2004), this feature results in hopelessly misspecified test statistics with one exception – sign tests.

In addition to misspecified test statistics and the choice of benchmark, we experience that our sample exhibits overlapping event windows. This overlap of return may result in a cross-sectional correlation, which is generally a severe problem in long-run event studies (Khotari & Warner, 2006). The research states that the problem arises as market- and industry-specific factors such as exogenous shocks would result in "contemporaneous co-movements in security returns." The effect is radically amplified by (i) the overlap of event windows, (ii) waves of corporate events such as mergers that would potentially make some periods more susceptible to co-movements, and (iii) the overrepresentation of some industries in the sample. Our sample is potentially affected by points (i) and (iii) as we do not see extraordinary amounts of mergers throughout the period. Industries that potentially influence our findings are the Information Technology and Health Care sector, where we find the most IPOs throughout the sample period (cf. section 8.1.1). A cure to this problem is the CTP approach (Kothari & Warner, 2006), which is explained in the following.

Another drawback of the BHAR approach is event-induced volatility. This concept refers to the fact that certain events induce larger volatility compared to the overall market volatility at the point of time (Kothari & Warner, 2006). Substantially, this translates into the event exhibiting higher volatility than the match firms that we take for the measurement of the buy-and-hold abnormal returns. However, we do not observe this type of behavior for our sample. As presented in section 10, the winsorized returns of the benchmark do not manifest significantly lower volatility compared to our IPO sample (3.0% vs. 3.1%, respectively). Therefore, based on our data, this issue is seen as subordinate or rather non-existent for our thesis.

To conclude, BHAR inhibits significant issues, mostly related to the power of the used test statistic. While these problems exist, the use of control firms with a double-sort through ME and BE/ME in connection with bootstrapped-based testing seems to be the most robust solution to the problems set out above.

11.3. Calendar-time portfolio approach

11.3.1. Model

The Jensen-alpha approach or calendar-time portfolio approach [CTP], sometimes even referred to as the Fama-French calendar-time approach, is a different path for our analysis to estimate long-run abnormal returns. The approach has gained much attention in the recent financial literature with respect to long-run abnormal returns, and its use is widespread. In our field, Brav & Gompers (1997) and Loughran & Ritter (1995) are the most reputed users of the model.

A very distinguishing feature is the use of an asset pricing model and the aggregation of security-specific returns into portfolios. This method almost entirely solves the cross-correlation mentioned above as the overlap of event windows is not vital for the creation of the portfolios. The abnormal returns in this method are estimated through a regression over the full event period, including three years of event windows, which consequently spans from 2000 to 2016.

The portfolio is continuously rebalanced on the basis that each firm is included for precisely three years from the IPO onwards. This approach implies that the number of portfolio components fluctuates over time. Due to this procedure, our model is potentially exposed to heteroskedasticity of the error terms (Dutta, 2015). Fama (1998) suggests that the use of a regression-based on ordinary least squares [OLS] does not account for the heteroskedasticity issue. Thus, he finds that weighted least squares [WLS] are a potential solver for this issue. Lee & Lee (2015) support the evidence as they find that the estimation with WLS improves power as the holding period gets longer. Due to the holding period of 3 years, we deduce that this is the case for our event study. Daily returns in the WLS model are subsequently weighted by the number of event firms included in the event portfolio on day t. Through this weighting mechanism, heteroskedasticity ought to be controlled.

For our model to estimate reliable results, the choice of the asset pricing model to vanish the earlier mentioned joint hypothesis issue is of great importance, and it is, therefore, treated in the following sub-chapter.

11.3.2. Asset pricing models

Estimation methods vary by nature and can be divided into two main categories: economic and statistical models. Following Campbell, Lo & MacKinlay (1997), statistical models do not follow any economic assumptions. In return, economic models do not only depend on statistical

arguments but also inherit economic restrictions such as investor behavior. Therefore, economic models are considered to be a more accurate measure (Campbell, Lo, & MacKinlay, 1997). However, the simple market model still gathers a lot of attention in financial literature as for instance, Brown & Weinstein (1985) find that with regard to the increased use of economic models, there is only "limited value-added relative to the use of a simple market model." Finally, we decide to use an economic model. While it would be interesting to have another model as a robustness check, the scope of the Master thesis does not ultimately allow us to make another robustness test next to the three results that we are going to present (3-year and 5-year ABHARs in combination with CTP). Therefore, we use a regression-based factor model (FF3).

Fama French 3-Factor Model

This section is dedicated to the explanation of the FF3 model[7]. We follow the notation of Lee & Lee (2015), which describes the model as follows:

$$R_{pt} - R_{ft} = \alpha + \beta\left(R_{mt} - R_{ft}\right) + sSMB_t + hHML_t + \epsilon_t,$$

where R_{pt} is the event portfolio's return on day t; R_{ft} is the one-month Treasury bill rate; R_{mt} is the daily market return; small-minus-big (SMB_t) is the daily return on the zero investment portfolio for the factor size in stock returns; and high-minus-low (HML_t) is the daily return on the zero investment portfolio for the factor book-to-market in stock returns. In case, the FF3 model achieves a sufficient explanation for the cross-sectional variance of stock returns, the α measures the average daily abnormal return on the event portfolio (Lee & Lee, 2015). Under the null hypothesis H_0, the average abnormal return α and, therefore, the intercept should equal zero.

While a later modification of the FF3 that added a momentum factor to the model has gained much attention in the recent financial literature, Lee & Lee (2015) find evidence that the addition of another factor can lead to overfitting, which is why we disregard the momentum factor in our approach.

[7] The data for FF3 was extracted from Kenneth French's website, which provides portfolio data for the different factors in the U.S. market (https://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html).

Student's t-test

In recent financial literature, it is widely spread to use the standard Student's t-test to measure the statistical significance of the different factors and the intercept (our abnormal return) in the FF3. Also, Lee & Lee (2015) suggest that this method delivers well-specified test statistics in the regression environment. It is also in line with the assumptions of the FF3 model, which are that abnormal returns are mutually independent and follow the normal distribution (Lee & Lee, 2015). We follow again the notation of Lee & Lee (2015) who describe the test statistic as follows:

$$t = \frac{\overline{AR}}{\frac{s(AR)}{\sqrt{n}}}$$

where $\overline{AR}$ is the average abnormal return, which in our case is represented as α_p, and $s(AR)$ stands for the standard error of the intercept α_p.

11.3.3. Reflections on the CTP method

The CTP approach is essential and very instrumental as it accounts for the cross-correlation of our returns that arises due to the overlap of event returns (Knif & Pynnonen, 2013).

The CTP method itself suffers from heteroskedasticity in the residuals, as mentioned above. To diminish this statistical issue, the WLS estimation method is used. The main problem that the CTP method inhibits, however, is the "bad model problem" (Knif & Pynnonen, 2013) as brought forward by Fama (1998). According to Knif & Pynnonen (2013), this issue relates to the fact that "α_p tends to be non-zero in non-event portfolios also". This statement means that while we test for abnormal returns in our portfolio regression and receive statistically significant ARs, the evidence does not automatically mean that we cannot find another non-event portfolio that generates similar abnormal returns. Another issue is the assumption of constancy on the α_p, which is very unlikely to hold. The problem was brought forward by Mitchell & Stafford (2000) in which they suggested that our regression brings forward one estimated intercept that is assumed to represent the average daily abnormal return in the past 13 years if an investor had invested in the event portfolio. However, the abnormal returns likely fluctuate over time. An additional problem with the CTP approach is that, according to Mitchell and Stafford (2000), event days with low IPO activity are equally weighted as days with increased activity. This

issue is further explained by Loughran & Ritter, 2000. They find that CTP has low power when it evaluates events that "are subject to behavioral timing considerations" (Loughran & Ritter, 2000). This group of events displays "time clustering that is correlated with prior market movements." As explained earlier, these windows of opportunity bear chances for managers to make use of "time-varying misvaluations," such as the chance to increase the proceeds of an IPO (Loughran & Ritter, 2000).

Due to the several sources for misspecification the CTP inhibits, we conclude that the CTP may not be a perfect model to calculate abnormal returns for long-run event studies. However, we find that perfect models do not exist, and drawbacks are reported with every approach that has been used for long-run event studies. The CTP approach alongside with BHAR has been the most widely spread procedure and reached considerable acceptance in the financial literature. Therefore, we sum up that our two methods are individually the ones with the most power and, thus, the most suitable. Jointly, the two procedures allow us to bring forward meaningful analysis with well-specified test statistics and an in-depth interpretation.

Results

12. Description of results

In the following section, we present the results of our event study. The results are mainly clustered into two significant parts: results from the BHAR approach and results from the CTP approach. As the BHAR approach allows us to look at average daily abnormal returns, this section relatively overweighs the CTP approach, which, through its regression-based approach, cannot give us the same depth in the analysis. Therefore, we compare different holding years in our BHAR results. However, the CTP approach does deliver abnormal returns that are free of cross-correlation issues, which is a potential drawback in the BHAR approach driven by the effect of overlapping event windows.

The results are further split into different inter-sections of the BHARs and CTPs that we look at. The first and obvious split of our overall abnormal returns is the different results for sponsor-backed, and non-sponsor backed offerings. This division accompanies us throughout the whole section as we show their behavior throughout the years. We note that the years that we refer to do not indicate the performance of the sample in that specific year but covers the 3-year abnormal stock price performance and 5-year abnormal stock price performance of IPOs that went

public in that year. Furthermore, we provide data on the seven previously mentioned industries, again per SB and NSB. Afterward, we exhibit the abnormal returns of IPOs per specific sponsor type – PE, VC, and Combined sponsors. Subsequently, the abnormal returns of the different exit types are presented. Finally, we offer some insights from BHARs of specific industry/exit/sponsor-combinations, which provides us with valuable information for the following interpretation of the results.

After an overall view on the abnormal returns per value- and equally-weighted approach, we report every number on an equally-weighted basis. The decision had two drivers. Firstly, our descriptive statistics (cf. chapter 8) indicates that we have several outliers in terms of market capitalization. These huge companies, such as Facebook and General Motors, would substantially distort the picture of the performance of IPOs as the median and mean is way below the big companies. Second, we find that the regressions we ran for the CTP approach exhibit substantially higher explanatory power in terms of the adjusted R^2 when measured through an equally-weighted portfolio approach.

Moreover, the CTP approach inhibits a particular treatment. Throughout the period, we observe some periods that have a low sample size and, therefore, low power. The affected analysis is, for instance, the abnormal returns of sponsor-backed IPOs in 2001 and 2002, where we have a meager sample size (cf. chapter 8.1.1). Therefore, we decide to generally ignore days where the event portfolios for the CTP contain only a few IPO return data. Our approach leaves out all days with less than 10 events included in the event portfolio. We refer to this method as the 10+ portfolio approach.

12.1. Buy-and-hold abnormal returns

BHAR – Overall and sponsor-backed vs. non-sponsor backed

Our overall sample exhibits contradicting results when averaged using a value-weighted versus an equally-weighted approach (cf. table 12). While the value-weighted suggests a large positive overall 3-year ABHAR of 57.79% with enormous significance, the equally-weighted average displays a negative ABHAR of -7.73%, which is statistically different from zero on the 5%-significance level. As mentioned, our sample is made up of a lot of small stocks, but also a few massive players such as Facebook and General Motors. The deviation in the weight would substantially drag the ABHAR into the direction of these two stocks in the months the big stocks

are included. Therefore, to observe the effects of the whole sample, the equally-weighted approach is seen as more valuable and used in the next tables. This observation is repeated with the 5-year overall ABHARs.

The comparison between the 3-year ABHAR for NSB and SB displays that in the value-weighted and equally-weighted method, NSB is outperformed by the sponsor-backed counterparts. However, the results show no significance for SB in the value-weighted level. On the other hand, the equally-weighted ABHAR proposes that SB is distinguishable from zero on a significance level of 5% with abnormal returns of -6.55%. In contrast, NSB exhibits negative abnormal returns in the same period of -8.76%, which is not statistically significant.

Table 12: ABHAR – Overall, non-sponsor backed and sponsor-backed

This table presents the average buy-and-hold abnormal return for the whole sample of IPOs (overall), non-sponsor backed, and sponsor-backed IPOs. Both value-weighted and equally-weighted ABHARs are presented for 3 years and 5 years holding period. Besides, the ABHAR, we offer the calculated annualized returns $ABHAR_{365}$ and the respective value of Johnson's skewness-adjusted test statistic with bootstrapped p-values. The critical values for the test are presented in section 11.2.3. The statistical significance is exhibited through the use of asterisks where one asterisk (*) signifies significance on the 90%-confidence interval, two asterisks (**) stand for significance on the 95%-confidence interval, and three asterisks (***) are presented for significance on the 99%-confidence interval.

	Value-weighted			*Equally-weighted*		
	$ABHAR_3$	**$ABHAR_{365}$**	**J_0**	**$ABHAR_3$**	**$ABHAR_{365}$**	**J_0**
Overall	57.79%	16.42%	-153597.38***	-7.73%	-2.65%	-2.18**
NSB	53.71%	15.41%	4.39***	-8.76%	-3.01%	-1.53
SB	64.02%	17.93%	1.89	-6.55%	-2.23%	-2.07**
	$ABHAR_5$	**$ABHAR_{365}$**	**J_0**	**$ABHAR_5$**	**$ABHAR_{365}$**	**J_0**
Overall	125.18%	17.63%	-76049.35***	-12.97%	-2.74%	-1.94**
NSB	141.46%	19.28%	12.72***	-17.05%	-3.67%	-1.69*
SB	123.42%	17.44%	0.06	-8.30%	-1.72%	-1.88**

The 5-year ABHAR show similarities; however, the equally-weighted NSB results are significant on the 10% significance level and underperform SB IPOs more than in the case of 3-year ABHARs. On the value-weighted side, the results are similar in terms of significance. Nonetheless, the NSB 5-year ABHAR outperforms its SB counterpart on this longer time-window.

BHAR – Sponsor-backed vs. non-sponsor backed by IPO years

The development of our ABHARs over time (cf. table 13) exhibits several interesting observations for both sponsor-backed and non-sponsor backed IPOs. Firstly, we compare the 3-year ABHARs between each other. For IPOs in 2000, the SB stocks show statistically significant negative ABHARs of -59.33%. The same can be observed for NSB IPOs from 2000, which amounted to an ABHAR of -31.90%. An interesting IPO period is 2001, where NSB exhibits a positive ABHAR of 30.62%, which is statistically significant on a 10%-significance level, while SB IPOs are negatively performing at -57.63%. This profoundly negative abnormal return, however, is accompanied by a low sample size of only four SB IPOs in the year 2001. This evidence is also a primary driver for why the share price performance does not turn out to be statistically distinguishable from zero. The lousy year 2001 for SB IPOs is followed by a slightly better performance with an ABHAR of 7.82% and -17.70% in 2002 and 2003, respectively. Again, these returns are not statistically significant but confirm the SB's inferior performance in the early 2000s compared to the non-sponsor backed counterparts.

Subsequently, the SB IPOs perform at a superior level in the years 2004 until 2006. In this period, non-sponsor backed IPOs exhibit negative years of share price performance with ABHARs ranging from -32.19% to -3.28%. However, none of these ABHARs are statistically significant.

The IPO year 2007 marks another year of slightly positive production in terms of abnormal returns for the sponsor-backed stocks where IPOs exhibit an ABHAR of 3.85%, while the NSB counterpart is at -2.40%. Both, however, are insignificant. The IPO year 2007 was followed by low IPO activity in 2008. However, the IPOs from 2008 generally performed at a better level with ABHAR of 60.32% for sponsor-backed IPOs and 23.18% for non-sponsor backed IPOs.

Until 2011, we observe that the sponsor-backed ABHARs perform negatively and then turn around to be positive in the last two years 2012 and dip again in 2013, where ABHARs show 26.88% in 2012 and -7.47% in 2013, respectively. For the non-sponsor backed IPOs, the trend was very similar. The ABHARs in 2009 and 2010 suggest a negative development for the IPOs. Subsequently, the ABHARs turned positive, as one can see in table 13. The IPOs from 2013, however, turned out to be negative at -6.88%. All of these ABHARs are statistically insignificant and, therefore, not distinguishable from zero. Therefore, potential interpretation has to be treated with caution.

Concerning the overall picture of the comparison between the two groups, we see four periods where the signs are different and, thus, ten periods where the magnitude of the abnormal returns goes into the same direction. The highest 3-year abnormal return corresponds to the year 2008 of sponsor-backed IPOs, while the lowest ABHAR relates to the year 2000 of SB IPOs.

Table 13: ABHARs for SB and NSB public offerings per year of IPO

The table presents the 3-year and 5-year ABHARs for sponsor-backed and non-sponsor backed IPOs for the period from 2000 to 2013. Herein, the years represent the corresponding year of the IPO, i.e., an IPO in 2001 is included in the year 2001, while an IPO from 2000 is not included in 2001. We also present the annualized return and the J_0. The same asterisks model is used for the designation of statistical significance. The abbreviation "n.m." refers to the fact that returns of less than -100% cannot be annualized as they are non-intuitive.

	Sponsor-backed			*Non-sponsor backed*		
	$ABHAR_3$	**$ABHAR_{365}$**	**J_0**	**$ABHAR_3$**	**$ABHAR_{365}$**	**J_0**
2000	-59.33%	-25.91%	-5.10***	-31.90%	-12.02%	-3.06***
2001	-57.63%	-24.89%	-1.34	30.62%	9.31%	2.13*
2002	7.82%	2.54%	0.14	26.33%	8.10%	1.13
2003	-17.70%	-6.29%	-0.79	-2.22%	-0.74%	-0.09
2004	8.80%	2.85%	0.38	-12.49%	-4.35%	-0.49
2005	-9.40%	-3.24%	-0.46	-3.28%	-1.11%	-0.26
2006	-9.42%	-3.25%	-0.83	-32.19%	-12.15%	-1.04
2007	3.85%	1.27%	-0.96	-2.40%	-0.81%	-0.17
2008	60.32%	17.04%	1.44	23.18%	7.20%	0.61
2009	-35.84%	-13.75%	-1.39	-0.24%	-0.08%	-0.01
2010	-9.01%	-3.10%	-0.53	-29.87%	-11.15%	-1.22
2011	-5.13%	-1.74%	-0.20	7.95%	2.58%	0.36
2012	26.88%	8.26%	1.37	7.79%	2.53%	0.25
2013	-7.47%	-2.56%	-0.92	-6.88%	-2.35%	-0.44
	$ABHAR_5$	**$ABHAR_{365}$**	**J_0**	**$ABHAR_5$**	**$ABHAR_{365}$**	**J_0**
2000	-120.72%	n.m.	-5.20***	-62.84%	-17.96%	-2.22**
2001	-84.10%	-30.77%	-0.63	28.52%	5.15%	0.87
2002	-104.65%	n.m.	-0.96	-11.41%	-2.39%	-0.20
2003	-33.72%	-7.90%	-0.99	-44.15%	-11.00%	-1.24
2004	12.67%	2.41%	0.44	-10.82%	-2.26%	-0.47
2005	2.25%	0.45%	0.11	-8.12%	-1.68%	-0.45
2006	-1.67%	-0.34%	-0.08	12.46%	2.38%	0.44
2007	12.08%	2.31%	-1.01	17.14%	3.21%	0.72
2008	99.83%	14.85%	1.32	58.99%	9.72%	1.04
2009	-33.65%	-7.88%	-0.97	12.75%	2.43%	0.34

2010	-10.06%	-2.10%	-0.41	-50.08%	-12.97%	-1.62*
2011	-7.78%	-1.61%	-0.21	-2.97%	-0.60%	-0.12
2012	24.12%	4.42%	0.80	-4.13%	-0.84%	-0.10
2013	11.25%	2.15%	0.76	0.82%	0.16%	0.03

The 5-year ABHARs for SB report different results. We compare the annualized abnormal returns. The first two years of 2000 and 2001 also show negative returns. However, for the 5-year holding period this negative performance continued into the year 2003 with a higher magnitude, when comparing the initially mentioned annualized returns. There are large differences in the year 2002, where the annualized return of the 3-year ABHAR results in 2.54% compared to staggering -104.65% on the 5-year ABHAR basis (mathematically not possible to annualize). The annualized returns of the 5-year ABHARs had mostly stronger returns between 2004 and 2009 and especially in the last year 2013. The 5-year results show similar insignificance as the 3-year ABHARs.

The NSB results show differences in the years. Between 2000 and 2003, the annualized 5-year ABHAR underperforms their 3-year annualized counterparts. This observation changes in the years between 2004 to 2009, with an exception in 2005. In the last years, 2010 and 2013, the annualized 5-year ABHAR again shows a lower number than the 3-year annualized ABHARs except in the year 2013. Comparing the results overall, one can see that the SB underperform their NSB counterparts in 8 (7) out of 14 years in their 3-year (5-year) ABHARs.

Figure 9 illustrates that the behavior of the ABHARs over time converge towards the actual BHAR of the categories over the whole period. This is achieved through the filling of abnormal returns with their final BHAR once they end their event period. This procedure means that, e.g., the ARs from IPOs earlier in the sample period are included with their final BHAR throughout time. Their return is, therefore, filled after the end of their event period. The illustration is, therefore, only an indication of how the BHARs fluctuate over time. It helps us understand the dynamics of the abnormal returns and is a substantial part of our analysis in the interpretation section of our paper. It shows the performance of sponsor-backed and non-sponsor backed IPOs over the years, and the abnormal returns of the two portfolios are shown on a cumulative basis that includes all 1492 IPOs at the end of 2016. Meanwhile, it contains only 268 IPOs, 202 non-sponsor backed, and 66 sponsor-backed, respectively, in total at the end of the year 2000.

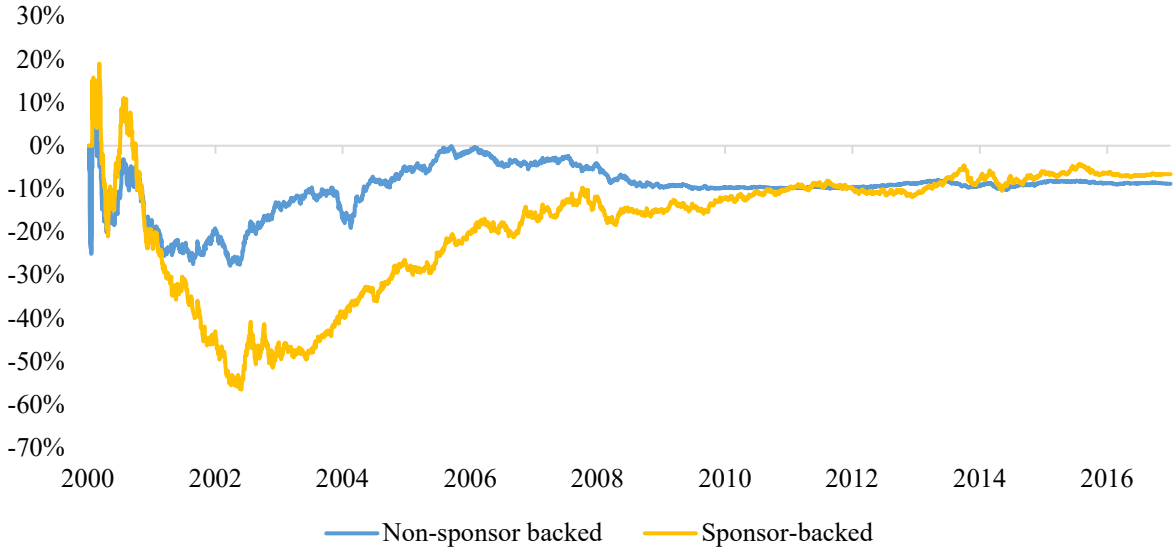

***Figure 9**: (Cumulated) non-sponsor backed and sponsor-backed ABHARs over time*

The figure further confirms the content of our table, indicating a weak performance of NSB and a sharp peak of SB IPOs at the beginning of our sample period. However, the sponsor-backed IPOs relatively underperform the NSB IPOs in the following. Afterward, it seems like both groups recover from the first bad years. In the following years until the end of our observation, the BHARs of both cohorts seem to slightly fluctuate between -10 and -20%. In the years after 2013, we observe that the sponsor-backed IPOs stabilize themselves slightly above the BHAR of their NSB counterparts.

BHAR – Sponsor-backed vs. non-sponsor backed by sectors

The next split that we direct our attention to demonstrates the comparison of the seven different industries that we used throughout our thesis (cf. table 14). For the comparison, we again differentiate between 3-year and 5-year ABHARs for sponsor-backed, and non-sponsor backed IPOs.

Our first finding is the magnitude of the 3-year ABHARs observed in the industries. We find that all sectors except for Information Technologies and Energy & Utilities exhibit negative ABHARs for the sponsor-backed IPOs. On the other hand, we note that two industries have positive abnormal returns for the non-sponsor backed public offerings, which are Financials & Real Estate and Energy & Utilities.

In terms of significance, the two groups exhibit ABHARs that are statistically distinguishable from zero in different sectors. We find statistical significance for one area concerning sponsor-

backed IPOs, namely the group of Consumer Goods offerings that exhibits an ABHAR of -29.92% with statistical significance on a 5%-confidence interval. The other industries mostly show slight negative ABHARs except for Information Technologies and Energy & Utilities that manifests slight positive ABHARs of 5.04% and 19.87% respectively over the three-year event period. A strongly negative performance can be seen in Communication Services without any significance.

As mentioned, non-sponsor backed IPOs display significance in distinct industries. Communication Services show a high degree of statistical significance (99%-confidence interval) with an ABAHR of -38.58%. The Health Care sector, in return, shows slight meaningfulness under a 95%-confidence interval. The corresponding average buy-and-hold abnormal yield amounts to -35.56%. The only positive and significant abnormal return throughout all industries, and both sponsor types, is the cohort of non-sponsor backed IPOs in the Energy & Utilities sector with an ABHAR of 26.41%, which is significant on a 5%-significance level. As mentioned earlier, the non-sponsor supported cohort displays one more positive ABHAR throughout the 14 years of events, which is the Financials & Real Estate sector. It exhibits a slight positive abnormal return of 3.79%, yet non-significant. The remaining industries display negative abnormal behavior, which did not result in any abnormal returns that are significantly different from zero.

Table 14: ABHARs for SB and NSB public offerings per industry

The table presents the 3-year and 5-year ABHARs for sponsor-backed and non-sponsor backed IPOs for the different CIQ industries. We also display the annualized return and the J_0. The same asterisks model is used for the designation of statistical significance.

	Sponsor-backed			*Non-sponsor backed*		
	$ABHAR_3$	**$ABHAR_{365}$**	**J_0**	**$ABHAR_3$**	**$ABHAR_{365}$**	**J_0**
CG	-29.92%	-11.18%	-2.10**	-30.06%	-11.24%	-1.63
F&RE	-4.93%	-1.67%	-0.37	3.79%	1.25%	0.21
I&M	-4.25%	-1.44%	-0.39	-11.54%	-4.00%	-0.62
CS	-20.94%	-7.53%	-1.46	-38.58%	-15.00%	-2.82***
IT	5.04%	1.65%	-0.72	-0.57%	-0.19%	-0.07
HC	-12.05%	-4.19%	-1.11	-35.56%	-13.63%	-1.86**
E&U	19.87%	6.23%	0.78	26.41%	8.12%	2.68**
	$ABHAR_5$	**$ABHAR_{365}$**	**J_0**	**$ABHAR_5$**	**$ABHAR_{365}$**	**J_0**
CG	-28.23%	-6.42%	-1.42	-11.70%	-2.46%	-0.35

F&RE	-11.43%	-2.40%	-0.62	-3.84%	-0.78%	-0.21
I&M	-13.58%	-2.88%	-0.61	-46.90%	-11.89%	-1.33
CS	-16.80%	-3.61%	-1.08	-60.58%	-16.99%	-2.75***
IT	8.59%	1.66%	-1.00	-15.81%	-3.38%	-1.38
HC	-17.50%	-3.77%	-0.98	-31.50%	-7.29%	-0.86
E&U	14.86%	2.81%	0.46	14.00%	2.66%	0.66

For the 5-year ABHARs, we report less significant values and mostly results similar to the 3-year ABHARs with a few exceptions that we point out. The results do not show any significant values for SB and only a highly significant result on a 99%-confidence interval for CS in the NSB section. The industries for the SB have similar annualized returns with the same signs. However, there are no clear patterns of whether the 3-year annualized or 5-year annualized ABHARs have larger magnitudes in terms of abnormal returns.

For NSB, the 5-year annualized ABHARs show worse performance than their 3-year ABHAR counterparts in 5 out of 7 industries. Only Consumer Goods and Health Care seem to perform better on a longer time horizon. Furthermore, the signs are the same in every industry, except for F&RE. However, both values for this industry are relatively close to zero.

Overall both time horizons draw the same picture and show that SB outperforms NSB in 5 out of 7 industries, however, the corresponding industries change between the different length of the event window.

BHAR – Sponsor-backed sub-types and sponsor exit strategies

The next part addressed the split between the different sponsor types, which are Private Equity, Venture Capital, and a combination of the two [CO]. Besides, we look at the findings of our exit analysis, which comprises the sponsors' different strategic options of No Exit [NEx], Partial Exit [PEx], and Complete Exit [CEx] as discussed in section 6. Again we start by looking at the results from our 3-year ABHARs and compare them on an annualized basis with the 5-year ABHAR results.

To put the results of the sub-sponsors into context, it is essential to remember that our overall sponsor-backed cohort of IPOs display negative 3-year ABHARs of -6.55% with statistical significance under the 95%-confidence interval. We discover that there is substantial statistical

evidence of the long-run underperformance of Combined IPOs (cf. table 15), which underperform the benchmark by 15.66%, statistically different from zero in a 95%-significance level. The other two sub-groups of sponsors display statistically insignificant, yet notable behavior. While the VC-backed IPOs are in line with the overall underperformance of sponsor-backed public offerings, PE-backed offerings exhibit a positive 3-year ABHAR of 1.87% in the total period. Despite being relatively small and, thus, statistically insignificant, this finding indicates that there is a different performance between the three groups that requires further investigation (cf. section 13).

The second part of the table is made up of the three exit strategies. Once more, it is imperative to remember the overall sponsor-backed performance of IPOs to put these numbers into context, as mentioned above. The magnitude of the exit strategies' 3-year ABHARs is gradual. While NEx IPOs exhibit low, insignificant abnormal returns of -4.34%, PEx shows a slightly higher ABHAR of -1.76%, yet still non-significant. The lowest-performing cohort, however, is the Complete Exits of sponsors. CEx IPOs underperform their benchmark by 32.40% with strong statistical significance on a 99%-confidence interval.

Table 15: ABHARs for different sub-sponsor types and different sponsor-exit strategies

This table presents the ABHARs for the sponsor types PE, VC, and a combination of the two [CO]. Below, we show the ABHARs for the different exit strategies the sponsors could use where *NEx* refers to No Exit, *PEx* signifies Partial Exit, and *CEx* stands for Complete Exit. Furthermore, we show the corresponding $ABHAR_{365}$ and the J_0. The same asterisks model is used for the designation of statistical significance. The number in the subscript of the sponsor type and exit strategy represents the holding period in years.

	Sponsor type		
	ABHAR	**$ABHAR_{365}$**	**J_0**
PE_3	1.87%	0.62%	0.25
VC_3	-6.65%	-2.27%	-1.28
CO_3	-15.66%	-5.52%	-2.28**
PE_5	6.15%	1.20%	0.59
VC_5	-14.22%	-3.02%	-1.32
CO_5	-20.25%	-4.42%	-1.64*
	Exit type		
	ABHAR	**$ABHAR_{365}$**	**J_0**
NEx_3	-4.34%	-1.47%	-0.46
PEx_3	-1.76%	-0.59%	-1.12
CEx_3	-32.40%	-12.24%	-2.79***
NEx_5	8.34%	1.61%	0.60

PEx_5	-1.39%	-0.28%	-1.23
CEx_5	-76.53%	-25.17%	-3.95***

The results on the sponsor type for the 5-year ABHARs confirm the outperformance of PE-backed IPOs, followed by VC-backed and Combined sponsorship. However, only the Combined group is significantly different from zero, and the results, therefore, have to be treated with caution yet again. On a longer time horizon, it is evident that PE and CO have a more positive annualized ABHAR compared to the 3-year annualized results.

The exit type in table 15 has notable results across time horizons as well. The overall results show that in general, the annualized 5-year ABHARs have stronger performance, except for CEx, where the annualized performance is substantially weaker (-12.24% vs. 25.17%). Also, the ranking of the different exit strategies changes over a longer time window. As we mentioned above, PEx shows the strongest performance for the 3-year ABHARs, but this changes with the 5-year ABHARs. The results report that NEx shows the strongest performance and even switches into a positive value. This is followed by PEx and CEx, as aforementioned.

12.2. Calendar-time portfolio approach

CTP – Overall and sponsor-backed vs. non-sponsor backed

We now look at the performance according to the CTP method. Similarly to the previous section, we first look at the results of our overall sample, where we find that the value-weighted and the equally-weighted approach suggest different findings. For the value-weighted portfolio, the intercept α (remember: the intercept represents the daily abnormal return) indicates a positive and statistically significant (1%-significance level) abnormal daily performance of 0.07% of IPOs in the period from 2000-2013. In contrast, the abnormal return suggested by the equal-weighted portfolio does not indicate an abnormal return that is statistically distinguishable from zero. More likely, according to the magnitude of the abnormal return in the equally-weighted approach is a negative AR, which amounts to -0.01% per day. However, this return needs to be again treated with caution as it is statistically insignificant. The daily returns translate into annualized returns of 27.72% and -2.55% for the value-weighted and equally-weighted approach, respectively. To give these returns some more meaning in the regression-based method, it is also crucial to look at results from the regression other than the sheer abnormal return intercept. In terms of explanatory power, we find that the regression with equally-weighted explains more

of the cross-section of returns, expressed by the adjusted R^2, which is denoted as $\overline{R^2}$, in comparison to the value-weighted approach.

Table 16: CTP – Overall

This table represents the 3-year regression-based results for the CTP approach of the whole sample. The different factors are explained in section 9.3.1. Notably, α represents the daily abnormal return achievable through the investment strategy of investing in the event portfolio. AR_{365} signifies the annualized abnormal return of the event portfolio. The statistical significance presented through the Student's t-test is exhibited through the use of asterisks where one asterisk (*) signifies significance on the 90%-confidence interval, two asterisks (**) stand for significance on the 95%-confidence range, and three asterisks (***) are presented for significance on the 99%-confidence interval. Both value-weighted and equally-weighted portfolios are presented. In this case, we used the portfolio return of every day using WLS estimation.

Regressions: $R_{pt} - R_{ft} = \alpha + \beta(R_{mt} - R_{ft}) + sSMB_t + hHML_t + \epsilon_t$,

	Value-weighted (All portfolios)		*Equally-weighted (All portfolios)*	
	Coefficient	***t*-stat**	**Coefficient**	***t*-stat**
α	0.0007	6.83***	-0.0001	-1.04
$\overline{R^2}$	0.76		0.86	
T	4277		4277	
N	1492		1492	
AR_{365}	27.72%		-2.55%	

The first split of our sample is again the comparison of sponsor-backed and non-sponsor backed public offerings. Both the intercept for SB and NSB are insignificant from zero. Concerning the magnitude, however, we can say that the sponsor-backed outperformed the non-sponsor backed event portfolio with a daily abnormal return of slightly above 0% and -0.01%, respectively. As both portfolios' abnormal returns are zero from a statistical perspective, these ARs have to be yet again observed with caution.

Table 17: CTP - Non-sponsor backed and sponsor-backed

The table shows the 3-year CTP regression results for sponsor-backed and non-sponsor backed event portfolios. The results are based on equally-weighted portfolios. The regression is only based on days where the sample size consists of more than ten event returns. The same asterisks model is used for the designation of statistical significance. The regression was processed using the weighted least squares method.

Regressions: $R_{pt} - R_{ft} = \alpha + \beta(R_{mt} - R_{ft}) + sSMB_t + hHML_t + \epsilon_t$,

	Sponsor-backed		*Non-sponsor backed*	
	Coefficient	***t*-stat**	**Coefficient**	***t*-stat**
α	0.0000	-0.19	-0.0001	-0.96
$\overline{R^2}$	0.86		0.79	
T	4218		4196	
N	695		797	

AR_{365}	0.49%	-2.74%

CTP – Sponsor-backed vs. non-sponsor backed by IPO years

Table 18 shows the differences in the results of event portfolios built based on the respective IPO years. We observe that in the early 2000s, negative abnormal returns exist for the sponsor-backed event portfolios, which also exhibit statistical significance. While in 2000, these abnormal returns amount to an annualized intercept of -30.04%, we see a subsequent decrease in the relative magnitude. The years 2001 and 2002 correspondingly exhibit annualized abnormal returns of -2.51% and -0.39%. However, these two years need to be handled with general caution as the sample size was not big enough to sample them with our favored portfolio 10+ approach. The same applies to the year 2009 for the non-sponsored portfolios.

For the non-sponsor backed events, the year 2000 displays similar abnormal returns to the sponsor-backed counterparts with an annualized intercept of -23.35%, which is statistically significant at a 99%-confidence interval. However, the following years were successful IPO years in terms of long-run performance as in 2001, IPOs demonstrate annualized abnormal returns of 13.30% in the long-run, and, in 2002, the long-run performance event amounts to 23.19% on an annual basis. Both of which are significantly different from zero.

In the subsequent years after 2002, sponsor-backed IPOs do not present any statistically reliable evidence of abnormal returns with one exception. The IPO year 2005 is found to be a strong period where statistically significant annualized abnormal returns amount to 12.57%, and reliable explanatory power of the model is manifested. After this high-performing year, the abnormal returns signal positive intercepts in five years, with three years of negative performance in 2006, 2010, and 2013. The magnitude of positive annualized ARs ranges from 4.3% in 2012 up to 17.65% for 2008. In comparison, the negative annualized ARs fluctuate between 0.91% in 2010 and 8.80% in 2006.

Non-sponsor backed IPOs, in contrast, experienced another well-performing two years after 2002. In 2003, annualized ARs amounted to 7.86%, yet just shy of statistical significance. In the following year, the intercept indicated an event portfolio performance of 7.07%, which is suggested to be statistically distinguishable from zero on a 10%-significance level. After 2004, there is only one more statistically significant AR in the whole sample period, which is 2011, where abnormal returns are 14.77% on an annual basis. Until and after then, the findings for

intercept vary with four event portfolios of negative overall 3-year performance and four years of positive performance excluding the year 2011. The negative range in this period reaches from -0.25% to -3.31% annualized returns. In contrast, the positive ARs range from 1.64% to 12.01%.

For the overall picture, we find that the strongest year was the year 2002 of the non-sponsor backed public offerings, while the worst year corresponds to sponsor-backed IPOs from the year 2000. Generally, the sponsor-backed and non-sponsor backed counterparts share eight periods with the same sign.

Table 18: FFARs for SB and NSB public offerings per year of IPO

The table shows the 3-year CTP regression results for sponsor-backed and non-sponsor backed event portfolios. The years represent the year of the respective IPO. The results show the Fama-French abnormal returns [FFARs] and are based on equally-weighted portfolios. The regression is only based on days where the sample size consists of more than ten event returns. The abbreviation "n.a." refers to years where we used all daily portfolio returns. It is since the sample size was smaller than ten on every day in the sampling period because of low IPO activity. The same asterisks model is used for the designation of statistical significance. The regression was processed using the weighted least squares method.

Regression: $R_{pt} - R_{ft} = \alpha + \beta(R_{mt} - R_{ft}) + sSMB_t + hHML_t + \epsilon_t$

	Sponsor-backed				*Non-sponsor backed*			
	$\boldsymbol{\alpha}$	$\boldsymbol{AR_{365}}$	$\boldsymbol{\overline{R^2}}$	**T**	$\boldsymbol{\alpha}$	$\boldsymbol{AR_{365}}$	$\boldsymbol{\overline{R^2}}$	**T**
2000	-0.0010 (-2.98***)	-30.04%	0.74	883	-0.0007 (-3.03***)	-23.35%	0.80	949
2001	-0.0001 (-1.70*)	-2.51%	0.00	n.a.	0.0003 (2.25**)	13.30%	0.77	915
2002	-0.0000 (-0.21*)	-0.39%	0.00	n.a.	0.0006 (4.41***)	23.19%	0.76	890
2003	-0.0002 (-0.67)	-5.49%	0.60	735	0.0002 (1.50)	7.86%	0.70	829
2004	0.0001 (0.82)	4.21%	0.74	891	0.0002 (1.68*)	7.07%	0.82	963
2005	0.0003 (2.06**)	12.57%	0.82	794	-0.0000 (-0.06)	-0.25%	0.83	944
2006	-0.0003 (-1.36)	-8.80%	0.87	946	-0.0000 (-0.09)	-0.61%	0.84	950
2007	0.0002 (0.89)	6.32%	0.89	926	0.0000 (0.20)	1.64%	0.76	892
2008	0.0004 (1.22)	17.65%	0.65	580	0.0003 (1.07)	12.01%	0.61	615

2009	0.0002 (1.02)	6.29%	0.85	776	-0.0001 (1.37)	-2.48%	0.01	n.a.
2010	-0.0000 (-0.19)	-0.91%	0.89	921	0.0001 (0.24)	1.98%	0.73	641
2011	0.0001 (0.86)	5.57%	0.77	937	0.0004 (2.31**)	14.77%	0.46	816
2012	0.0001 (0.90)	4.30%	0.86	913	0.0002 (1.01)	7.82%	0.58	799
2013	-0.0002 (-1.28)	-6.67%	0.86	922	-0.0001 (-0.61)	-3.31%	0.73	876

CTP – Sponsor-backed vs. non-sponsor backed by sectors

The next split is concerned with the abnormal returns according to the CTP method per industry (cf. table 19). In total, we find that for the sponsor-backed and non-sponsor backed IPOs, three sectors each exhibit negative long-run performance according to the CTP method. Interestingly, in both groups, this concerns the industries Communication Services and Information Technology. The third sector for sponsor-backed IPOs is Health Care and Consumer Goods for the non-sponsor backed cohort.

With regard to significance, two of the negatively performing non-sponsor supported groups exhibit statistical significance. It affects the Communication Services sector in which we observe annualized abnormal returns of -40.23% and the Information Technology industry (-12.67%). Yet, for sponsor-backed offerings, we do not find statistical significance for industry-specific negative abnormal returns. In return, we find that the two sectors Consumer Goods and Industrials & Materials, exhibit statistically significant behavior with annual Fama-French abnormal returns [FFARs] of 12.25% and 9.23%, respectively. On the other side, we can also find statistically significant results that have a positive sign for the non-sponsor backed cohort. The Energy & Utilities and Financials & Real Estate sectors both display significant results with abnormal returns amounting to 13.25% and 8.53%, respectively.

Non-significant results have, of course, to be treated with prudence. We can see, however, that some industries have converging behavior between the two different cohorts. Only two out of the total seven sectors have different signs for the two groups SB and NSB. The two affected industries are Health Care and Consumer Goods. As mentioned, in the Consumer Goods sector, we find statistically significant ARs for the SB group. In contrast, for the NSB, we discover

slightly negative ARs, yet insignificant. For the Health Care industry, none of the two reveals a robust statistical signal.

The ranges of SB and NSB vary greatly. While sponsor-endorsed IPOs range from -10.75% to 12.25%, the span for public offerings without sponsor involvement reaches from -40.23% to 13.25%.

Table 19: FFARs for SB and NSB public offerings per industry

The table shows the 3-year CTP regression results for sponsor-backed and non-sponsor backed event portfolios per sector. The results are based on equally-weighted portfolios. The regression is only based on days where the sample size consists of more than ten event returns. The same asterisks model is used for the designation of statistical significance. The regression was processed using the weighted least squares method.

Regression: $R_{pt} - R_{ft} = \alpha + \beta(R_{mt} - R_{ft}) + sSMB_t + hHML_t + \epsilon_t$

	Sponsor-backed				*Non-sponsor backed*			
	$\boldsymbol{\alpha}$	$\boldsymbol{AR_{365}}$	$\boldsymbol{\overline{R^2}}$	**T**	$\boldsymbol{\alpha}$	$\boldsymbol{AR_{365}}$	$\boldsymbol{\overline{R^2}}$	**T**
CS	-0.0003 (-1.12)	-10.75%	0.65	1384	-0.0014 (-4.25***)	-40.23%	0.58	1402
IT	-0.0001 (-0.81)	-3.36%	0.78	4133	-0.0004 (-1.85*)	-12.67%	0.74	2333
E&U	0.0002 (0.83)	7.46%	0.53	921	0.0003 (2.27**)	13.25%	0.49	3257
F&RE	0.0001 (1.25)	5.30%	0.75	1517	0.0002 (3.32***)	8.53%	0.71	3701
HC	-0.0000 (-0.16)	-0.80%	0.65	3889	0.0000 (0.12)	0.65%	0.67	2175
CG	0.0003 (4.42***)	12.25%	0.78	2844	-0.0000 (-0.17)	-0.79%	0.69	2319
I&M	0.0002 (2.80***)	9.23%	0.86	2632	0.0002 (1.30)	6.96%	0.69	1968

CTP – Sponsor-backed sub-types and sponsor exit strategies

In our last result table 20, we address the different FFAR results for the different sub-sponsor types Private Equity, Venture Capital, and the combination of both sponsors. Subsequently, we look at the various exit strategies and the corresponding results.

In the comparison of the different sponsor cohorts, we observe that Private Equity is the only sponsor type that achieves positive abnormal returns that amount to an annualized return of

2.57%. In addition to the differing magnitude of the Private Equity group, it is also the only AR that is statistically significant (5%-confidence interval). In return, Venture Capital and CO achieve insignificant negative abnormal of -5.52% and -3.89% on an annual basis, respectively. In addition to the statistical significance, the Private Equity regression is also the one model that achieves the highest explanatory power of all regressions that we have run with an adjusted R^2 of 93%.

Concerning exit strategies, we find negative abnormal returns for all three groups that are statistically distinguishable from zero. In the comparison of the three exit strategies, we manifest that PEx exhibits the lowest abnormal performance of the cohort with annualized AR amounting to -49.91%. It is followed by CEx with an AR of -16.08% and NEx (-6.55%).

Table 20: FFARs for SB IPOs per sponsor type and exit type

The table shows the 3-year CTP regression results for the different sub-sponsor types and the various exit strategies. The results are based on equally-weighted portfolios. The regression is only based on days where the sample size consists of more than ten event returns. The same asterisks model is used for the designation of statistical significance. The regression was processed using the weighted least squares method.

Regression: $R_{pt} - R_{ft} = \alpha + \beta(R_{mt} - R_{ft}) + sSMB_t + hHML_t + \epsilon_t$

	Sponsor type				
	$\boldsymbol{\alpha}$	$\boldsymbol{AR_{365}}$	$\boldsymbol{\overline{R^2}}$	**T**	**N**
PE	0.0001 (2.03**)	2.57%	0.93	4044	277
VC	-0.0001 (-1.20)	-5.52%	0.71	3742	164
CO	-0.0001 (-1.06)	-3.89%	0.79	3988	254
	Exit type				
NEx	-0.0001 (-2.05**)	-6.55%	0.87	2983	209
PEx	-0.0008 (16.25***)	-49.91%	0.91	4000	395
CEx	-0.0005 (-2.49**)	-16.08%	0.68	2380	91

13.Interpretation

In this section, we analyze and interpret the results described above. The interpretation is based on the different aspects that we addressed throughout our paper. The first feature is the theoretical framework. A significant part of the interpretation is to put our results into the context of concurrent hypotheses, namely the information signaling, information cost, and the attention hypothesis. Where applicable, we also try to frame our results in the mentioned demand theories. The second feature is the assignment of effects to the firm characteristics leverage and profitability. The main drivers of the results could be higher profitability of SB IPOs, for instance. Potentially, this effect could be biased by the window dressing of the companies before the IPO to make the issuance look more appealing to investors. Additionally, we have to take into account that firm characteristics could be potentially driven by the sponsor type, elevating the financial performance of sponsored firms above non-sponsored firms in general. The third aspect that we aim to discuss is the choice of model. The BHAR and CTP methods often yield two different results that need to be further addressed and categorized whether this could potentially favor the EMH and the non-existence of abnormal returns. It is essential not to regard the facets mentioned above in isolation. The discussion's primary purpose is to direct the results towards isolated drivers of the effects. However, this can only be processed if we regard all of the different features in combination.

The structure of our interpretation mostly follows the order that we used for the results. This order helps us to enrich the discussion with different results throughout the interpretation. Besides, the structure directs us towards effects that are driven by sponsor type and effects that might be driven through other factors. However, there is one little exception to what we present in our interpretation in comparison to our results. We do not further show evidence on the sector types. This decision is driven by the results that we saw in BHAR and CTP. Both estimation procedures show highly divergent results where patterns are close to invisible. While the results are interesting, we do not see value in purely speculating for BHAR and CTP on an isolated basis. As stated before, the strength of our paper bases on the fact that we use two methods and find a consensus. When a consensus is untraceable, we have to accept that fact and state that sectors do not show any clear patterns that help us trace wherein the SB or NSB performance originates. Therefore, you can find the suggestive findings on sectors in Appendix D.

Overall performance of IPOs

"Do IPOs overall underperform in the long-run?"

We start with the discussion on the above-presented results for the overall sample. As mentioned, the sample displays negative abnormal returns in the long-run event. This finding is persistent and significant for both BHAR event windows (3- and 5-year) (cf. table 21). For the CTP method, we find a similarly negative abnormal return. However, this AR is found to be statistically insignificant at all confidence intervals. In sum, disregarding the sponsor type or industry classification, the first clear finding is that we suggest that IPOs underperform similar non-event companies in the BHAR setting. This also means that we find evidence to confirm the overall long-run underperformance of IPOs.

Table 21: Comparison of annualized abnormal returns – Overall

The table shows the comparison of annualized abnormal returns between the two approaches of BHAR and CTP. For BHARs, we show the 3-year and 5-year time window. Additionally, we show the number of IPOs *N*. The same asterisks model is used for the designation of statistical significance for the respective methods.

	3-year $ABHAR_{365}$	**5-year $ABHAR_{365}$**	**CTP AR_{365}**	**N**
Overall	-2.65%**	-2.74%**	-2.55%	1492

In the context of the information signaling theory, this finding means that the average sample firm does not credibly signal a superior firm quality in comparison to non-event companies in the event of an IPO. A potential driver of the lack of power of the signal could be the apparent firm characteristics profitability and leverage (cf. table 22) compared to the benchmark. While high profitability is seen as an excellent signal to the investors, high leverage demonstrates an increased risk appetite that could be partially driven by risk-seeking management prior to the IPO. The analysis of the overall sample manifests that, in comparison to the benchmark (composed of the BHAR control firms), the sample is less profitable on average in terms of average EBITDA margin and shows higher leverage. Thus, we find evidence that the negative abnormal returns may relate to low profitability that decreases investors' interest in the IPO firms in the long-run. Another explanation could be the further worsening of the firms' financial performance after the IPO that we did not observe in our analysis. The higher leverage that we observe for the sample in comparison to the benchmark seems to keep investors further from investing long-term in the IPO firm. The higher corresponding risk appears to be unattractive to investors.

Another possible explanation could be the two crises that the equity market went through during the sample period. The financial crisis and the Dotcom Bubble put much pressure on stock prices in the early and late 2000s, which potentially drove down IPO stock performances in these times. Besides, we recall that our sample is mostly made up of small stocks. As mentioned earlier in the thesis, small-cap stocks appear to take longer to recover from exogenous shocks, which would further amplify the effect of the two crises.

Another driver could be the research on the long-run underperformance itself. IPO underperformance is a thoroughly researched and discussed topic that receives notable attention from potential long-term investors. This awareness for this phenomenon could severely bias the stock performance expectations of investors as it creates a confirmation bias over time. This behavioral bias could further amplify the investors' behavior of selling IPO stocks earlier than other stocks instead of following a buy-and-hold strategy. It could also reinforce the investors' image that IPO stocks are purely speculative instruments.

Table 22: Comparison of profitability and leverage – Overall

The table presents the different probability and leverage levels for each of the cohorts. The profitability is measured by the average EBITDA margin per group, while leverage stands for the median Debt/Equity ratio of the different sample groups.

	Profitability	Leverage
Overall	19.1%	0.43
Benchmark	20.7%	0.26

Through the significant abnormal returns that we find in our sample overall for the BHAR method, we also find evidence that potentially question the semi-strong form of the Efficient Market Hypothesis. The observation of persistent abnormal returns that could relate to the information on profitability and leverage violates the EMH, which is that abnormal returns cannot persist over a long-term period. Yet, we find that the CTP approach yields a negative abnormal return that statistically indistinguishable from zero. We suggest that this provides a basis for the assumption that the EMH holds in the overall sample. However, we interpret that the very similar magnitude in conjunction with the significance in the BHAR approach indicates that the overall IPOs underperform the market.

Sponsor-backed vs. non-sponsor backed IPOs

"Do sponsor-backed IPOs on the U.S. market outperform non-sponsor backed IPOs in terms of the long-run average abnormal returns?"

This part of the interpretation corresponds to the comparison of the overall results of the two cohorts – SB and NSB IPOs throughout the sampling period. The results show that in all methods, the SB IPOs outperform the NSB group in terms of magnitude (cf. table 23). In the 3-year ABHAR approach, we find that NSB is statistically indistinguishable from zero, while the sponsor-backed IPOs display significant negative performance. In the 5-year approach, we achieve significance for both NSB and SB on a 10%- and 5%-confidence interval, respectively. In the CTP approach, both abnormal returns are statistically insignificant. Interestingly in this approach, the sponsor-backed companies do not only outperform the NSB group but also achieve a positive abnormal return, which deviates from the similar magnitude in the two BHAR measurements.

Table 23: Comparison of annualized abnormal returns – NSB and SB

The table shows the comparison of annualized abnormal returns between the two approaches of BHAR and CTP. For BHARs, we show the 3-year and 5-year time window. Additionally, we show the number of IPOs per subgroup N. The same asterisks model is used for the designation of statistical significance for the respective methods.

	3-year $ABHAR_{365}$	**5-year $ABHAR_{365}$**	**CTP AR_{365}**	**N**
NSB	-3.01%	-3.67%*	-2.74%	797
SB	-2.23%**	-1.72%**	0.49%	695

We find evidence that the outperformance of the SB companies seems to be in line with the information signaling and information cost hypothesis where sponsors credibly signal that the backed companies are of higher quality than the non-sponsor backed companies. The evidence is based on the findings in terms of operating profitability. As the relatively weak profitability for SB companies (cf. table 24) does not deliver evidence that the outperformance is solely based on financial data, we suggest that other factors must have played an essential role in the investors' favoring of SB companies. A possible factor for the decision can be the sponsor backing itself. As mentioned earlier in this thesis, information asymmetry plays a vital role in IPOs. As reliable information is hard to achieve, and investors might suspect window dressing prior to the IPO, the sponsor backing might give a credible signal. Particular financial sponsors

are often connected to more stable management and, therefore, a possible predictor of higher long-term performance through the structure and managerial and financial practices that were previously implemented by the sponsor. While this signal may be valid for the comparison to the non-sponsor backed cohort, SB IPOs were still outperformed by the benchmark and, therefore, exhibit negative ABHARs. This stands in line with the previous findings of the long-run underperformance of IPOs. The credible signal becomes even more intriguing when looking at the CTP approach, where we observe positive abnormal returns (cf. table 23). The difference in the sign could be driven by the chosen control firms in the BHAR approach that are not only matched based on the FF3 models' factors but also based on the industry. This third factor could be a reason for distortion in our model and, therefore, drive down the abnormal returns in the BHAR approach. However, this also gives us insights that the industry mix of our sample might be a driver for the higher CTP abnormal returns as this hypothetical industry effect seems to be more controlled for in the BHAR approach.

Table 24: Comparison of financial data – NSB and SB

The table presents the different probability, leverage levels and market cap for each of the cohorts. The profitability is measured by the average EBITDA margin per group while leverage stands for the median Debt/Equity ratio of the different sample groups.

	Profitability	Leverage	Market cap
NSB	20.1%	0.44	1,164
SB	18.1%	0.42	1,278
Benchmark	20.7%	0.26	1,708

Another factor that we want to address is leverage. We observed high relative leverage in the whole sample and across all cohorts of IPOs compared to the benchmark. However, leverage does not seem to play an important role in the explanation of the ARs that we observed in our results as the median leverage is at a similar level for SB and NSB. Therefore, we conclude that leverage does not serve as a good predictor of long-run performance when comparing SB and NSB cohort. We address leverage in a subsequent section again as it delivers fascinating insights in other areas.

A third factor that we want to include in the analysis is the fact that we have mostly small stocks in our sample (cf. section 8.1.1). In this regard, the previously addressed attention hypothesis comes into play. Small stocks have to gain media attention in order to arouse the investors'

interest. Small companies that have large sponsors may have an advantage compared to non-supported companies of the same market capitalization as the investors' interest could already be enhanced through a press release of the sponsor. This finding means that the higher performance of SB IPOs could also be driven by the attention that the sponsor itself brings with the investment and, subsequently, with the divestment. The sponsor could also bring investor attention through the fact that investors are already invested in the sponsor's fund, e.g., a Private Equity Fund. Therefore, some investors could have already tracked the performance of these small stocks and could potentially decide to stay invested in the company once the Private Equity fund releases it from the portfolio through the IPO.

Despite the higher relative performance of SB IPOs, the statistical significance plays an essential role as it changes the picture of our analysis. While we do not find ARs that are statistically distinguishable from zero in the CTP approach, the BHAR approach bears some critical insights through the significance. While the 3-year BHARs are only statistically significant for the sponsor-backed companies, we find that the measured 5-year BHARs show significant negative abnormal returns on a 90%-confidence interval. Therefore, we suggest that investors could use a strategy that is based on 5 years in order to reap the benefits of the outperformance of SB IPOs.

Another factor that comes into play is the existence of IPO funds. IPO funds invest in the stock issuances and usually buy large blocks of shares in these transactions. As mentioned for the downward-sloping-demand-curve hypothesis, while block trades create a short-term price effect, they also potentially increase the long-term price equilibrium. In these IPO funds, market capitalization is often a criterion to invest in an IPO or not (e.g., IPOX Composite ETF). As we find bigger average issuances for SB IPOs (cf. table 24), the block trades could theoretically create price support for more SB public offerings compared to NSB IPOs, which would be in line with one of our demand theories.

Another interesting finding is that we observe that the ABHARs take two different directions when looking at the 5-year ABHARs in comparison to the 3-year event windows. While SB IPOs reduce their losses from the previous three years, the NSB IPOs even dropped further, and their negative abnormal return is now significantly different from zero. As we do not have a further view on the profitability or leverage at that time, we can only argue that the sponsor backing might still have a passive influence through the implementation of stable management

for the time after the IPO, which is much more directed towards long-term growth in comparison to NSB companies. As we know, it is also very likely that the sponsor still exercises an active influence on the company as partial exits or no exits are more likely than complete exits of the sponsors after the IPO. Another possible explanation is connected to the previous point that it could again be driven by permanent price support through IPO funds.

For the CTP approach, we deduce that insignificant ARs would mean that the previously described magnitude has to be treated with extreme caution. ARs do not persist over time and equal zero from a statistical point of view. The consequence would be that the three variables of the FF3 almost entirely describe the cross-section of the long-run IPO returns for the two groups. This finding would be directly in line with the EMH, which does not allow any abnormal returns over a longer time window. In sum, we find that the sponsor-backed companies consistently outperform the non-sponsor backed IPOs. However, the research is not entirely conclusive as we find statistically insignificant results in some approaches and with some time windows, while for the sponsor-backed IPOs, the sign of abnormal returns differs between the CTP and the BHAR approach.

Sponsor-backed vs. non-sponsor backed IPOs for different sponsor types

"Do companies that are backed by sponsors outperform non-sponsor backed IPOs no matter the sponsor type (Private Equity, Venture Capital, and a combination of the two [Combined])?

This section treats the different sub-sponsor types, and their abnormal stock performance in comparison to the non-sponsor backed IPOs. We recall that non-sponsor backed IPOs were only significant in the BHAR method using a 5-year event window and were generally outperformed by the SB IPOs. Significance among the different sub-sponsor types is only observed for the PE-backed IPOs in the CTP approach (cf. table 25), where a positive abnormal return is displayed. For the BHAR approach, we find the Combined-backed IPOs to be negative and statistically significant in both approaches, yet with different confidence intervals. In terms of magnitude, we observe a very persistent picture for the Private Equity-sponsored companies. In each of our estimation procedures, the PE-backed firms outperform all other cohorts, including the non-sponsor supported companies. In the BHAR approach, the runners-up are consistently the VC-backed firms followed by NSB companies. In the CTP approach, the NSB firms outperform the Combined and VC-backed firms, which follow in the third and fourth place, respectively. As before, we firstly concentrate on the magnitudes and their implications for our

study. Finally, we further comment on the significance and make suggestions on the implications for the EMH.

Table 25: Comparison of annualized abnormal returns – NSB and sponsor types

The table shows the comparison of annualized abnormal returns between the two approaches of BHAR and CTP. For BHARs, we show the 3-year and 5-year time window. Additionally, we show the number of IPOs per subgroup N. The same asterisks model is used for the designation of statistical significance for the respective methods.

	3-year $ABHAR_{365}$	**5-year $ABHAR_{365}$**	**CTP AR_{365}**	**N**
NSB	-3.01%	-3.67%*	-2.74%	797
PE	0.62%	1.20%	2.57%**	277
VC	-2.27%	-3.02%	-5.52%	164
CO	-5.52%**	-4.42%*	-3.89%	254

As mentioned, PE-backed IPOs outperform the other groups substantially across all estimation procedures. Additionally, in both approaches (CTP and BHAR), the PE-backed IPOs are the only cohort that yields positive abnormal returns. This finding implies that Private Equity firms succeed in providing a credible signal to the investors that the firms that go public are superior to alternatives in our sample, which would be in line with the information signaling hypothesis. The question that we want to address is whether this finding could also possibly relate to better profitability or possibly higher leverage, which induces a high-risk, high-return company profile. Our first finding in this regard is that PE-backed firms are substantially larger in terms of market capitalization compared to the counterparts of other sponsors or NSB companies (cf. table 26). This finding is also visualized in figure 10, where the biggest bubbles are attributed to Private Equity IPOs. Figure 10 further displays the range of abnormal returns between CTP and the BHAR approach measured on the Y-axis and puts this AR in context with the operating profitability measured by the average EBITDA margin on the X-axis. Two similarly colored bubbles represent the range of abnormal returns that we measure for the different sponsor types.

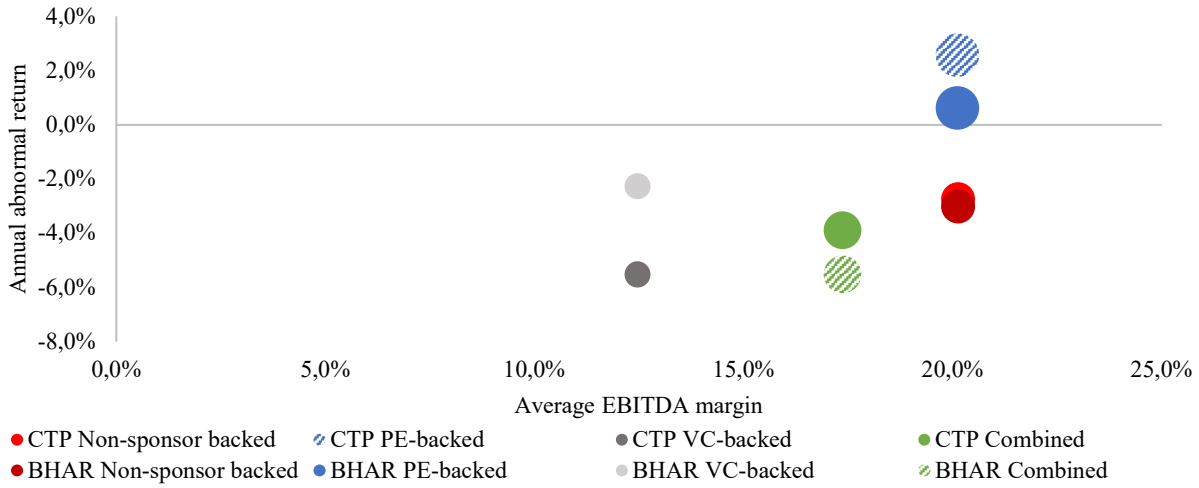

***Figure 10**: Relation of annualized abnormal returns and profitability*
Note: The bubble sizes represent the average market capitalization. Pattern bubbles represent significant ARs.

A bigger market capitalization often signals steadier cash flows and, therefore, less risk that is connected to the company. This finding is also in line with what PEs usually aim for in terms of their investment focus. The achievement of higher market capitalization is also often connected to better management, which further amplifies the lower risk profile of the company. The size factor is also an indicator of how long it takes to recover from unexpected shocks. Small stocks often need more time to reach the old valuation level compared to stocks with a higher market capitalization. This potentially gives us an explanation of why VC-backed and Combined companies perform at a relatively lower level in terms of abnormal return. Due to their smaller size and the two big crises in our sampling period (Dotcom Bubble and Great Recession), these two sub-groups might suffer the most from these shocks. Therefore, the stocks might be dragged down rather due to their relative size instead of the sponsor type itself.

We also find that PE-backed companies achieve higher profitability compared to the other sponsor types (cf. table 26). This finding further adds to the impression that PE-backed firms exhibit a superior company profile compared to the other cohorts. Moreover, the PE-backed firms are the only companies that achieve a similar median EBITDA margin compared to the benchmark, which we found in an earlier chapter (cf. section 8.1.2).

Table 26: Comparison of financial data – NSB and sponsor types

The table presents the different probability, leverage levels, and market cap for each of the cohorts. The profitability is measured by the average EBITDA margin per group, while leverage stands for the median Debt/Equity ratio of the different sample groups.

	Profitability	Leverage	Market cap
NSB	20.1%	0.4	1,164
PE	20.1%	1.4	1,494
VC	12.5%	0.1	895
CO	17.4%	0.2	1,290
Benchmark	20.7%	0.26	1,708

In addition to profitability, we also want to address the leverage of PE-backed firms (cf. table 26). The relationship between our abnormal returns and the leverage for the different cohorts is further illustrated in figure 11. Figure 11 displays the range of abnormal returns between CTP and the BHAR approach measured on the Y-axis and puts this AR in context with the leverage measured by the Debt/Equity ratio on the X-axis. Two similarly coloured bubbles represent the range of abnormal returns that we measure for the different sponsor types.

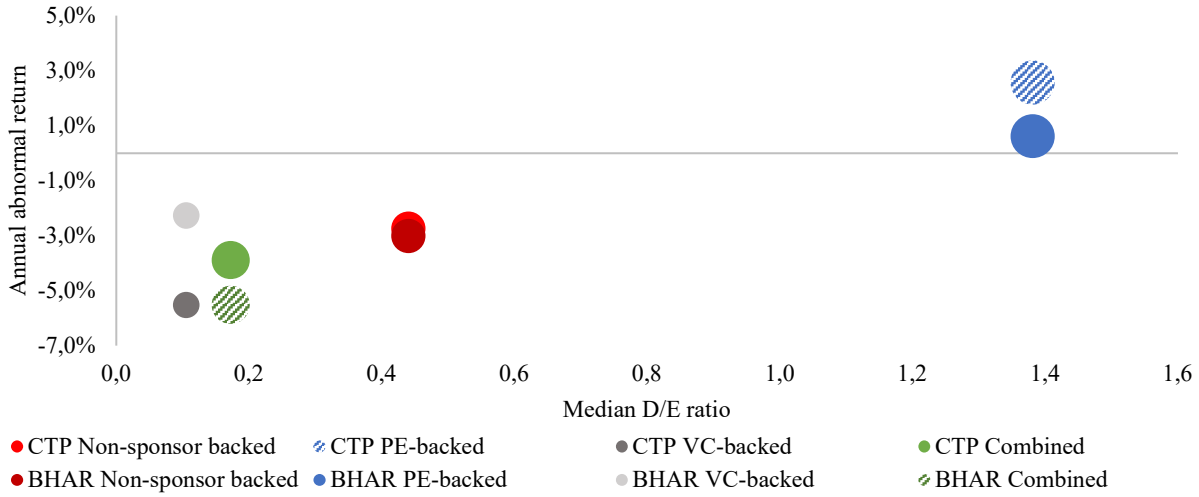

***Figure 11**: Relation of annualized abnormal returns and leverage*

Note: The bubble sizes represent the average market capitalization. Pattern bubbles represent significant ARs.

We find that companies that go public with the support of Private Equity have substantially higher leverage (cf. table 26). Moreover, it is the only group that is majorly financed by debt. This financing method is widespread amongst Private Equity firms when proceeding with Leveraged Buyouts where companies take on a large amount of debt. The subsequently high leverage, in conjunction with the above mentioned steady cash flows of the underlying company,

enhances the profitability and, mostly, the internal rate of return in the event of the divestment of the portfolio company. However, this vast amount of leverage also carries a more considerable default risk. It appears in our sample that the corresponding risk does not scare away investors as we see a positive long-run performance in contrast to the other sponsor types and non-sponsor backed issues.

In light of these findings for the PE-backed companies, we suggest that the high profitability and high leverage positively influence the abnormal return for this specific group. However, this finding does not hold for other cohorts in our sample. As we see in figure 10 and as mentioned earlier, non-sponsor endorsed companies have similar operating profitability while exhibiting a negative abnormal return in both estimation procedures. For this specific group, we find that the lower leverage (cf. figure 11) and, therefore, lower risk-appetite of management might affect the abnormal return and confirms the linear relationship between leverage and abnormal return performance. However, this would mean that leverage holds as an influence on post-IPO performance while operating profitability plays a subordinate role in the investors' assessment of IPO firms. For the other two cohorts, we find that they both exhibit lower profitability and lower leverage compared to the PE-backed and non-sponsor supported companies. In the CTP setting, we find evidence for a weak, but seemingly existing positive linear relationship between abnormal returns and operating profitability (cf. figure 10). Based on the CTP setting, we suggest not only that operating profitability does, indeed, influence the post-IPO performance but also we find an apparent relation between leverage and the abnormal return (cf. figure 11).

This finding slightly needs to be adjusted when observing our BHAR results. In the buy-and-hold setting, the second-best performing cohort (VC-backed) has not only the lowest profitability but also the lowest proportional debt financing in our sample. The VC-backed also represents the cohort with the most prominent interval between CTP and BHAR approach, which could be potentially driven by worse fits in the control firms or by low sample sizes throughout the years. We deduce from these contradictory findings not only that the establishment of a relationship between ARs and the corresponding fundamentals is complicated, but we also lack sufficient data points in the figures 10 and 11 to solidify this view further.

In case this relationship does not hold, we are still on the search for explanations for the clear outperformance of PE-backed companies. The analytical approach of superior performance

could then be directed towards the signaling hypothesis where PE-backed firms credibly signal to the investors that they are of higher quality, as mentioned before. Obviously, it is easier to form the impression of higher quality in case profitability is higher than in other companies. Another approach is to take the image of the sponsor type as the signal for future performance. Private Equity stands for steady cash flows. Investors are generally interested in steady dividends and superior performance in the long-term. The Private Equity sponsor itself could, therefore, be an additional signal of reliable performance to investors. In contrast, VC-backed firms generally invest in more early-stage companies with a higher attached risk. An image that could scare away investors from investing. In this aspect, the combination of both sponsors does not seem to fully take away the insecurity that is attached to Venture Capital when comparing the different results for Combined in the CTP and BHAR setting.

As mentioned in the section of comparison between SB and NSB, we find that the sponsor's arousal of interest through media attention could also be an essential factor. The attention hypothesis describes that mostly small stocks have trouble gaining enough media attention. This finding is further amplified in our sample as we suggest that the stocks with smaller ME of VC-backed and Combined-backed firms generally perform weaker than the PE-backed counterparts. The more considerable media attention could also be positively reinforced by the sponsor type itself. Private Equity firms appear to generally attain higher interest due to the more known and more prominent investment prospects that they have. In addition to this finding, another possibility of attention could be the different sponsor funds. The investors that invest in certain PE funds, for instance, could also be more interested in public equity compared to investors that focus on VC and Combined funds. This is related to the fact that the market cap of Private Equity backed companies is much closer to the benchmark than the for the other sponsor types. Investors that are interested in the PE holdings and want to retain certain investments in their portfolio might be then interested in investing in the newly public company that left the PE fund portfolio.

In terms of a longer buy-and-hold horizon, we find PE-backed and Combined companies improve their abnormal stock price performance, while VC-backed firms further decreased their abnormal return compared to the benchmark in the BHAR method. This could be related to the impression of better long-term oriented management in case a Private Equity firm was involved in the backing prior to the IPO. For this finding to be solidified, we would need to look for the

companies overall financial performance after the IPO. However, we do not further address this in our thesis.

Besides the magnitude of our returns, we must also look at the significance of the abnormal returns in both settings. While in the CTP approach, we find the positive abnormal return of PE-backed firms to be statistically significant, the BHAR approach only suggests that the negative abnormal return of the Combined-backed firms is significant. Both ARs are significant on a 95%-confidence interval. This amplifies the caution that we have to inherit when looking at our interpretation. The main finding that we want to bring further is the outperformance of PE-backed firms, which is confirmed through significance in the CTP approach. However, in the BHAR setting, this finding is limited to the magnitude without further statistical foundation through significance. Instead, we find that Combined abnormal returns with the worst performance of all sponsor groups are significant, which only further supports that IPOs underperform in the long-run.

Sponsor-backed IPOs vs. non-sponsor backed IPOs for different exit strategies

"Does the retention of ownership by the financial sponsor significantly influence the sponsor-backed companies' performance in the long-run relative to the non-sponsor backed companies?"

In this part of the discussion of our findings, we want to address the different exit strategies that sponsors follow. Table 27 shows a recap of the results that we presented in section 8.

Table 27: Comparison of annualized abnormal returns – Exit strategies

The table shows the comparison of annualized abnormal returns between the two approaches of BHAR and CTP. For BHARs, we show the 3-year and 5-year time window. Additionally, we show the number of IPOs per subgroup N. The same asterisks model is used for the designation of statistical significance for the respective methods.

	3-year $ABHAR_{365}$	5-year $ABHAR_{365}$	CTP AR_{365}	N
NEx	-1.47%	1.61%	-6.55%**	210
PEx	-0.59%	-0.28%	-49.91%***	395
CEx	-12.24%***	-25.17%***	-16.08%**	90

The comparison of the different exit strategies in the three estimation procedures yield substantial findings of their impact. Across all three result columns, we find evidence that companies, where the sponsor does not exit the investment at all, outperform stocks where the financial

sponsor decides to partially or entirely divest (cf. table 27). This effect is even more amplified when we look at the 5-year performance of No Exits compared to the benchmark in the BHAR approach, where abnormal returns are positive. While in the BHAR approach, Complete Exits are found to have considerably negative ARs, Partial Exits exhibit only slight negative abnormal performance that, in addition, is statistically indistinguishable from zero. In the CTP setting, we find evidence that the worst-performing cohort is by far the Partial Exits, which is also statistically significant. Without looking at the financial data of the different cohorts, the findings are in line with the information signaling hypothesis where No Exit would qualify for a credible signal that these companies are indeed superior.

The sponsor withholds all their shareholdings after the IPO, which signals that they do not want to step away from the company as they appear to forecast the company to yield even more return in the following years. Notably, in the event of the IPO, where asymmetric information is a substantial issue as established earlier in the paper, the No Exit signal can be a strong signal that the company is indeed forecasted to perform at a superior level in the future. The negative performance of CEx could be explained by large block trades. As the sponsor exits the target firm after the IPO or lock-up period, it can generate a supply of outstanding stocks, which is larger than the short-term demand can absorb. This creates a downward price pressure, and the only way to facilitate the excess supply is to lower the stock price. It is crucial to mention; however, that large block trades can provoke permanent price effect as the supply and demand equilibrium is moved to a new level but can also infer solely short term effects (cf. chapter 3.3). Therefore, the relative strength of this effect for our long-term horizon is in question. The difference between the second and third places for the two different approaches is difficult to explain thoroughly. Notably, the inferior abnormal stock performance of the Partial Exits after the IPO in the CTP approach is compelling as this finding does not persist in the BHAR method, while the Complete Exit's abnormal return is somewhat in line for the CTP and BHAR approach. We suggest that a substantial driver is the choice of benchmark for the BHAR approach. As a reminder, we also used industry as a third sort component. This means that we also control for potential industry-specific effects in the BHAR approach. As the FF3 model does not deliver an industry variable, the difference may mostly stem from this small deviation in the two models. Another explanation could be the relatively small sample size for Complete Exits (cf. table 27).

Another very interesting part of the abnormal returns is the comparison between the 3-year and 5-year ABHARs. While we see that the No Exits show positive abnormal returns in the longer run, Complete Exits seem to perform even worse in this regard (cf. table 27). Partial Exits mostly stay at a similar level. This provides further evidence that the No Exit companies did not only contain the signal of better long-term performance. Instead, these IPOs seem to convince the investors more and more throughout the time that they are indeed of superior quality compared to other IPOs in the same period. The opposite finding can be deduced for the Complete Exits, where the bad share price performance is even further amplified within the extra two years.

Table 28: Comparison of financial data – Exit strategies

The table presents the different probability, leverage levels, and market cap for each of the cohorts. The profitability is measured by the average EBITDA margin per group, while leverage stands for the median Debt/Equity ratio of the different sample groups.

	Profitability	Leverage	Market cap
NEx	19.7%	0.4	857
PEx	17.9%	0.5	1,502
CEx	15.3%	0.3	1,276
Benchmark	20.7%	0.26	1,708

Possible explanatory paths for the consistent outperformance of No Exits can also be found when looking at the profitability and leverage of the different exit strategies (cf. table 28). While the median leverage is at a similar level for all three cohorts, we find that the operating profitability decreases with the extent of the divestment. Therefore, we find that the sponsor's decision to get rid in full of a company could be driven by the low profitability of the company. This finding stands in contrast with the previously described window dressing, where companies are assumed to drive up profitability figures to increase the return for the sponsor at the event of the divestment. This is because window dressing induced by the sponsor would only make sense in case the sponsor at least partially exits their investment and, therefore, realizes a gain on their investment. Otherwise, the sponsor would still suffer from the subsequent worse performance post-IPO as it still incurs the share's ups and downs and, thus, may have to realize losses in the future.

Another stimulating feature is the average market capitalization of the three exit strategies, which substantially stands in contrast with our previous findings (cf. table 28). While we find No Exits to be the best-performing group in terms of abnormal returns in both estimation procedures, this cohort exhibits the lowest of all average market capitalization. Previously, we found that market capitalization potentially signifies a steadier cash flow in the comparison of the different sponsor types. This finding cannot be sustained in this section. Therefore, we suggest that the No Exit must contain more information than the pieces that we can observe in terms of market cap, leverage, and operating profitability. We find that this adds further evidence to the argumentation that the ownership retention is indeed a credible signal to the market.

Moreover, we find that the above findings are not substantially influenced by the mix of sponsor types (cf. figure 12). Instead, we suggest that the exit strategies can be interpreted free of the sponsor type. Therefore, we suggest further that the No Exit strategy is superior in terms of abnormal returns no matter what sponsor backed the company prior to the IPO.

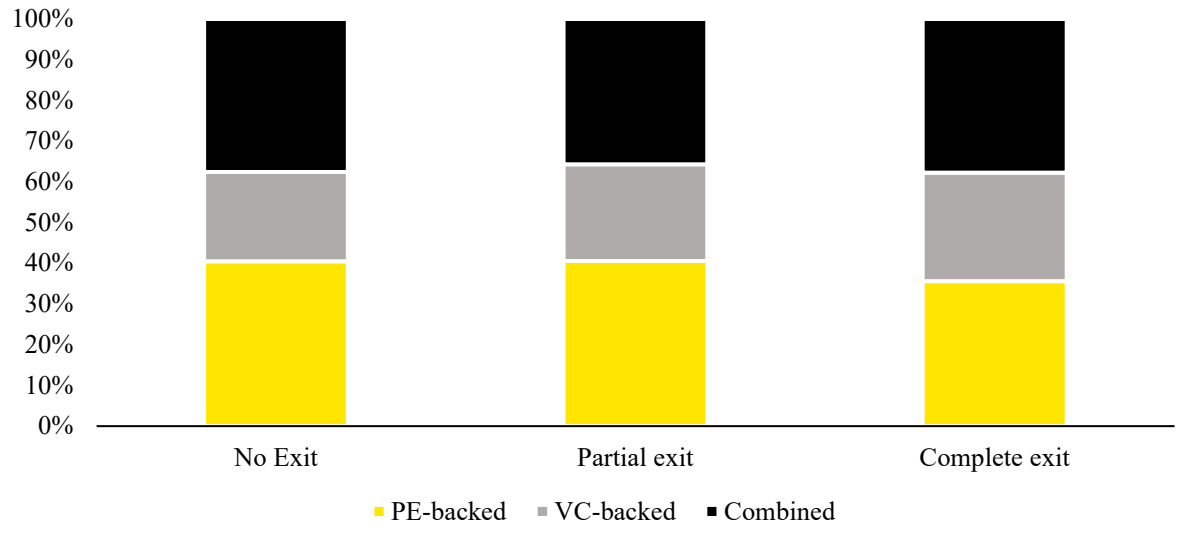

***Figure 12**: Percentage of sponsor type per exit strategy*

Another very interesting feature of our analysis on the exit strategy is that the exits do not consistently appear but vary over time (cf. figure 13). Particularly, the Complete Exits, which appear to be the preferred exit method in 2000, almost vanish after the Dotcom Bubble in the same year. After the overall drought in IPO activity, the preferred exit strategies are No Exit and Partial Exit. As the overall IPO performance from the year 2000 is found to be very poor in the upcoming section, the Complete Exits' negative abnormal return could also be reinforced

by the effects of the IPO year 2000. On the other hand, it could also be part of the reason for the poor stock performance of the IPO class of 2000. We further comment on this in the following section about the IPO performance over time.

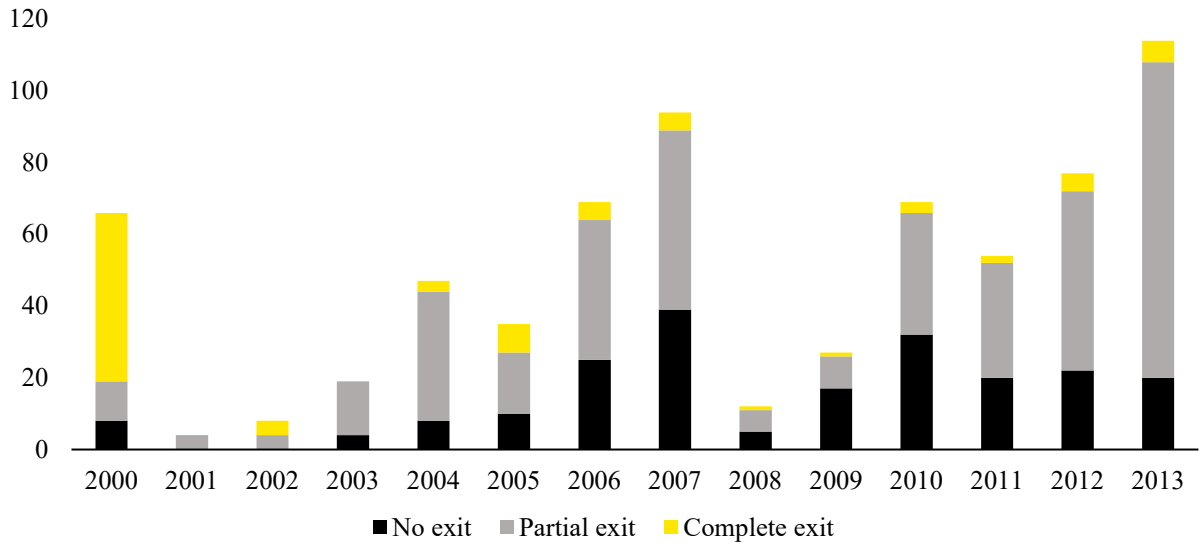

***Figure 13**: Number of sponsor-backed IPOs per exit strategies over time*

Sponsor-backed vs. non-sponsor backed IPOs over time

"Do sponsor-backed firms outperform non-sponsored companies consistently throughout the sample years (in a yearly comparison of the two cohorts)?"

In this section, we go back to the split between SB and NSB IPOs without further analysis of differences between the different sponsor types. This stems from the fact that we do not achieve a large enough sample for the different sponsor cohorts. While we report the 5-year ABHARs for all years in the results section, we do not include them in this part as the more extended period substantially changes many insights from our 3-year ABHARs. This would potentially harm the content and insights that we want to give for the 3-year. Additionally, this section generally serves as a combination of the findings of some previous sections and put them into the context of different years.

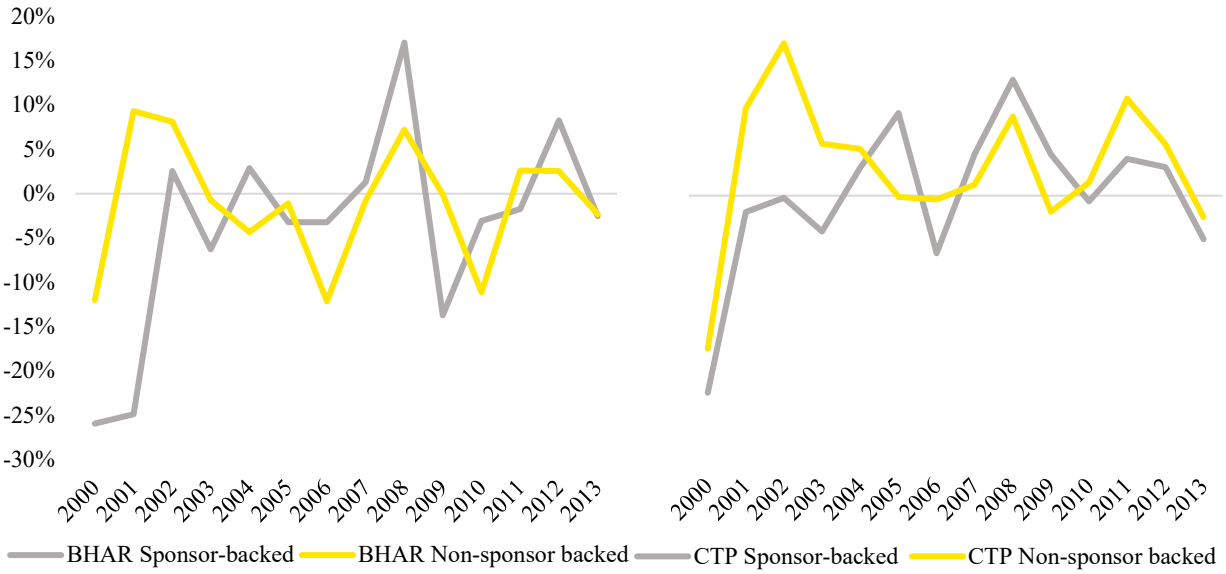

***Figure 14**: BHAR approach: BHARs over time for SB and NSB*

***Figure 15**: CTP approach: ARs over time for SB and NSB*

We primarily look at the return magnitude. In contrast to the previous section, we already hint at the corresponding significance in order not to repeat too much at the end. For a better overview, the abnormal returns of the BHAR and CTP method are illustrated in figures 14 and 15, respectively. The years 2001, 2002, and 2009 need to be treated with extreme caution due to the lack of a sufficient sample size for either the sponsor-backed cohort or the non-sponsor backed group.

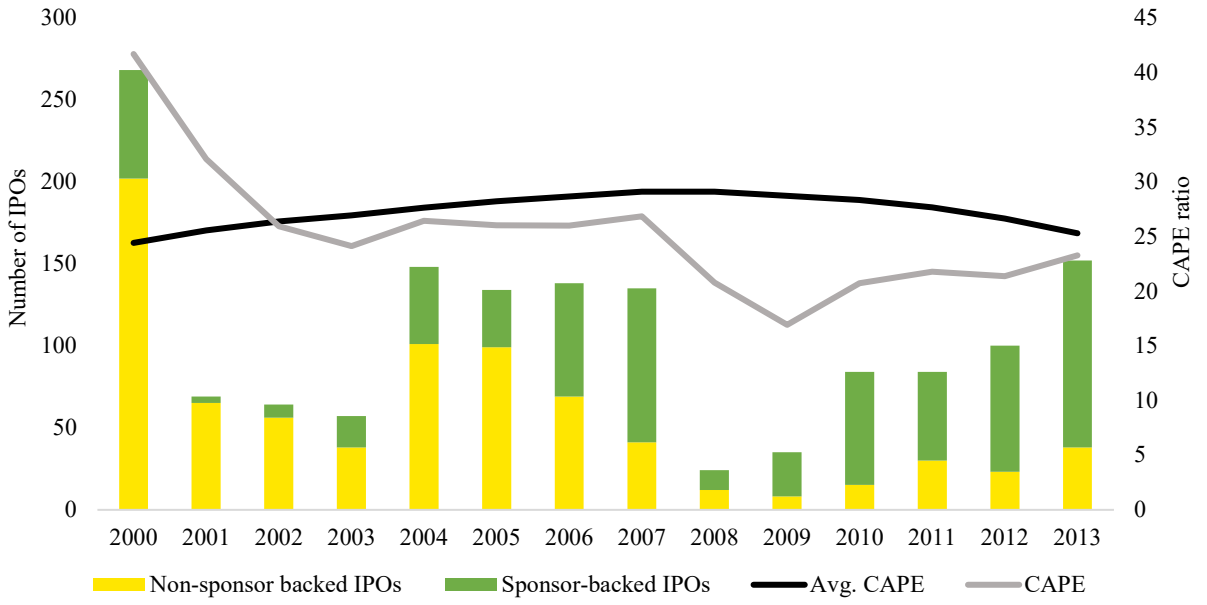

***Figure 16**: IPO activity over time in regards to market valuation level*
Note: The average CAPE ratio is the trailing average of the previous 14 years (same window as our sampling period), while the CAPE ratio represents the rate of the specific years.

A very consistent finding in our results is the hugely negative abnormal returns in 2000 for both cohorts, which we also find to be statistically different from zero in both estimation procedures. We recall that the year 2000 represents the abnormal returns for the three years following the year 2000 for companies that went public in that year. We find that the negative abnormal returns for both cohorts correlate heavily with the decrease in equities valuation level between 2000 and 2003. The market valuation level, represented by the cyclically adjusted price-earnings [CAPE][8] ratio, is illustrated in figure 16. In this year, we can deduce that NSB appears to outperform the IPOs of SB companies while both cohorts perform extremely poor according to the magnitude of their abnormal returns. The market in the early 2000s is substantially hit by the Dotcom Bubble, where market valuations, notably in the Information Technology sector, were inflated by high future expectations. We can see that the CAPE ratio was substantially higher than the corresponding trailing average. High market valuations create windows of opportunities in which management tries to time the market in terms of a public offering. We find evidence that the high equity valuation level stands in direct relation with the increased IPO activity as we see a substantial decrease in the activity once the valuation level starts to decline. The relative outperformance of NSB companies compared to SB is possibly due to the higher leverage that we found earlier for SB companies. As mentioned, higher leverage bears an increased default risk in bad times, such as in the Dotcom Bubble. Since the equity buffer for sponsored companies is, on average, smaller compared to non-sponsor backed companies, investors may have sold a more substantial chunk of SB companies as they turn their attention towards less risky assets. Another factor could be the composition of sponsor-backed companies. As established earlier, we find evidence for higher abnormal returns for PE-backed companies compared to other cohorts. In the year 2000, however, we encounter only little activity from the Private Equity firms (cf. figure 17).

[8] The CAPE ratio is a measure of the current equity market valuation levels introduced by Robert Shiller. We retrieved the corresponding data for the S&P Composite Price Index from the official website of Robert Shiller (http://www.econ.yale.edu/~shiller/data.htm). A high valuation level is achieved in case the CAPE ratio surpasses the trailing average.

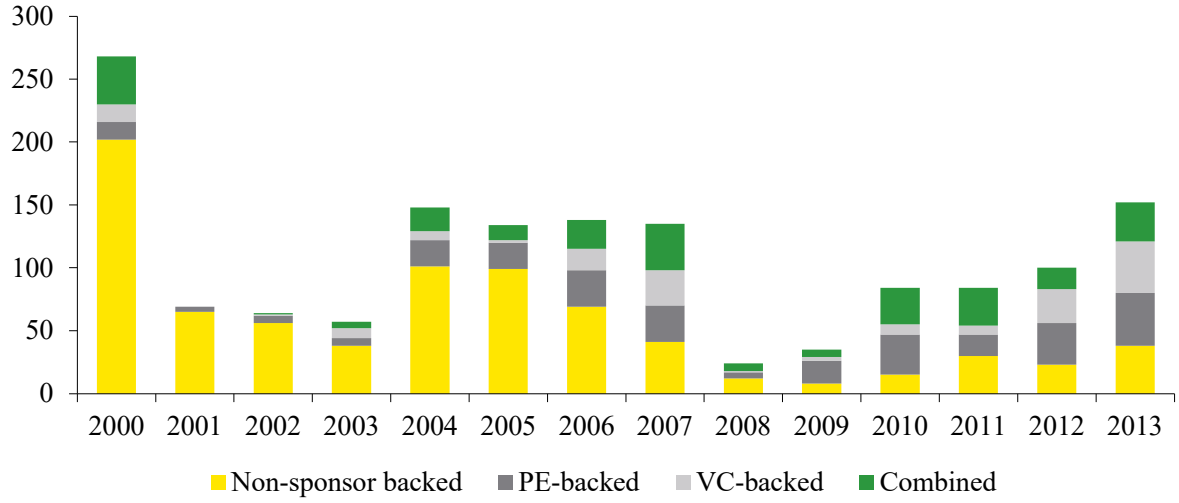

***Figure 17**: IPO activity per sponsor type*

Another explanation that we want to bring forward is the use of complete exits in the year 2000. As depicted in figure 13, we find that most of the SB IPOs in the year 2000 come with the complete divestment of shares in the newly floating companies. This exit strategy, as suggested in the previous part, exhibits negative abnormal returns that are statistically distinguishable from zero in both the CTP and BHAR approach. Notably, in the BHAR method, we suggest that the Complete Exits represent the worst-performing sponsor exit strategy. Additionally, we found earlier that the cohort of Complete Exits exhibits the lowest profitability amongst the exit strategies, which may further amplify the negative stock price performance. Therefore, the signal of a complete divestment in conjunction with the high valuation level could leave investors thinking that the sponsors, indeed, timed the market to get rid of companies that might not inherit the best prospects in the future. In connection with the information cost hypothesis, which states that information asymmetry plays a significant role in IPOs, this signal might be enough information for investors to disregard the stocks with a complete exit in the course of the Dotcom Bubble. This finding would potentially explain the abysmal stock price performance that found to be statistically distinguishable from zero.

As mentioned, the high IPO activity in 2000 is followed by a substantial plunge in the subsequent years. Especially, SB IPOs almost stopped. In terms of abnormal returns, our results from CTP and BHAR show correlated results. Non-sponsor backed IPOs continue to outperform the SB counterparts in terms of abnormal returns. In the CTP approach, we find evidence that the positive abnormal returns for the non-sponsor backed cohort after the burst of the Dotcom Bubble is statistically different from zero. This finding further establishes the evidence that the NSB

companies gain more attention from the investors after the crisis. Potentially, this is again driven by the higher leverage in the sponsor-backed companies, as mentioned earlier. While investors seem to be generally interested in IPOs post-2000, the fact that there are almost no sponsor-supported companies, leaves them without other options than investing in the non-sponsor backed initial public offerings. Those sponsor-backed IPOs that were offered in these years show a substantially negative performance that we even find statistically significant on a 10%-confidence interval in the BHAR approach. The low SB level of IPO activity itself could be a signal to the market that both PEs and VCs doubt that the companies are ready to go public. Another factor is, of course, that sponsors want to again wait for a better market opportunity to exit their investments. While it seems that the sponsors, therefore, look for different divestment opportunities, we can see that the subsequent increase and stability of market valuations appear to catch their attention for a new wave of equity offerings, as we explain in the following paragraph.

From the year 2004, the SB IPO activity comes closer and even surpasses its initial level in 2000. In contrast, we find that non-sponsor backed public offerings become more and more scarce. In terms of abnormal returns, we find that the SB companies outperform the NSB counterparts in most years before the Great Recession. It is apparent that the stable level of the CAPE and, therefore, the increased market valuations, provoke an IPO wave of SB companies. Since this valuation level is not substantially higher than the trailing average, we do not suggest that this is because of a distinctive window of opportunity. We suggest that the non-existence of another window of opportunity post-2000 also delivers an explanation for why the level of IPO activity never reached the level of 2000 again throughout our sample period. Yet, the equity market's stability in these years attracts sponsors to get rid of several portfolio companies.

In contrast to the years 2001-2003, where we propose low activity as a negative reinforcing signal for the significantly negative return performance, the increase in IPO activity itself is now also suggested to be a positive signal for investors because sponsors see their portfolio investments as ready to go public. This signal is especially valuable due to the previously low activity of sponsor-backed companies. Because sponsors are well-informed market participants, the low previous activity could signal that the market conditions are not favorable. An additional signal is based on the findings in the previous section about exit strategies. The increase in IPO activity comes along with a modified approach of sponsors in terms of exit, which is

illustrated earlier in figure 13. While the year 2000, as mentioned, was marked by a lot of complete exits that might have signaled lower quality and a bad outlook for future profitability, the second IPO wave is accompanied by more partial and no exits. This might be driven by the observable bad performance of complete exit companies during the crisis and the bad reputation this finding inherits. The bad stock market performance might have also harmed the reputation of some sponsors, which is why they changed their approach to stabilize the companies that go public. As previously mentioned, we find substantial evidence that especially the complete retention of ownership significantly lowers the underperformance in the long-run. In the BHAR setting, we also found that the complete exit is by far the least attractive option as the companies exhibit a significantly lower performance compared to the other two exit strategies. Therefore, the change in their exit approach could also deliver a strong signal that companies are of higher quality. Thus, we suggest that the positive abnormal returns in this period before the financial crisis are partially driven by the sponsors' exit paradigm shift towards a smaller degree of divestment. Another driver for the positive abnormal returns could be the shift in the sponsor type mix (cf. figure 17). As established earlier, PE-backed companies relatively outperform other sponsor groups. While in 2000, PE-backed companies were comparably inactive, the second IPO wave is carried primarily from Combined and PE-backed companies. The strong share price performance of PE-backed companies that we mentioned earlier could, therefore, potentially carry up those years.

In terms of statistical significance, we find that most abnormal returns in this period are statistically insignificant, with one exception in 2004 for the CTP approach, where non-sponsor endorsed companies exhibit positive abnormal returns that are distinguishable from zero. We suggest that this also shows that investors were maybe still influenced by the previously bad performance of sponsor-backed IPOs. Therefore, more investors turned their attention to non-sponsored companies. However, generally, we find that SB companies outperform in this period. At the same time, abnormal returns are statistically insignificant, indicating that the signals that we discussed are not strong enough to make the performance significantly higher compared to the benchmark or in the CTP setting.

In the year 2008, IPO activity overall plummeted to a level comparable to the levels after the Dotcom Bubble. The plunge may be driven or reinforced by a decrease in the overall market valuations as the Great Recession begins to unfold. The abnormal returns in this period are all statistically insignificant, mostly driven by low power due to small sample sizes. However, we

manifest that SB companies in the years 2008-2010 relatively outperform the NSB counterparts except for 2009 in the BHAR approach, where SB companies appear to underperform the benchmark and also the non-sponsor supported companies substantially. The period exhibits not only low activity but a stable composition of the exit strategy towards a smaller degree of exit, which we suggest to be the reason for the relative outperformance of SB companies.

The last three years of our sample period exhibit that the non-sponsor backed cohort outperforms the sponsor-backed firms. However, none of the abnormal returns are found to be statistically different from zero. As depicted in figure 17, the period from 2011-2013 is accompanied by an increase in overall IPO activity, especially sponsor-backed public offerings. In terms of the exit strategy, we see a significant increase in partial exits of sponsors and a slight increase in the previously proscribed complete exits. As the SB offerings underperform the other cohort, we find evidence that the signal of the shift in exit strategies does not appear to be received very well by investors in comparison to the other IPOs. Nevertheless, in the BHAR and CTP setting, we find positive abnormal returns for SB IPOs for the IPO years 2012 and 2011 and 2012, respectively.

14. Comparison to Literature

This section is designated to compare our findings from chapter 13 to the financial literature. Here, we focus on the papers that we introduced in section 4. This section mostly goes through each of the most critical papers separately and states the differences and similarities in our findings and the findings in the recent and most relevant financial literature.

Table 29: Comparison of annualized abnormal returns

The table shows the comparison of annualized abnormal returns between the two approaches of BHAR and CTP. For BHARs, we show the 3-year and 5-year time window. The same asterisks model is used for the designation of statistical significance for the respective methods.

	3-year $ABHAR_{365}$	5-year $ABHAR_{365}$	CTP AR_{365}
Overall	-2.65%**	-2.74%**	-2.55%***
NSB	-3.01%	-3.67%*	-2.74%
SB	-2.23%**	-1.72%**	0.49%
PE	0.62%	1.20%	2.57%**
VC	-2.27%	-3.02%	-5.52%
CO	-5.52%**	-4.42%*	-3.89%
NEx	-1.47%	1.61%	-6.55%**

PEx	-0.59%	-0.28%	-49.91%***
CEx	-12.24%***	-25.17%***	16.08%**

The comparison of results in table 29 presents consistently in the overall results of all three annualized abnormal returns that our sample indeed underperforms in the long-run. These results are significant on a 90%-confidence interval or higher. The phenomenon of long-run underperformance was first introduced by Ritter (1991) and Ritter and Loughran (1995). Even with different time windows and approaches, we can confirm that issuing firms underperform in the long-run. In our case, we also implemented an extended control firm model, by not only using ME but also BE/ME matching, while Ritter and Loughran (1995) only used control firms matched based on market capitalization. Ritter and Loughran (1995) suggest that reasons for a long-run underperformance comprise (i) periodic hot-issue waves, (ii) windows of opportunity, and (iii) initial underpricing with a positive overreaction, which leads to a long-run correction of the stock prices. Our findings find evidence that periodic hot-issue waves and windows of opportunities may induce long-run underperformance, while we do not further comment on the initial underpricing effect on the long-run performance of IPO firms. As mentioned throughout our paper, we observe three IPO waves in 2000, from 2004 to 2007 and from 2012 to 2013 in our sample. However, as previously shown, the average abnormal valuation of IPOs is not necessarily enhanced by high IPO activity. In the year 2000, we find, indeed, evidence that the big wave of IPO activity comes with a stronger long-run underperformance of IPO companies. However, this finding is slightly reversed when looking at the second and third IPO wave, we observe in our thesis. In contrast, especially the second period of increased activity reveals that the corresponding IPOs perform at a level around zero in the long-run and sometimes even positively. The third wave is again connected to mixed evidence on the relation between IPO waves and negative abnormal returns, where we find high abnormal stock price performance for the year 2012. Hence, the implication that the effects of long-run IPO underperformance may occur stronger in years of increased IPO activity (Lerner, 1994; Ritter and Loughran, 1995) cannot be consistently supported by our findings. On a side note, both the second and third wave does not reveal any statistical significance for abnormal returns. Furthermore, in the literature review, windows of opportunity are a thoroughly discussed topic (Lerner, 1994; Ritter & Loughran, 1995; Brav & Gompers, 1997). As explained in chapter 4, these so-called windows of opportunities describe that firms can time their IPO during generally high valuation

periods. We observe that one year in our sample meets the definition of a window of opportunity where the CAPE ratio surpasses the trailing average (cf. section 13). The corresponding period is the year 2000, where we subsequently observe that the extremely negative abnormal returns are statistically different from zero. Thus, our findings are in line with the research of Ritter and Loughran (1995).

In the following, we compare abnormal returns between sponsor type subgroups. In our results, only a few subgroups show statistical significance. Our results show that the PE-backed IPOs exhibit positive abnormal returns, which are statistically distinguishable from zero. All other abnormal returns for the specific sponsor groups do not display statistically significant results, except for buy-and-hold abnormal returns for Combined. Generally, all the approaches indicate low positive annualized abnormal returns for PE-backed IPOs compared to negative VC-backed and Combined ARs. However, we find similarities to the findings of Brav & Gompers (1997), who state that VC-backed IPOs outperform the cohort of non-sponsor backed IPOs. However, both groups underperform relatively to their benchmark and, therefore, manifest negative ARs. While the finding for BHARs is consistent with the above, this finding does not hold for the CTP approach. We can see that the performance of VC-backed IPO firms is substantially weaker than NSB. Consequently, these VC-backed firms appear to account for a substantial part of the negative abnormal stock price performance of SB firms.

The comparison of the abnormal returns between VC and NSB does not show similar differences in magnitude, as stated by Brav & Gompers (1997). Their 5-year abnormal returns are -9.1% (-31.2%) for VC-backed firms (NSB). Our 5-year BHAR and CTP results do not show differences in this scale. Nonetheless, we find that VC-backed IPOs underperform the benchmark with all three approaches, yet statistically insignificant. Brav and Gompers (1997) finds that VC-backed IPOs usually stem from industries with relatively low returns. They assume that lower returns can be translated into industries with lower risk and state that VC-backed firms operate in industries with less risk than their NSB counterparts. They measure the risk with the beta or the standard deviation of certain subgroups. In contrast, we cannot find clear evidence in support of this statement. However, we have indicators that substantially contradict their evidence. First of all, VC-backed firms have very low leverage, which is an indicator of low risk-taking and a lower probability of default. On the other hand, we find that the corresponding return standard deviation exhibits higher values than the benchmark. In our thesis, we find that VC-backed IPOs substantially consist of two industries – Information Technology and

Health Care. The overall EBITDA margins of these industries are some of the lowest compared to other industries, and the VC-backed EBIDTA margins are crucially lower than the average values. Also, the Debt/Equity ratios of these industries are by far the lowest (cf. section 8.1.2). To sum up, we do not find substantial evidence that VC-backed firms operate in low-risk-sectors. However, we suggest that the low leverage in the VCs' main industries can be seen as an indication of the above-mentioned. Furthermore, they also tend to pick companies that are sizably lower in profitability on average. One should also keep in mind that Venture Capital firms inherit a different investment style compared to Private Equity firms. VCs invest in earlier stages of a business life-cycle and do not see an IPO as the ultimate goal but rather the sale to a different VC or another investment firm, such as PEs.

A comparison of our findings with Levis (2011) gives multiple similarities and differences to point out. Our observations differ from Levis (2011) in terms of geographic location and time window. Therefore, we need to treat a comparison of findings with caution. The PE-backed firms in our and the case of Levis (2011) tend to have higher market capitalization than VC-backed and non-sponsor backed IPOs. Furthermore, in our case, PE-backed firms tend to have substantially higher leverage than any other sponsor- or non-sponsor backed firm and outperform all subgroups. As shown in the interpretation, we find evidence that this high leverage might represent a driver of higher abnormal returns as we establish a linear relationship in the CTP setting. However, as mentioned earlier, there are also many other factors that need to be taken into account. The finding of a potential linear relationship is in line with the findings of Bhandari (1998) and Hou and Robinson (2006) and contradicts the evidence that is provided by Minardi et al. (2013), who finds a negative relationship between abnormal returns and leverage, which we address in a later passage in more detail. In this regard, Gomes & Schmid (2010) argue that the leverage as a sole predictor does not hold. They suggest that the investments that were processed with the debt influence the predictiveness of abnormal returns based on that measure. We find that the influence of investments would be an compelling topic for further research on the thesis.

The PE-backed firms in our sample also operate in other sectors than in the UK sample of Levis (2011). Specifically, the increased focus in IT stocks in our sample is nowhere near the sector composition in Levis' paper. The positive results of PE-backed firms can be confirmed and have even significant values in the CTP approach. Furthermore, the negative but non-significant

VC-backed results appear to be comparable to the observations made by Levis (2011). Remarkable are similar value-weighted and equally-weighted abnormal returns, which we cannot confirm. The evidence suggests that Levis (2011) most likely did not have the same large and well-performing companies as in our sample. Levis (2011) states that large market capitalization is a driver for lower IPO underperformance. Our results hit in the same notch as PE-backed companies that inherit large market capitalizations outperform all other cohorts.

Levis (2011) also observes patterns in terms of IPO activity and describes the most considerable underperformance happening during active IPO years, which, as mentioned earlier, we find additional evidence for in the year 2000. The high amount of IPOs in that year correlates heavily with the long-run underperformance for the corresponding IPO. The high IPO activity level for 2000 was never reached again in subsequent years. This finding indicates, in accordance, with Levis, that extreme IPO activity could lead to an amplified IPO long-run underperformance. Unfortunately, we lack a sufficient sample size to draw comparisons for this based on the different sponsor types PE, VC, or CO. Therefore, we cannot compare the results on a yearly cohort basis. With his robustness tests where he introduces a restriction on smaller IPOs, Levis (2011) suggests that larger IPOs (above £40 million) outperform the smaller IPOs in his sample throughout all cohorts. This finding is in line with our interpretation as we find an indication of a positive linear relationship between market capitalization and abnormal returns.

A comparison to the work of Minardi et al. (2013) should be taken with reservation as their sample size is relatively small for such a topic. Also, the different geographic location with an emerging market such as Brazil has to be taken into account when comparing the results. Besides, the researchers measure the abnormal returns using value-weighted CARs (Cumulative Abnormal Returns), which we categorically do not support for reasons mentioned in the methodology section. Additionally, the use of value-weighted returns they put more emphasis on larger companies with a value-weighted approach, which we do not find appropriate for our data set as it would substantially distort the picture of our analysis. Furthermore, their use of an event window spanning over only one year makes it difficult to compare the respective results. Interestingly, as mentioned above Minardi et al. (2013) suggest that leverage is negatively correlated with the performance of abnormal returns. However, PE-backed firms in their sample are substantially less levered than non-sponsor backed IPOs and also have a lower BE/ME value than non-sponsor backed firms. Our IPO sample in regards to PE-backed firms directly contradicts the assumption in terms of market capitalization, as shown in earlier chapters. Despite the

great differences in PE characteristics and testing procedure, Minardi et al. (2013) also find that PE-backed firms outperform non-backed firms consistently. They mention that in Brazil, PE firms are seen as "quality stamps" for firms that they endorse. Some parallels can be drawn to our findings. In the interpretation, we raise attention to the fact that the profitability margins of sponsor-backed cohorts and NSB are generally lower than the benchmark. Therefore, the positive abnormal returns in our sample could be connected to evidence that investors pay attention and rely on PE-backed IPOs for reasons that are not connected to the EBITDA margins. We argue that there might be an information signaling effect that is further enhanced by the information asymmetry/information cost hypothesis. Other reasons could be that PE-backed firms have a long-lasting positive influence on the managerial and organizational structure that cannot be measured directly through financial data, which we also mention in our paper. In conclusion, we see indications that PE firms may act as quality stamps for investors also in a more developed market such as the U.S., which would be in line with the findings of Minardi et al. (2013).

An insight is that the combination of both sponsor-types has not been shown in any other research paper yet, as it is unique to our thesis. Therefore, it lacks valuable comparison opportunities. When comparing the Combined companies to SB IPOs in general, our outcomes differ significantly. The literature displays that SB firms, in general, usually outperforming non-sponsor backed groups. The large significant negative abnormal returns of CO in comparison to NSB show a different pattern. (Brav and Gompers, 1997; Levis, 2011; Minardi et al., 2013). Based on market and financial characteristics, it is furthermore difficult to categorize Combined IPOs towards a specific group. Therefore, we do not dig deeper into this specific sponsor group.

Our results have, as shown, similar findings as the financial literature would suggest. However, we have identified different drivers that could influence the performance of the different SB subgroups and the NSB firms, which the current literature does not take into account. One of which is our work on the different exit strategies of SB firms. Only one paper goes into a similar field, which is from Downes and Heinkel (1982). They analyzed entrepreneurial ownership retention in the form of an information signaling factor. However, this retention is connected to the founders of companies and, therefore, less relevant for comparison. In our opinion, as mentioned above, exit strategies are a profound factor for PE firms and VCs in their business and should be taken into consideration for IPO performance analyzes.

15. Conclusion

As a result of our analysis of sponsor-backed and non-sponsor backed IPOs for the years 2000 until 2013 in the United States of America, we find various findings with differing significance and magnitude. The overall data finds significant evidence and support for the underperformance of IPOs in the long-run, which substantially contradicts the EMH. The more detailed view on the sponsor groups leaves us with a mixed view on how firms with different shareholders before the IPO are affected. In terms of magnitude, we establish a link between sponsor-backing and slightly better performance compared to firms without a financial sponsor. This link, however, is weakened by the significance where we found negative ARs for SB firms significantly different from zero, while no statistically significant negative returns were observed for the companies that went public without a sponsor for CTP and the 3-year BHARs. A notable finding is that the SB IPOs in the year 2000 are consistently found to underperform, according to BHAR and CTP. We find evidence that this year is accompanied by high market valuations that created an apparent window of opportunity that incentivized management and sponsors to initiate a public offering. Subsequently, the decrease in overall market valuations (measured by CAPE) did not only drag down the IPO performance but also the IPO activity for sponsor-backed firms in the early 2000s. While we see this effect in 2000 for non-sponsor endorsed companies, too, the subsequent IPO years turned out to exhibit significant positive abnormal returns despite the lower market valuations. Particularly, the CTP approach provides evidence for this view. For single industries, we find contradicting evidence with our two methods. According to the CTP approach, sponsor-backed IPOs perform particularly well in the Consumer Goods industry with a statistically significant positive abnormal return, while the BHAR approach indicates that this is the poorest performing industry. A similarly mixed picture is shown for the non-sponsor backed industries. As results contradict each other to a considerable extent, we did not find evidence for specific patterns that industries influenced.

For the different sponsor types, we find evidence for the outperformance of PE-backed firms over all other sponsors. This sometimes significant positive abnormal return is accompanied by a company profile with greater market capitalization, high profitability, and high leverage, which in combination appear to arouse the investors' interest. In contrast, both Combined and VC-backed companies are performing poorly in terms of magnitude. We also find the negative abnormal return for Combined-backed companies to be significant, which further established our view on the long-run underperformance of this sponsor type.

For the three exit types, we found evidence for long-run underperformance for all three exit strategies. While the CTP approach indicates that Partial Exits sent out the strong negative signal to investors as it performs very poorly, the BHAR approach shows that the Complete Exit of a sponsor resulted in the weakest performance. Both findings were suggested to be statistically different from zero. A consistent finding is the outperformance of No Exits in our sample. The relatively strong performance cannot be connected to factors such as leverage, profitability, and market cap. Therefore, we find strong evidence that investors use the decision not to divest as a signal for superior performance in the future.

We suggest the existence of differences between sponsor- and non-sponsor backed public offerings in terms of abnormal returns. The deviation appears to be particularly pronounced for the Private Equity-backed companies, while no evidence is found for specific industries that drive this finding overall. In terms of the exit strategy, we find that the sponsors' partial or complete divestment in the public offering is perceived as a negative signal to the market, which results in an even more unfavorable long-run performance of the publicly offered company.

When looking back at the motivation of our paper, we suggest that there is a possibility to profit from an investment strategy that is based on buying the portfolio of PE IPOs and selling the portfolio of non-sponsor backed IPOs. In contrast, the sponsor-backed portfolio would still yield a negative abnormal return based on our analysis. The investment strategy is, however, connected to risk as we find evidence that the sponsor-backed IPOs perform worse than the non-sponsor backed counterparts in periods with high valuation levels and subsequent sell-offs.

16. Further Research

To conclude our master thesis, we suggest the following extensions to our research or different aspects that we would find interesting to dig deeper in a study following our thesis.

Firstly, we would find it interesting to expand the research to other developed markets. For instance, an extension towards the European market where research on the performance of sponsor-backed IPOs is scarce would shed more light on the performance with a different geographic focus. Besides the extension to another geographic area, we also suggest the use of a more differentiated sponsor field. For instance, we propose the estimation of abnormal returns for IPOs that were sponsored by hedge, government, or pension funds.

Secondly, we propose that our research on the exit strategies is expanded to differentiate between a controlling and non-controlling ownership prior to the public offering. Controlling ownership refers to different situations, such as majority-shareholder ownership, controlling power over the management, or the majority ownership of the board of directors. This adjustment to the research would substantially improve the view on how the influence of the sponsor is perceived in the public market. However, we found that the information for this type of data is limited or hard to obtain since Private Equity and Venture Capitalists rarely share precise information about their investment holdings.

Thirdly, we suggest further research on the relationship between operating profitability, leverage, and abnormal returns. A possible solution would be to implement a cross-sectional regression model with additional variables. In this setting, we also suggest the extension to variables that measure useful factors for our proposed information theories. For instance, the introduction of a media coverage variable for the measurement of the attention hypothesis could be an exciting way of conducting more in-depth research on the behavior of long-run returns following the public offering.

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Appendix A – Event list

Appendix A - table 1: Complete list of sample with general event information

Event ID	Offer date	First trading date	Company Name	Industry	Sponsor type	Exit strategy
Event1	17.12.2013	18.12.2013	AMC Entertainment Holdings, Inc.	CS	NSB	-
Event2	12.12.2013	13.12.2013	Nimble Storage, Inc.	IT	VC	PEx
Event3	12.12.2013	13.12.2013	Cheniere Energy Partners LP Holdings, LLC	E&U	NSB	-
Event4	12.12.2013	13.12.2013	Fidelity & Guaranty Life	F&RE	NSB	-
Event5	11.12.2013	12.12.2013	Kindred Biosciences, Inc.	HC	NSB	-
Event6	11.12.2013	12.12.2013	Hilton Worldwide Holdings Inc.	CG	PE	PEx
Event7	11.12.2013	12.12.2013	Aramark	CG	PE	PEx
Event8	10.12.2013	11.12.2013	Valero Energy Partners LP	E&U	NSB	-
Event9	02.12.2013	03.12.2013	Xencor, Inc.	HC	VC	PEx
Event10	26.11.2013	27.11.2013	Ideal Power Inc.	I&M	VC	CEx
Event11	21.11.2013	22.11.2013	Vince Holding Corp.	CG	PE	NEx
Event12	14.11.2013	15.11.2013	Zulily, LLC	CG	VC	PEx
Event13	14.11.2013	15.11.2013	Relypsa, Inc.	HC	CO	PEx
Event14	13.11.2013	14.11.2013	Tandem Diabetes Care, Inc.	HC	CO	NEx
Event15	13.11.2013	14.11.2013	Houghton Mifflin Harcourt Company	CG	PE	PEx
Event16	12.11.2013	13.11.2013	Chegg, Inc.	CG	VC	NEx
Event17	12.11.2013	13.11.2013	Extended Stay America, Inc.	CG	PE	PEx
Event18	11.11.2013	20.11.2013	Caesars Company	CG	NSB	-
Event19	07.11.2013	08.11.2013	NMI Holdings, Inc.	F&RE	CO	PEx
Event20	06.11.2013	07.11.2013	Norcraft Companies, Inc.	CG	PE	PEx
Event21	06.11.2013	07.11.2013	Mitel Mobility Inc.	IT	VC	PEx
Event22	06.11.2013	07.11.2013	Twitter, Inc.	CS	CO	PEx
Event23	06.11.2013	07.11.2013	LGI Homes, Inc.	CG	NSB	-
Event24	06.11.2013	08.11.2013	Midcoast Energy Partners, L.P.	E&U	NSB	-
Event25	05.11.2013	06.11.2013	Karyopharm Therapeutics Inc.	HC	VC	PEx
Event26	05.11.2013	06.11.2013	Arc Logistics Partners LP	E&U	PE	PEx
Event27	05.11.2013	06.11.2013	Barracuda Networks, Inc.	IT	CO	PEx
Event28	31.10.2013	04.11.2013	The Container Store Group, Inc.	CG	PE	NEx
Event29	30.10.2013	01.11.2013	Marcus & Millichap, Inc.	F&RE	NSB	-
Event30	30.10.2013	31.10.2013	Veracyte, Inc.	HC	VC	NEx
Event31	29.10.2013	30.10.2013	SCAI Holdings, LLC	HC	CO	PEx
Event32	25.10.2013	26.10.2013	Aerie Pharmaceuticals, Inc.	HC	CO	PEx
Event33	25.10.2013	26.10.2013	Sprague Resources LP	E&U	NSB	-
Event34	24.10.2013	25.10.2013	Endurance International Group Holdings, Inc.	IT	PE	NEx
Event35	24.10.2013	25.10.2013	CommScope Holding Com-pany, Inc.	IT	PE	PEx
Event36	16.10.2013	18.10.2013	ADMA Biologics, Inc.	HC	CO	PEx
Event37	15.10.2013	16.10.2013	Veeva Systems Inc.	HC	VC	PEx
Event38	15.10.2013	16.10.2013	OneMain Holdings, Inc.	F&RE	PE	CEx
Event39	15.10.2013	16.10.2013	Plains GP Holdings, L.P.	E&U	PE	PEx
Event40	10.10.2013	11.10.2013	MacroGenics, Inc.	HC	CO	PEx

Event41	09.10.2013	10.10.2013	Stonegate Mortgage Corporation	F&RE	PE	PEx
Event42	09.10.2013	10.10.2013	Western Refining Logistics, LP	E&U	NSB	-
Event43	09.10.2013	10.10.2013	Antero Resources Corporation	E&U	PE	PEx
Event44	08.10.2013	09.10.2013	LDR Holding Corporation	HC	CO	PEx
Event45	03.10.2013	04.10.2013	Potbelly Corporation	CG	VC	PEx
Event46	03.10.2013	04.10.2013	OCI Partners LP	I&M	NSB	-
Event47	01.10.2013	02.10.2013	RE/MAX Holdings, Inc.	F&RE	PE	PEx
Event48	01.10.2013	02.10.2013	Burlington Stores, Inc.	CG	PE	PEx
Event49	30.09.2013	01.10.2013	Fate Therapeutics, Inc.	HC	VC	NEx
Event50	26.09.2013	27.09.2013	RingCentral, Inc.	IT	VC	PEx
Event51	26.09.2013	27.09.2013	Premier, Inc.	HC	NSB	-
Event52	26.09.2013	27.09.2013	Pattern Energy Group Inc.	E&U	PE	PEx
Event53	26.09.2013	27.09.2013	Covisint Corporation	CS	NSB	-
Event54	25.09.2013	26.09.2013	Applied Optoelectronics, Inc.	IT	CO	PEx
Event55	24.09.2013	25.09.2013	IVERIC bio, Inc.	HC	VC	PEx
Event56	24.09.2013	25.09.2013	Foundation Medicine, Inc.	HC	VC	PEx
Event57	24.09.2013	25.09.2013	Evoke Pharma, Inc.	HC	VC	NEx
Event58	19.09.2013	20.09.2013	Rocket Fuel Inc.	IT	VC	PEx
Event59	19.09.2013	20.09.2013	FireEye, Inc.	IT	VC	PEx
Event60	19.09.2013	20.09.2013	Pioneer Power Solutions, Inc.	I&M	NSB	-
Event61	19.09.2013	20.09.2013	ClubCorp Holdings, Inc.	CG	PE	PEx
Event62	18.09.2013	19.09.2013	Acceleron Pharma Inc.	HC	CO	NEx
Event63	17.09.2013	18.09.2013	Benefitfocus, Inc.	IT	CO	NEx
Event64	17.09.2013	18.09.2013	Five Prime Therapeutics, Inc.	HC	CO	NEx
Event65	13.09.2013	14.09.2013	Ciner Resources LP	I&M	NSB	-
Event66	21.08.2013	22.08.2013	Regado Biosciences, Inc.	HC	CO	PEx
Event67	13.08.2013	14.08.2013	Envision Healthcare Holdings, Inc.	HC	PE	PEx
Event68	08.08.2013	09.08.2013	Cvent, Inc.	IT	VC	PEx
Event69	08.08.2013	09.08.2013	World Point Terminals, LP	E&U	NSB	-
Event70	08.08.2013	09.08.2013	Stock Building Supply Holdings, Inc.	I&M	PE	PEx
Event71	08.08.2013	09.08.2013	QEP Midstream Partners, LP	E&U	NSB	-
Event72	07.08.2013	08.08.2013	Precigen, Inc.	HC	VC	PEx
Event73	07.08.2013	08.08.2013	Fox Factory Holding Corp.	CG	PE	PEx
Event74	06.08.2013	07.08.2013	YuMe, Inc.	CS	VC	PEx
Event75	01.08.2013	02.08.2013	Control4 Corporation	IT	VC	PEx
Event76	01.08.2013	02.08.2013	Marrone Bio Innovations, Inc.	I&M	VC	PEx
Event77	01.08.2013	02.08.2013	Athlon Energy Inc.	E&U	PE	NEx
Event78	31.07.2013	02.08.2013	Sprouts Farmers Market, Inc.	CG	PE	PEx
Event79	25.07.2013	26.07.2013	Marlin Midstream Partners, LP	E&U	NSB	-
Event80	24.07.2013	25.07.2013	Onconova Therapeutics, Inc.	HC	VC	CEx
Event81	24.07.2013	25.07.2013	Conatus Pharmaceuticals Inc.	HC	CO	PEx
Event82	24.07.2013	25.07.2013	FUJIFILM Cellular Dynamics, Inc.	HC	CO	PEx
Event83	24.07.2013	26.07.2013	WCI Communities, Inc.	CG	NSB	-
Event84	23.07.2013	24.07.2013	Agios Pharmaceuticals, Inc.	HC	VC	PEx
Event85	23.07.2013	24.07.2013	Heat Biologics, Inc.	HC	VC	CEx
Event86	22.07.2013	23.07.2013	Phillips 66 Partners LP	E&U	NSB	-

Event87	18.07.2013	19.07.2013	RetailMeNot, Inc.	CS	CO	PEx
Event88	18.07.2013	19.07.2013	Diamond Resorts International, Inc.	CG	VC	PEx
Event89	17.07.2013	18.07.2013	UCP, Inc.	CG	NSB	-
Event90	17.07.2013	18.07.2013	OncoMed Pharmaceuticals, Inc.	HC	CO	NEx
Event91	16.07.2013	17.07.2013	Clearway Energy, Inc.	E&U	NSB	-
Event92	27.06.2013	28.06.2013	Noodles & Company	CG	PE	PEx
Event93	26.06.2013	27.06.2013	Telaria, Inc.	IT	CO	NEx
Event94	26.06.2013	28.06.2013	Silvercrest Asset Management Group Inc.	F&RE	NSB	-
Event95	26.06.2013	27.06.2013	HD Supply Holdings, Inc.	I&M	PE	PEx
Event96	26.06.2013	27.06.2013	CDW Corporation	IT	PE	PEx
Event97	26.06.2013	27.06.2013	Aratana Therapeutics, Inc.	HC	VC	PEx
Event98	25.06.2013	26.06.2013	NanoString Technologies, Inc.	HC	VC	NEx
Event99	20.06.2013	21.06.2013	Gogo Inc.	CS	PE	PEx
Event100	19.06.2013	20.06.2013	PTC Therapeutics, Inc.	HC	CO	PEx
Event101	18.06.2013	19.06.2013	bluebird bio, Inc.	HC	VC	PEx
Event102	12.06.2013	13.06.2013	Coty Inc.	CG	PE	PEx
Event103	11.06.2013	12.06.2013	Gigamon Inc.	IT	VC	PEx
Event104	06.06.2013	07.06.2013	Textura Corporation	IT	NSB	-
Event105	30.05.2013	31.05.2013	Epizyme, Inc.	HC	VC	PEx
Event106	22.05.2013	23.05.2013	ChannelAdvisor Corporation	IT	VC	PEx
Event107	22.05.2013	23.05.2013	Global Brass and Copper Holdings, Inc.	I&M	PE	CEx
Event108	22.05.2013	23.05.2013	Ply Gem Midco, Inc.	I&M	PE	NEx
Event109	21.05.2013	22.05.2013	Portola Pharmaceuticals, Inc.	HC	CO	PEx
Event110	16.05.2013	17.05.2013	Marketo, Inc.	IT	CO	PEx
Event111	16.05.2013	17.05.2013	Tableau Software, Inc.	IT	VC	PEx
Event112	15.05.2013	16.05.2013	William Lyon Homes	CG	NSB	-
Event113	15.05.2013	16.05.2013	Ambit Biosciences Corporation	HC	CO	NEx
Event114	13.05.2013	15.05.2013	Tallgrass Energy Partners, LP	E&U	CO	PEx
Event115	08.05.2013	09.05.2013	Cyan, Inc.	IT	VC	PEx
Event116	08.05.2013	10.05.2013	Receptos, Inc.	HC	VC	PEx
Event117	08.05.2013	10.05.2013	TriState Capital Holdings, Inc.	F&RE	CO	PEx
Event118	08.05.2013	09.05.2013	IQVIA Holdings Inc.	HC	PE	PEx
Event119	08.05.2013	10.05.2013	PennyMac Financial Services, Inc.	F&RE	PE	PEx
Event120	01.05.2013	02.05.2013	Voya Financial, Inc.	F&RE	NSB	-
Event121	18.04.2013	19.04.2013	Blackhawk Network Holdings, Inc.	IT	NSB	-
Event122	18.04.2013	19.04.2013	Diversified Restaurant Holdings, Inc.	CG	NSB	-
Event123	18.04.2013	19.04.2013	SeaWorld Entertainment, Inc.	CG	PE	PEx
Event124	17.04.2013	18.04.2013	Taminco Corporation	I&M	PE	PEx
Event125	11.04.2013	12.04.2013	Rally Software Development Corp.	IT	VC	PEx
Event126	11.04.2013	12.04.2013	Omthera Pharmaceuticals, Inc.	HC	VC	CEx

Event127	11.04.2013	12.04.2013	EVERTEC, Inc.	IT	NSB	-
Event128	10.04.2013	11.04.2013	Chimerix, Inc.	HC	VC	PEx
Event129	09.04.2013	10.04.2013	Taylor Morrison Home Corporation	CG	PE	PEx
Event130	02.04.2013	03.04.2013	Independent Bank Group, Inc.	F&RE	NSB	-
Event131	27.03.2013	28.03.2013	Pinnacle Foods Inc.	CG	PE	PEx
Event132	21.03.2013	22.03.2013	Marin Software Incorporated	IT	VC	NEx
Event133	21.03.2013	22.03.2013	West Corporation	IT	PE	PEx
Event134	20.03.2013	21.03.2013	Model N, Inc.	IT	CO	PEx
Event135	20.03.2013	21.03.2013	Enanta Pharmaceuticals, Inc.	HC	CO	PEx
Event136	19.03.2013	20.03.2013	Tetraphase Pharmaceuticals, Inc.	HC	VC	PEx
Event137	12.03.2013	13.03.2013	Silver Spring Networks, Inc.	IT	VC	PEx
Event138	06.03.2013	08.03.2013	Artisan Partners Asset Management Inc.	F&RE	PE	PEx
Event139	04.03.2013	05.03.2013	Professional Diversity Network, Inc.	CS	NSB	-
Event140	14.02.2013	15.02.2013	Xoom Corporation	F&RE	CO	PEx
Event141	11.02.2013	13.02.2013	ConnectOne Bancorp, Inc.	F&RE	NSB	-
Event142	07.02.2013	11.02.2013	Health Insurance Innovations, Inc.	F&RE	NSB	-
Event143	06.02.2013	07.02.2013	The ExOne Company	I&M	NSB	-
Event144	05.02.2013	06.02.2013	Boise Cascade Company	I&M	PE	PEx
Event145	31.01.2013	01.02.2013	Zoetis Inc.	HC	NSB	-
Event146	28.01.2013	30.01.2013	Stemline Therapeutics, Inc.	HC	CO	PEx
Event147	24.01.2013	25.01.2013	Bright Horizons Family Solutions Inc.	CG	PE	NEx
Event148	24.01.2013	28.01.2013	LipoScience, Inc.	HC	CO	PEx
Event149	17.01.2013	18.01.2013	SunCoke Energy Partners, L.P.	I&M	NSB	-
Event150	17.01.2013	18.01.2013	Norwegian Cruise Line Holdings Ltd.	CG	PE	PEx
Event151	16.01.2013	18.01.2013	CVR Refining, LP	E&U	NSB	-
Event152	15.01.2013	16.01.2013	USA Compression Partners, LP	E&U	PE	NEx
Event153	12.12.2012	13.12.2012	Tesla Energy Operations, Inc.	IT	VC	PEx
Event154	12.12.2012	13.12.2012	PBF Energy Inc.	E&U	PE	PEx
Event155	19.11.2012	20.11.2012	Alon USA Partners, LP	E&U	NSB	-
Event156	15.11.2012	16.11.2012	Ruckus Wireless, Inc.	IT	VC	PEx
Event157	07.11.2012	08.11.2012	Atossa Therapeutics, Inc.	HC	NSB	-
Event158	02.11.2012	03.11.2012	Delek Logistics Partners, LP	E&U	NSB	-
Event159	01.11.2012	02.11.2012	RH	CG	PE	PEx
Event160	25.10.2012	26.10.2012	Danone US, Inc.	CG	NSB	-
Event161	25.10.2012	26.10.2012	MPLX LP	E&U	NSB	-
Event162	24.10.2012	25.10.2012	CrossAmerica Partners LP	E&U	NSB	-
Event163	11.10.2012	12.10.2012	Workday, Inc.	IT	VC	PEx
Event164	11.10.2012	12.10.2012	Diamondback Energy, Inc.	E&U	PE	PEx
Event165	10.10.2012	11.10.2012	Intercept Pharmaceuticals, Inc.	HC	PE	PEx
Event166	10.10.2012	11.10.2012	Hamilton Bancorp, Inc.	F&RE	NSB	-

Event167	10.10.2012	11.10.2012	Realogy Holdings Corp.	F&RE	PE	NEx
Event168	10.10.2012	11.10.2012	Kythera Biopharmaceuticals, Inc.	HC	VC	NEx
Event169	10.10.2012	11.10.2012	Shutterstock, Inc.	CG	VC	PEx
Event170	09.10.2012	12.10.2012	Sears Hometown and Outlet Stores, Inc.	CG	NSB	-
Event171	09.10.2012	10.10.2012	Ambarella, Inc.	IT	VC	PEx
Event172	04.10.2012	05.10.2012	Berry Global Group, Inc.	I&M	PE	PEx
Event173	02.10.2012	03.10.2012	LifeLock, Inc.	CG	CO	PEx
Event174	27.09.2012	28.09.2012	Summit Midstream Partners, LP	E&U	PE	NEx
Event175	27.09.2012	28.09.2012	Qualys, Inc.	IT	VC	NEx
Event176	20.09.2012	21.09.2012	Sunoco LP	E&U	NSB	-
Event177	19.09.2012	20.09.2012	Trulia, Inc.	CS	VC	PEx
Event178	19.09.2012	20.09.2012	National Bank Holdings Corporation	F&RE	CO	PEx
Event179	19.09.2012	20.09.2012	Capital Bank Financial Corp.	F&RE	PE	NEx
Event180	15.08.2012	16.08.2012	Hi-Crush Inc.	E&U	PE	PEx
Event181	09.08.2012	10.08.2012	Performant Financial Corporation	I&M	PE	PEx
Event182	07.08.2012	08.08.2012	Bloomin' Brands, Inc.	CG	PE	NEx
Event183	07.08.2012	08.08.2012	Peregrine Semiconductor Corporation	IT	VC	PEx
Event184	02.08.2012	03.08.2012	Globus Medical, Inc.	HC	CO	NEx
Event185	01.08.2012	02.08.2012	Eloqua, Inc.	IT	CO	CEx
Event186	26.07.2012	27.07.2012	Del Frisco's Restaurant Group, Inc.	CG	PE	PEx
Event187	25.07.2012	26.07.2012	Hyperion Therapeutics, Inc.	HC	VC	NEx
Event188	25.07.2012	26.07.2012	E2open, LLC	IT	CO	NEx
Event189	25.07.2012	26.07.2012	Northern Tier Energy LP	E&U	VC	PEx
Event190	24.07.2012	25.07.2012	Natural Grocers by Vitamin Cottage, Inc.	CG	NSB	-
Event191	23.07.2012	24.07.2012	Chuy's Holdings, Inc.	CG	PE	PEx
Event192	19.07.2012	20.07.2012	Palo Alto Networks, Inc.	IT	VC	PEx
Event193	19.07.2012	20.07.2012	Kayak Software Corporation	CG	CO	CEx
Event194	18.07.2012	19.07.2012	Five Below, Inc.	CG	PE	PEx
Event195	18.07.2012	19.07.2012	Durata Therapeutics, Inc.	HC	CO	NEx
Event196	09.07.2012	10.07.2012	FS Bancorp, Inc.	F&RE	NSB	-
Event197	28.06.2012	29.06.2012	ServiceNow, Inc.	IT	CO	PEx
Event198	28.06.2012	29.06.2012	Exa Corporation	IT	VC	NEx
Event199	27.06.2012	28.06.2012	Tesaro, Inc.	HC	VC	NEx
Event200	26.06.2012	27.06.2012	EQM Midstream Partners, LP	E&U	NSB	-
Event201	17.05.2012	18.05.2012	Facebook, Inc.	CS	CO	PEx
Event202	09.05.2012	10.05.2012	Audience, Inc.	IT	VC	PEx
Event203	09.05.2012	10.05.2012	WageWorks, Inc.	I&M	PE	PEx
Event204	03.05.2012	04.05.2012	Tilly's, Inc.	CG	NSB	-
Event205	03.05.2012	04.05.2012	Flint Hills Resources Houston Chemical, LLC	I&M	PE	NEx
Event206	02.05.2012	03.05.2012	The Carlyle Group Inc.	F&RE	NSB	-

Event207	02.05.2012	03.05.2012	TIAA FSB Holdings, Inc.	F&RE	PE	PEx
Event208	30.04.2012	01.05.2012	Supernus Pharmaceuticals, Inc.	HC	CO	NEx
Event209	26.04.2012	27.04.2012	Edgen Group Inc.	I&M	PE	PEx
Event210	24.04.2012	25.04.2012	ClearSign Technologies Corporation	IT	NSB	-
Event211	24.04.2012	25.04.2012	Envivio, Inc.	IT	VC	NEx
Event212	19.04.2012	20.04.2012	Infoblox Inc.	IT	PE	PEx
Event213	19.04.2012	20.04.2012	Proofpoint, Inc.	IT	NSB	-
Event214	18.04.2012	19.04.2012	Splunk Inc.	IT	VC	PEx
Event215	18.04.2012	19.04.2012	Tumi Holdings, Inc.	CG	PE	PEx
Event216	17.04.2012	18.04.2012	Digital Cinema Destinations Corp.	CS	NSB	-
Event217	11.04.2012	12.04.2012	MRC Global Inc.	I&M	PE	PEx
Event218	11.04.2012	12.04.2012	Forum Energy Technologies, Inc.	E&U	PE	PEx
Event219	11.04.2012	12.04.2012	Oaktree Capital Group, LLC	F&RE	PE	NEx
Event220	29.03.2012	30.03.2012	Enphase Energy, Inc.	IT	VC	PEx
Event221	28.03.2012	29.03.2012	Millennial Media Inc.	CS	VC	PEx
Event222	28.03.2012	29.03.2012	Merrimack Pharmaceuticals, Inc.	HC	VC	CEx
Event223	28.03.2012	29.03.2012	CafePress Inc.	CG	VC	PEx
Event224	28.03.2012	29.03.2012	Rexnord Corporation	I&M	PE	NEx
Event225	27.03.2012	28.03.2012	Annie's, Inc.	CG	PE	PEx
Event226	27.03.2012	28.03.2012	Vocera Communications, Inc.	HC	VC	PEx
Event227	27.03.2012	28.03.2012	Regional Management Corp.	F&RE	PE	NEx
Event228	21.03.2012	22.03.2012	ExactTarget, LLC	CS	VC	PEx
Event229	21.03.2012	22.03.2012	Worldpay, Inc.	IT	PE	PEx
Event230	15.03.2012	16.03.2012	Allison Transmission Holdings, Inc.	I&M	PE	PEx
Event231	14.03.2012	15.03.2012	MACOM Technology Solutions Holdings, Inc.	IT	PE	NEx
Event232	14.03.2012	15.03.2012	Demandware, LLC	IT	CO	PEx
Event233	07.03.2012	08.03.2012	Nationstar Mortgage Holdings Inc.	F&RE	PE	PEx
Event234	01.03.2012	02.03.2012	Yelp Inc.	CS	CO	CEx
Event235	23.02.2012	24.02.2012	Bazaarvoice, Inc.	IT	CO	PEx
Event236	23.02.2012	24.02.2012	Proto Labs, Inc.	I&M	VC	PEx
Event237	21.02.2012	22.02.2012	Ceres, Inc.	HC	CO	PEx
Event238	17.02.2012	18.02.2012	Brightcove Inc.	IT	CO	PEx
Event239	10.02.2012	11.02.2012	HomeStreet, Inc.	F&RE	NSB	-
Event240	09.02.2012	10.02.2012	Synacor, Inc.	IT	VC	PEx
Event241	08.02.2012	09.02.2012	ChemoCentryx, Inc.	HC	NSB	-
Event242	07.02.2012	08.02.2012	Roundy's, Inc.	CG	CO	PEx

Event243	07.02.2012	08.02.2012	Caesars Entertainment Corporation	CG	NSB	-
Event244	07.02.2012	08.02.2012	EPAM Systems, Inc.	IT	PE	NEx
Event245	03.02.2012	04.02.2012	Cempra, Inc.	HC	VC	NEx
Event246	01.02.2012	02.02.2012	Matador Resources Company	E&U	PE	PEx
Event247	01.02.2012	02.02.2012	Greenway Medical Technologies, Inc.	HC	CO	NEx
Event248	31.01.2012	01.02.2012	U.S. Silica Holdings, Inc.	E&U	NSB	-
Event249	26.01.2012	27.01.2012	Verastem, Inc.	HC	NSB	-
Event250	25.01.2012	27.01.2012	Wellesley Bancorp, Inc.	F&RE	NSB	-
Event251	24.01.2012	25.01.2012	Guidewire Software, Inc.	IT	VC	PEx
Event252	18.01.2012	19.01.2012	Renewable Energy Group, Inc.	E&U	PE	CEx
Event253	15.12.2011	16.12.2011	Inergy Midstream, L.P.	E&U	NSB	-
Event254	15.12.2011	16.12.2011	Zynga Inc.	CS	CO	PEx
Event255	14.12.2011	15.12.2011	Laredo Petroleum, Inc.	E&U	CO	PEx
Event256	14.12.2011	15.12.2011	Mid-Con Energy Partners, LP	E&U	VC	PEx
Event257	12.12.2011	13.12.2011	Jive Software, Inc.	IT	VC	PEx
Event258	08.12.2011	09.12.2011	Rose Rock Midstream, L.P.	E&U	NSB	-
Event259	17.11.2011	18.11.2011	Intermolecular, Inc.	IT	VC	PEx
Event260	17.11.2011	18.11.2011	Manning & Napier, Inc.	F&RE	NSB	-
Event261	17.11.2011	18.11.2011	Mattress Firm Holding Corp.	CG	PE	NEx
Event262	16.11.2011	17.11.2011	Angie's List, Inc.	CS	CO	PEx
Event263	15.11.2011	16.11.2011	Clovis Oncology, Inc.	HC	CO	NEx
Event264	15.11.2011	16.11.2011	InvenSense, Inc.	IT	VC	PEx
Event265	11.11.2011	12.11.2011	Pacific Drilling S.A.	E&U	NSB	-
Event266	10.11.2011	11.11.2011	LRR Energy, L.P.	E&U	NSB	-
Event267	10.11.2011	14.11.2011	NewLink Genetics Corporation	HC	NSB	-
Event268	08.11.2011	09.11.2011	Imperva, Inc.	IT	VC	PEx
Event269	03.11.2011	04.11.2011	CVR Nitrogen, LP	I&M	NSB	-
Event270	03.11.2011	04.11.2011	Groupon, Inc.	CG	CO	PEx
Event271	18.10.2011	19.10.2011	ZELTIQ Aesthetics, Inc.	HC	CO	NEx
Event272	13.10.2011	14.10.2011	Ubiquiti Inc.	IT	PE	PEx
Event273	11.10.2011	12.10.2011	ASB Bancorp, Inc.	F&RE	NSB	-
Event274	04.10.2011	05.10.2011	BSB Bancorp, Inc.	F&RE	NSB	-
Event275	12.09.2011	13.09.2011	Poage Bankshares, Inc.	F&RE	NSB	-
Event276	10.08.2011	11.08.2011	Carbonite, Inc.	IT	CO	NEx
Event277	27.07.2011	28.07.2011	Teavana Holdings, Inc.	CG	PE	PEx
Event278	27.07.2011	28.07.2011	The Chefs' Warehouse, Inc.	CG	NSB	-
Event279	27.07.2011	28.07.2011	Wesco Aircraft Holdings, Inc.	I&M	PE	NEx
Event280	26.07.2011	27.07.2011	Dunkin' Brands Group, Inc.	CG	PE	PEx
Event281	26.07.2011	27.07.2011	American Midstream Partners, LP	E&U	NSB	-
Event282	21.07.2011	22.07.2011	Francesca's Holdings Corporation	CG	PE	PEx
Event283	20.07.2011	21.07.2011	SunCoke Energy, Inc.	I&M	NSB	-

Event284	19.07.2011	20.07.2011	Zillow Group, Inc.	CS	CO	PEx
Event285	19.07.2011	20.07.2011	Skullcandy, Inc.	CG	CO	PEx
Event286	13.07.2011	14.07.2011	Oiltanking Partners, L.P.	E&U	NSB	-
Event287	07.07.2011	08.07.2011	IF Bancorp, Inc.	F&RE	NSB	-
Event288	30.06.2011	07.07.2011	State Investors Bancorp, Inc.	F&RE	NSB	-
Event289	30.11.2011	12.12.2011	Crossroads Capital, Inc.	F&RE	NSB	-
Event290	28.06.2011	29.06.2011	HomeAway, Inc.	CG	CO	PEx
Event291	21.06.2011	22.06.2011	Vanguard Health Systems Inc.	HC	NSB	-
Event292	16.06.2011	17.06.2011	Baton Holding, LLC	IT	NSB	-
Event293	15.06.2011	16.06.2011	CSI Compressco LP	E&U	NSB	-
Event294	14.06.2011	15.06.2011	Pandora Media, LLC	CS	CO	PEx
Event295	08.06.2011	09.06.2011	Fusion-io, Inc.	IT	CO	PEx
Event296	25.05.2011	26.05.2011	Active Network, LLC	IT	CO	PEx
Event297	25.05.2011	26.05.2011	Freescale Semiconductor, Ltd.	IT	PE	NEx
Event298	25.05.2011	26.05.2011	Spirit Airlines, Inc.	I&M	CO	PEx
Event299	18.05.2011	19.05.2011	LinkedIn Corporation	CS	CO	CEx
Event300	11.05.2011	12.05.2011	NGL Energy Partners LP	E&U	CO	NEx
Event301	10.05.2011	11.05.2011	Kosmos Energy Ltd.	E&U	PE	NEx
Event302	04.05.2011	05.05.2011	Thermon Group Holdings, Inc.	I&M	PE	PEx
Event303	04.05.2011	05.05.2011	RPX Corporation	I&M	CO	PEx
Event304	03.05.2011	04.05.2011	Boingo Wireless, Inc.	CS	CO	NEx
Event305	01.05.2011	02.05.2011	SharpSpring, Inc.	IT	NSB	-
Event306	25.04.2011	28.04.2011	Franklin Financial Corporation	F&RE	NSB	-
Event307	20.04.2011	21.04.2011	Responsys, Inc.	IT	CO	PEx
Event308	19.04.2011	20.04.2011	Andeavor Logistics LP	E&U	NSB	-
Event309	19.04.2011	20.04.2011	Sagent Pharmaceuticals, Inc.	HC	CO	NEx
Event310	18.04.2011	19.04.2011	Air Lease Corporation	I&M	CO	NEx
Event311	14.04.2011	15.04.2011	Ellie Mae, Inc.	IT	CO	NEx
Event312	13.04.2011	14.04.2011	Zipcar, Inc.	I&M	CO	PEx
Event313	13.04.2011	14.04.2011	TMS International Corp.	I&M	PE	NEx
Event314	07.04.2011	08.04.2011	CVR Partners, LP	I&M	NSB	-
Event315	01.04.2011	04.04.2011	Tranzyme, Inc.	HC	NSB	-
Event316	31.03.2011	04.04.2011	Fraternity Community Bancorp, Inc.	F&RE	NSB	-
Event317	31.03.2011	01.04.2011	GNC Holdings, Inc.	CG	PE	PEx
Event318	29.03.2011	30.03.2011	Apollo Global Management, Inc.	F&RE	PE	PEx
Event319	24.03.2011	25.03.2011	ServiceSource International, Inc.	IT	PE	PEx
Event320	16.03.2011	17.03.2011	Cornerstone OnDemand, Inc.	IT	CO	PEx
Event321	09.03.2011	10.03.2011	HCA Healthcare, Inc.	HC	PE	CEx

Event322	11.02.2011	12.02.2011	AcelRx Pharmaceuticals, Inc.	HC	VC	NEx
Event323	10.02.2011	11.02.2011	Kinder Morgan, Inc.	E&U	PE	PEx
Event324	09.02.2011	10.02.2011	Fluidigm Corporation	HC	CO	PEx
Event325	08.02.2011	09.02.2011	Gevo, Inc.	E&U	CO	NEx
Event326	04.02.2011	05.02.2011	Endocyte, Inc.	HC	CO	PEx
Event327	03.02.2011	04.02.2011	Atlantic Coast Financial Corporation	F&RE	NSB	-
Event328	02.02.2011	03.02.2011	Pacira BioSciences, Inc.	HC	VC	NEx
Event329	01.02.2011	02.02.2011	Epocrates, Inc.	HC	CO	PEx
Event330	01.02.2011	02.02.2011	NeoPhotonics Corporation	IT	CO	NEx
Event331	27.01.2011	28.01.2011	BankUnited, Inc.	F&RE	PE	NEx
Event332	26.01.2011	27.01.2011	Nielsen Holdings plc	I&M	PE	NEx
Event333	25.01.2011	26.01.2011	Anchor Bancorp	F&RE	NSB	-
Event334	25.01.2011	26.01.2011	Leaf Group Ltd.	CG	CO	NEx
Event335	19.01.2011	20.01.2011	Wolverine Bancorp, Inc.	F&RE	NSB	-
Event336	13.01.2011	14.01.2011	Oconee Federal Financial Corp.	F&RE	NSB	-
Event337	16.12.2010	17.12.2010	QR Energy, LP	E&U	NSB	-
Event338	16.12.2010	17.12.2010	Fortegra Financial Corporation	F&RE	PE	NEx
Event339	16.12.2010	17.12.2010	Assembly Biosciences, Inc.	HC	CO	NEx
Event340	15.12.2010	16.12.2010	Swift Transportation Company	I&M	NSB	-
Event341	14.12.2010	15.12.2010	RigNet, Inc.	E&U	CO	PEx
Event342	14.12.2010	15.12.2010	Walker & Dunlop, Inc.	F&RE	NSB	-
Event343	14.12.2010	15.12.2010	FleetCor Technologies, Inc.	IT	PE	PEx
Event344	14.12.2010	15.12.2010	GAIN Capital Holdings, Inc.	F&RE	PE	NEx
Event345	08.12.2010	09.12.2010	First Republic Bank	F&RE	PE	NEx
Event346	06.12.2010	07.12.2010	Targa Resources Corp.	E&U	PE	PEx
Event347	23.11.2010	24.11.2010	Anacor Pharmaceuticals, Inc.	HC	VC	NEx
Event348	22.11.2010	23.11.2010	Zogenix, Inc.	HC	VC	NEx
Event349	18.11.2010	19.11.2010	Aeroflex Holding Corp.	IT	PE	NEx
Event350	17.11.2010	18.11.2010	General Motors Company	CG	NSB	-
Event351	17.11.2010	18.11.2010	LPL Financial Holdings Inc.	F&RE	PE	NEx
Event352	16.11.2010	17.11.2010	Booz Allen Hamilton Holding Corporation	IT	PE	PEx
Event353	11.11.2010	12.11.2010	Inphi Corporation	IT	VC	PEx
Event354	10.11.2010	11.11.2010	Complete Genomics, Inc.	HC	VC	NEx
Event355	04.11.2010	05.11.2010	The Fresh Market, Inc.	CG	NSB	-
Event356	04.11.2010	05.11.2010	Primo Water Corporation	CG	CO	PEx
Event357	29.10.2010	01.11.2010	SP Bancorp, Inc.	F&RE	CO	NEx
Event358	27.10.2010	28.10.2010	ExamWorks Group, Inc.	HC	CO	CEx
Event359	27.10.2010	28.10.2010	SeaCube Container Leasing Ltd.	I&M	PE	NEx
Event360	26.10.2010	27.10.2010	Pacific Biosciences of California, Inc.	HC	CO	NEx
Event361	22.10.2010	23.10.2010	Aegerion Pharmaceuticals, Inc.	HC	PE	NEx
Event362	21.10.2010	22.10.2010	Bravo Brio Restaurant Group, Inc.	CG	PE	CEx
Event363	20.10.2010	21.10.2010	Vera Bradley, Inc.	CG	NSB	-

Event364	18.10.2010	19.10.2010	Netspend Holdings, Inc.	F&RE	CO	PEx
Event365	14.10.2010	15.10.2010	Tower International, Inc.	CG	PE	NEx
Event366	30.09.2010	01.10.2010	The KeyW Holding Corporation	I&M	CO	NEx
Event367	27.09.2010	28.09.2010	Amyris, Inc.	I&M	CO	PEx
Event368	24.09.2010	25.09.2010	JAGGAER, Inc.	IT	CO	PEx
Event369	13.08.2010	14.08.2010	Electromed, Inc.	HC	NSB	-
Event370	12.08.2010	13.08.2010	Park Sterling Corporation	F&RE	NSB	-
Event371	11.08.2010	12.08.2010	RealPage, Inc.	IT	PE	NEx
Event372	11.08.2010	12.08.2010	MediaMind Technologies Inc.	IT	VC	PEx
Event373	05.08.2010	06.08.2010	NuPathe, Inc.	HC	VC	PEx
Event374	05.08.2010	06.08.2010	IntraLinks Holdings, Inc.	IT	CO	PEx
Event375	02.08.2010	03.08.2010	Trius Therapeutics LLC	HC	CO	NEx
Event376	28.07.2010	29.07.2010	Envestnet, Inc.	IT	CO	PEx
Event377	28.07.2010	29.07.2010	Access Midstream Partners, L.P.	E&U	PE	PEx
Event378	21.07.2010	22.07.2010	Ameresco, Inc.	I&M	NSB	-
Event379	21.07.2010	22.07.2010	Green Dot Corporation	F&RE	CO	PEx
Event380	15.07.2010	16.07.2010	RealD Inc.	IT	PE	PEx
Event381	15.07.2010	16.07.2010	Qlik Technologies, Inc.	IT	PE	PEx
Event382	06.07.2010	07.07.2010	Peoples Federal Bancshares, Inc.	F&RE	NSB	-
Event383	28.06.2010	29.06.2010	Tesla, Inc.	CG	CO	PEx
Event384	16.06.2010	17.06.2010	Higher One Holdings, Inc.	IT	CO	PEx
Event385	16.06.2010	17.06.2010	BroadSoft, Inc.	IT	CO	PEx
Event386	16.06.2010	17.06.2010	Oasis Petroleum Inc.	E&U	PE	PEx
Event387	14.06.2010	15.06.2010	Cboe Global Markets, Inc.	F&RE	CO	PEx
Event388	28.05.2010	29.05.2010	GenMark Diagnostics, Inc.	HC	NSB	-
Event389	19.05.2010	20.05.2010	ReachLocal, Inc.	IT	CO	NEx
Event390	19.05.2010	20.05.2010	R1 RCM Inc.	HC	PE	PEx
Event391	13.05.2010	14.05.2010	Telenav, Inc.	IT	CO	NEx
Event392	12.05.2010	13.05.2010	Express, Inc.	CG	PE	PEx
Event393	12.05.2010	13.05.2010	Roadrunner Transportation Systems, Inc.	I&M	PE	NEx
Event394	11.05.2010	12.05.2010	Niska Gas Storage Partners LLC	E&U	PE	PEx
Event395	04.05.2010	05.05.2010	Douglas Dynamics, Inc.	I&M	PE	NEx
Event396	29.04.2010	30.04.2010	Alpha and Omega Semiconductor Limited	IT	CO	NEx
Event397	29.04.2010	30.04.2010	PAA Natural Gas Storage, L.P.	E&U	PE	NEx
Event398	29.04.2010	30.04.2010	Convio, Inc.	IT	CO	NEx
Event399	22.04.2010	23.04.2010	SPS Commerce, Inc.	IT	CO	PEx
Event400	22.04.2010	23.04.2010	Alimera Sciences, Inc.	HC	VC	NEx
Event401	21.04.2010	22.04.2010	Codexis, Inc.	HC	VC	NEx

Event402	08.04.2010	09.04.2010	Metals USA Holdings Corp.	I&M	PE	NEx
Event403	31.03.2010	01.04.2010	Primerica, Inc.	F&RE	PE	NEx
Event404	30.03.2010	31.03.2010	SS&C Technologies Holdings, Inc.	IT	PE	NEx
Event405	30.03.2010	31.03.2010	Meru Networks, Inc.	IT	CO	PEx
Event406	24.03.2010	25.03.2010	Calix, Inc.	IT	CO	PEx
Event407	23.03.2010	24.03.2010	First Interstate BancSystem, Inc.	F&RE	NSB	-
Event408	23.03.2010	24.03.2010	MaxLinear, Inc.	IT	CO	PEx
Event409	15.03.2010	16.03.2010	Financial Engines, Inc.	F&RE	PE	PEx
Event410	11.03.2010	12.03.2010	AVEO Pharmaceuticals, Inc.	HC	CO	PEx
Event411	10.03.2010	11.03.2010	Sensata Technologies Holding plc	I&M	PE	PEx
Event412	09.03.2010	10.03.2010	Baltic Trading Limited	I&M	NSB	-
Event413	10.02.2010	11.02.2010	Graham Packaging Company Inc.	I&M	PE	NEx
Event414	10.02.2010	11.02.2010	QuinStreet, Inc.	CS	CO	PEx
Event415	10.02.2010	11.02.2010	Generac Holdings Inc.	I&M	PE	NEx
Event416	02.02.2010	03.02.2010	Ironwood Pharmaceuticals, Inc.	HC	CO	NEx
Event417	21.01.2010	22.01.2010	OBA Financial Services, Inc.	F&RE	NSB	-
Event418	21.01.2010	22.01.2010	Cellu Tissue Holdings, Inc.	CG	PE	CEx
Event419	21.01.2010	22.01.2010	Symetra Financial Corporation	F&RE	PE	PEx
Event420	20.01.2010	21.01.2010	Omniamerican Bancorp, Inc.	F&RE	NSB	-
Event421	16.12.2009	17.12.2009	Crimson Exploration Inc.	E&U	NSB	-
Event422	16.12.2009	17.12.2009	Kraton Corporation	I&M	PE	PEx
Event423	15.12.2009	16.12.2009	Team Health Holdings, Inc.	HC	PE	NEx
Event424	10.12.2009	11.12.2009	KAR Auction Services, Inc.	I&M	PE	NEx
Event425	19.11.2009	20.11.2009	Sotera Defense Solutions, Inc.	I&M	NSB	-
Event426	19.11.2009	20.11.2009	Archipelago Learning, Inc.	CG	PE	NEx
Event427	17.11.2009	18.11.2009	Fortinet, Inc.	IT	VC	PEx
Event428	12.11.2009	13.11.2009	rue21, Inc.	CG	PE	NEx
Event429	12.11.2009	13.11.2009	Dollar General Corporation	CG	PE	PEx
Event430	04.11.2009	05.11.2009	Hyatt Hotels Corporation	CG	CO	NEx
Event431	04.11.2009	05.11.2009	Ancestry.com LLC	CS	CO	NEx
Event432	27.10.2009	28.10.2009	Vitamin Shoppe, Inc.	CG	PE	CEx
Event433	27.10.2009	28.10.2009	Addus HomeCare Corporation	HC	PE	NEx
Event434	22.10.2009	23.10.2009	Dole Food Company, Inc.	CG	NSB	-
Event435	20.10.2009	21.10.2009	AGA Medical Holdings, Inc.	HC	PE	PEx
Event436	15.10.2009	19.10.2009	Penn Millers Holding Corporation	F&RE	NSB	-
Event437	12.10.2009	13.10.2009	RailAmerica, Inc.	I&M	PE	NEx
Event438	07.10.2009	08.10.2009	Mistras Group, Inc.	I&M	PE	PEx
Event439	07.10.2009	08.10.2009	Omeros Corporation	HC	VC	NEx

Event440	06.10.2009	07.10.2009	Verisk Analytics, Inc.	I&M	NSB	-
Event441	01.10.2009	02.10.2009	Echo Global Logistics, Inc.	I&M	CO	NEx
Event442	30.09.2009	01.10.2009	Talecris Biotherapeutics Holdings Corp.	HC	PE	NEx
Event443	25.09.2009	26.09.2009	Select Medical Holdings Corporation	HC	PE	NEx
Event444	23.09.2009	24.09.2009	Artio Global Investors Inc.	F&RE	NSB	-
Event445	23.09.2009	24.09.2009	Vitacost.com, Inc.	CG	NSB	-
Event446	11.08.2009	12.08.2009	Change Healthcare Holdings, Inc.	HC	PE	NEx
Event447	10.08.2009	11.08.2009	Cumberland Pharmaceuticals Inc.	HC	VC	NEx
Event448	05.08.2009	06.08.2009	Broadcom Inc.	IT	PE	PEx
Event449	30.06.2009	01.07.2009	LogMeIn, Inc.	IT	CO	PEx
Event450	24.06.2009	25.06.2009	Medidata Solutions, Inc.	HC	CO	PEx
Event451	21.05.2009	22.05.2009	OpenTable, Inc.	CG	PE	PEx
Event452	13.05.2009	14.05.2009	DigitalGlobe, Inc.	I&M	PE	NEx
Event453	15.04.2009	16.04.2009	Rosetta Stone Inc.	IT	CO	NEx
Event454	14.04.2009	15.04.2009	Zovio Inc	CG	PE	NEx
Event455	10.02.2009	11.02.2009	Mead Johnson Nutrition Company	CG	NSB	-
Event456	19.11.2008	20.11.2008	Grand Canyon Education, Inc.	CG	CO	PEx
Event457	10.10.2008	11.10.2008	First Savings Financial Group, Inc.	F&RE	NSB	-
Event458	12.08.2008	03.10.2008	Home Bancorp, Inc.	F&RE	PE	NEx
Event459	07.08.2008	08.08.2008	Rackspace Hosting, Inc.	IT	CO	PEx
Event460	01.07.2008	02.07.2008	Energy Recovery, Inc.	I&M	VC	PEx
Event461	20.05.2008	21.05.2008	Sino-Global Shipping America, Ltd.	I&M	NSB	-
Event462	19.05.2008	20.05.2008	Malvern Bancorp, Inc.	F&RE	NSB	-
Event463	08.05.2008	09.05.2008	Western Midstream Operating, LP	E&U	NSB	-
Event464	07.05.2008	08.05.2008	Colfax Corporation	I&M	NSB	-
Event465	30.04.2008	01.05.2008	Pioneer Southwest Energy Partners L.P.	E&U	NSB	-
Event466	22.04.2008	23.04.2008	American Water Works Company, Inc.	E&U	NSB	-
Event467	21.04.2008	22.04.2008	Intrepid Potash, Inc.	I&M	PE	CEx
Event468	18.03.2008	19.03.2008	Visa Inc.	IT	NSB	-
Event469	18.03.2008	19.03.2008	BioTelemetry, Inc.	HC	CO	PEx
Event470	11.03.2008	12.03.2008	Heritage-Crystal Clean, Inc	I&M	PE	NEx
Event471	14.02.2008	15.02.2008	MAKO Surgical Corp.	HC	CO	NEx
Event472	14.02.2008	15.02.2008	ArcSight, Inc.	IT	CO	PEx
Event473	31.01.2008	01.02.2008	Cape Bancorp, Inc.	F&RE	PE	NEx
Event474	25.01.2008	26.01.2008	IPC Healthcare, Inc.	HC	PE	PEx
Event475	24.01.2008	25.01.2008	RiskMetrics Group, LLC	I&M	CO	NEx

Event476	22.01.2008	23.01.2008	Meridian Bancorp, Inc.	F&RE	NSB	-
Event477	17.01.2008	18.01.2008	Williams Pipeline Partners L.P.	E&U	NSB	-
Event478	09.01.2008	10.01.2008	Danvers Bancorp Inc.	F&RE	NSB	-
Event479	08.01.2008	09.01.2008	Sound Financial Bancorp, Inc.	F&RE	NSB	-
Event480	19.12.2007	20.12.2007	NetSuite Inc.	IT	VC	NEx
Event481	18.12.2007	19.12.2007	Orion Energy Systems, Inc.	I&M	VC	PEx
Event482	13.12.2007	14.12.2007	MEMSIC, Inc.	IT	PE	NEx
Event483	13.12.2007	14.12.2007	Intellon Corporation	IT	VC	NEx
Event484	12.12.2007	13.12.2007	MedAssets, Inc.	HC	CO	NEx
Event485	12.12.2007	13.12.2007	K12 Inc.	CG	CO	NEx
Event486	11.12.2007	12.12.2007	Cardtronics plc	IT	PE	NEx
Event487	06.12.2007	07.12.2007	Titan Machinery Inc.	I&M	CO	PEx
Event488	06.12.2007	07.12.2007	Entropic Communications, LLC	IT	VC	NEx
Event489	06.12.2007	07.12.2007	Triple-S Management Corporation	HC	NSB	-
Event490	19.11.2007	20.11.2007	SuccessFactors, Inc.	IT	CO	PEx
Event491	16.11.2007	17.11.2007	Internet Brands, Inc.	IT	VC	PEx
Event492	15.11.2007	16.11.2007	Rubicon Technology, Inc.	IT	CO	NEx
Event493	15.11.2007	16.11.2007	El Paso Pipeline Partners, L.P.	E&U	NSB	-
Event494	15.11.2007	16.11.2007	3Par Inc.	IT	VC	NEx
Event495	14.11.2007	15.11.2007	MSCI Inc.	F&RE	PE	CEx
Event496	14.11.2007	15.11.2007	Virtual Radiologic Corporation	HC	PE	NEx
Event497	13.11.2007	14.11.2007	Sculptor Capital Management, Inc.	F&RE	PE	NEx
Event498	08.11.2007	09.11.2007	OSG America L.P.	E&U	NSB	-
Event499	08.11.2007	09.11.2007	American Public Education, Inc.	CG	PE	NEx
Event500	08.11.2007	09.11.2007	PostRock MidContinent Production, LLC	E&U	NSB	-
Event501	08.11.2007	09.11.2007	The Ensign Group, Inc.	HC	NSB	-
Event502	08.11.2007	09.11.2007	Lumber Liquidators Holdings, Inc.	CG	PE	PEx
Event503	07.11.2007	08.11.2007	Northfield Bancorp, Inc.	F&RE	NSB	-
Event504	07.11.2007	08.11.2007	FLIR Detection, Inc.	IT	CO	NEx
Event505	06.11.2007	07.11.2007	Merz Aesthetics, Inc.	HC	VC	NEx
Event506	01.11.2007	02.11.2007	Nanosphere, Inc.	HC	CO	NEx
Event507	01.11.2007	02.11.2007	Deltek, Inc.	IT	PE	PEx
Event508	01.11.2007	02.11.2007	SoundBite Communications, Inc.	IT	VC	PEx
Event509	01.11.2007	02.11.2007	Inteliquent, Inc.	CS	CO	PEx
Event510	29.10.2007	30.10.2007	Genoptix, Inc.	HC	CO	PEx
Event511	25.10.2007	26.10.2007	NovaBay Pharmaceuticals, Inc.	HC	NSB	-
Event512	25.10.2007	26.10.2007	FGX International Holdings Limited	HC	VC	PEx
Event513	24.10.2007	25.10.2007	Ulta Beauty, Inc.	CG	CO	PEx

Event514	24.10.2007	25.10.2007	Pzena Investment Management, Inc	F&RE	NSB	-
Event515	22.10.2007	23.10.2007	CVR Energy, Inc.	E&U	NSB	-
Event516	10.10.2007	11.10.2007	Virgin Mobile USA, Inc.	CS	PE	PEx
Event517	09.10.2007	10.10.2007	Compellent Technologies, Inc.	IT	VC	NEx
Event518	09.10.2007	10.10.2007	First Financial Northwest, Inc.	F&RE	NSB	-
Event519	09.10.2007	10.10.2007	Targanta Therapeutics Corporation	HC	CO	NEx
Event520	09.10.2007	10.10.2007	Main Street Capital Corporation	F&RE	NSB	-
Event521	04.10.2007	05.10.2007	MAP Pharmaceuticals, Inc.	HC	CO	NEx
Event522	02.10.2007	15.10.2007	Laporte Bancorp, Inc.	F&RE	NSB	-
Event523	02.10.2007	03.10.2007	Constant Contact, Inc.	IT	CO	PEx
Event524	01.10.2007	02.10.2007	Beacon Federal Bancorp, Inc.	F&RE	NSB	-
Event525	28.09.2007	29.09.2007	Duff & Phelps Corporation	I&M	PE	NEx
Event526	19.09.2007	20.09.2007	athenahealth, Inc.	HC	CO	PEx
Event527	11.09.2007	12.09.2007	Encore Energy Partners LP	E&U	NSB	-
Event528	13.08.2007	14.08.2007	VMware, Inc.	IT	NSB	-
Event529	10.08.2007	31.08.2007	FSB Bancorp, Inc.	F&RE	NSB	-
Event530	08.08.2007	09.08.2007	DemandTec, Inc.	IT	VC	NEx
Event531	07.08.2007	08.08.2007	Masimo Corporation	HC	CO	PEx
Event532	07.08.2007	08.08.2007	HireRight, LLC	IT	CO	PEx
Event533	02.08.2007	03.08.2007	Concho Resources Inc.	E&U	PE	NEx
Event534	02.08.2007	03.08.2007	Virtusa Corporation	IT	CO	PEx
Event535	02.08.2007	03.08.2007	Sucampo Pharmaceuticals, Inc.	HC	CO	PEx
Event536	01.08.2007	02.08.2007	BridgeTower Media, LLC	I&M	PE	CEx
Event537	25.07.2007	26.07.2007	Imarx Therapeutics, Inc.	HC	VC	CEx
Event538	24.07.2007	25.07.2007	BladeLogic, Inc.	IT	CO	CEx
Event539	24.07.2007	25.07.2007	Monotype Imaging Holdings Inc.	IT	PE	PEx
Event540	19.07.2007	20.07.2007	Orbitz Worldwide, Inc.	CG	NSB	-
Event541	19.07.2007	20.07.2007	Airvana, Inc.	IT	CO	PEx
Event542	18.07.2007	19.07.2007	Limco-Piedmont, Inc.	I&M	NSB	-
Event543	18.07.2007	19.07.2007	Netezza Corporation	IT	VC	NEx
Event544	18.07.2007	19.07.2007	Blueknight Energy Partners, L.P.	E&U	CO	CEx
Event545	17.07.2007	18.07.2007	Encore Bancshares, Inc.	F&RE	NSB	-
Event546	17.07.2007	18.07.2007	DHI Group, Inc.	CS	PE	NEx
Event547	02.07.2007	03.07.2007	ShoreTel, Inc.	IT	VC	NEx
Event548	28.06.2007	29.06.2007	Bridgeline Digital, Inc.	IT	NSB	-
Event549	27.06.2007	28.06.2007	PROS Holdings, Inc.	IT	PE	PEx

Event550	27.06.2007	28.06.2007	Polypore International, LP	I&M	PE	NEx
Event551	26.06.2007	27.06.2007	comScore, Inc.	CS	CO	PEx
Event552	26.06.2007	27.06.2007	Spectra Energy Partners, LP	E&U	NSB	-
Event553	26.06.2007	27.06.2007	Data Domain, Inc.	IT	VC	NEx
Event554	26.06.2007	27.06.2007	AuthenTec, Inc.	IT	CO	PEx
Event555	22.06.2007	23.06.2007	Tiptree Inc.	F&RE	CO	NEx
Event556	21.06.2007	22.06.2007	The Blackstone Group Inc.	F&RE	PE	PEx
Event557	14.06.2007	15.06.2007	BioFuels Energy Corp.	E&U	NSB	-
Event558	12.06.2007	13.06.2007	BWAY Parent Company, Inc.	I&M	PE	PEx
Event559	07.06.2007	08.06.2007	FBR & Co.	F&RE	PE	NEx
Event560	07.06.2007	08.06.2007	Limelight Networks, Inc.	IT	PE	PEx
Event561	06.06.2007	07.06.2007	Infinera Corporation	IT	CO	PEx
Event562	05.06.2007	06.06.2007	Starent Networks LLC	IT	VC	PEx
Event563	30.05.2007	31.05.2007	Amicus Therapeutics, Inc.	HC	VC	NEx
Event564	25.05.2007	26.05.2007	Clean Energy Fuels Corp.	E&U	NSB	-
Event565	22.05.2007	23.05.2007	Sirtris Pharmaceuticals, Inc.	HC	VC	NEx
Event566	22.05.2007	23.05.2007	RSC Holdings, Inc.	I&M	PE	PEx
Event567	17.05.2007	18.05.2007	Enel X North America, Inc.	IT	CO	PEx
Event568	17.05.2007	18.05.2007	TriMas Corporation	I&M	PE	NEx
Event569	16.05.2007	17.05.2007	CAI International, Inc.	I&M	VC	NEx
Event570	16.05.2007	17.05.2007	TechTarget, Inc.	CS	VC	NEx
Event571	15.05.2007	16.05.2007	Skilled Healthcare Group, Inc.	HC	NSB	-
Event572	14.05.2007	15.05.2007	Insulet Corporation	HC	CO	PEx
Event573	14.05.2007	15.05.2007	Continental Resources, Inc.	E&U	NSB	-
Event574	10.05.2007	11.05.2007	JMP Group LLC	F&RE	NSB	-
Event575	10.05.2007	11.05.2007	Solera Holdings, Inc.	IT	PE	PEx
Event576	10.05.2007	11.05.2007	Biodel Inc.	HC	CO	NEx
Event577	09.05.2007	10.05.2007	AECOM	I&M	PE	PEx
Event578	08.05.2007	09.05.2007	TomoTherapy Incorporated	HC	CO	PEx
Event579	01.05.2007	02.05.2007	Cavium, Inc.	IT	VC	PEx
Event580	26.04.2007	27.04.2007	Gilead Pharmasset LLC	HC	CO	NEx
Event581	23.04.2007	24.04.2007	Cinemark Holdings, Inc.	CS	PE	PEx
Event582	20.04.2007	23.04.2007	TFS Financial Corporation	F&RE	NSB	-
Event583	18.04.2007	19.04.2007	MetroPCS Communications, Inc.	CS	CO	PEx
Event584	12.04.2007	13.04.2007	Comverge, Inc.	IT	CO	PEx
Event585	04.04.2007	05.04.2007	CMS Bancorp, Inc.	F&RE	NSB	-
Event586	04.04.2007	05.04.2007	Veraz Networks, Inc.	IT	CO	PEx

Event587	29.03.2007	30.03.2007	GSI Technology, Inc.	IT	VC	PEx
Event588	28.03.2007	29.03.2007	SenoRx, Inc.	HC	VC	PEx
Event589	26.03.2007	27.03.2007	HPE Aruba	IT	VC	NEx
Event590	23.03.2007	24.03.2007	Saratoga Investment Corp.	F&RE	NSB	-
Event591	21.03.2007	22.03.2007	Glu Mobile Inc.	CS	VC	PEx
Event592	20.03.2007	21.03.2007	Cheniere Energy Partners, L.P.	E&U	NSB	-
Event593	16.03.2007	17.03.2007	FCStone Group, Inc.	F&RE	NSB	-
Event594	15.03.2007	04.04.2007	ESSA Bancorp, Inc.	F&RE	NSB	-
Event595	14.03.2007	15.03.2007	BigBand Networks, Inc.	IT	CO	PEx
Event596	08.03.2007	09.03.2007	Sourcefire, Inc.	IT	CO	PEx
Event597	15.02.2007	16.02.2007	Salary.com, Inc.	IT	PE	PEx
Event598	14.02.2007	15.02.2007	Barings BDC, Inc.	F&RE	NSB	-
Event599	14.02.2007	15.02.2007	Opnext, Inc.	IT	NSB	-
Event600	09.02.2007	10.02.2007	Optimer Pharmaceuticals, Inc.	HC	VC	PEx
Event601	08.02.2007	09.02.2007	Targa Resources Partners LP	E&U	NSB	-
Event602	08.02.2007	09.02.2007	Fortress Investment Group LLC	F&RE	NSB	-
Event603	08.02.2007	09.02.2007	U.S. Auto Parts Network, Inc.	CG	CO	NEx
Event604	07.02.2007	08.02.2007	Accuray Incorporated	HC	PE	PEx
Event605	07.02.2007	08.02.2007	National CineMedia, Inc.	CS	PE	PEx
Event606	07.02.2007	08.02.2007	Mellanox Technologies, Ltd.	IT	VC	PEx
Event607	07.02.2007	08.02.2007	Switch & Data Facilities Company, Inc.	IT	CO	NEx
Event608	06.02.2007	07.02.2007	Synta Pharmaceuticals Corp.	HC	NSB	-
Event609	30.01.2007	31.01.2007	Employers Holdings, Inc.	F&RE	NSB	-
Event610	30.01.2007	31.01.2007	HFF, Inc.	F&RE	NSB	-
Event611	30.01.2007	31.01.2007	Duncan Energy Partners LP	E&U	NSB	-
Event612	30.01.2007	31.01.2007	Animal Health Holdings, Inc.	HC	PE	PEx
Event613	26.01.2007	27.01.2007	Sonoma Pharmaceuticals, Inc.	HC	VC	NEx
Event614	22.01.2007	23.01.2007	AeroVironment, Inc.	I&M	NSB	-
Event615	20.12.2006	21.12.2006	Alliance Bancorp Inc of Pennsylvania	F&RE	NSB	-
Event616	18.12.2006	19.12.2006	Evraz Claymont Steel Holdings, Inc.	I&M	PE	PEx
Event617	15.12.2006	16.12.2006	Double-Take Software, Inc.	IT	PE	PEx
Event618	14.12.2006	15.12.2006	Altra Industrial Motion Corp.	I&M	PE	CEx
Event619	14.12.2006	15.12.2006	Carrols Restaurant Group, Inc.	CG	NSB	-
Event620	14.12.2006	15.12.2006	Isilon Systems, Inc.	IT	VC	NEx
Event621	14.12.2006	15.12.2006	US BioEnergy Corp.	E&U	NSB	-
Event622	13.12.2006	14.12.2006	First Eagle Private Credit, LLC	F&RE	NSB	-
Event623	13.12.2006	14.12.2006	Obagi Cosmeceuticals LLC	HC	CO	NEx
Event624	13.12.2006	14.12.2006	Medecision, Inc.	HC	PE	NEx
Event625	12.12.2006	13.12.2006	Guidance Software, Inc.	IT	NSB	-

Event626	12.12.2006	13.12.2006	IPG Photonics Corporation	IT	PE	PEx
Event627	12.12.2006	13.12.2006	Atlas Energy Resources, LLC	E&U	NSB	-
Event628	12.12.2006	29.12.2006	Reed's, Inc.	CG	NSB	-
Event629	11.12.2006	12.12.2006	Portman Ridge Finance Corporation	F&RE	NSB	-
Event630	07.12.2006	08.12.2006	Heelys, Inc.	CG	PE	NEx
Event631	07.12.2006	08.12.2006	Allegiant Travel Company	I&M	PE	PEx
Event632	20.11.2006	21.11.2006	Willdan Group, Inc.	I&M	NSB	-
Event633	20.11.2006	21.11.2006	Spirit AeroSystems Holdings, Inc.	I&M	PE	PEx
Event634	16.11.2006	17.11.2006	CMEG NYMEX Holdings Inc.	F&RE	NSB	-
Event635	16.11.2006	17.11.2006	First Solar, Inc.	IT	NSB	-
Event636	16.11.2006	17.11.2006	Venoco, Inc.	E&U	NSB	-
Event637	15.11.2006	16.11.2006	Hansen Medical, Inc.	HC	CO	NEx
Event638	15.11.2006	16.11.2006	Hertz Global Holdings, Inc.	I&M	PE	NEx
Event639	15.11.2006	16.11.2006	Sanchez Midstream Partners LP	E&U	NSB	-
Event640	15.11.2006	16.11.2006	KBR, Inc.	IT	NSB	-
Event641	14.11.2006	15.11.2006	Emergent BioSolutions Inc.	HC	NSB	-
Event642	13.11.2006	14.11.2006	Yield10 Bioscience, Inc.	HC	VC	NEx
Event643	09.11.2006	10.11.2006	Solta Medical, Inc.	HC	VC	PEx
Event644	09.11.2006	10.11.2006	Capella Education Company	CG	CO	PEx
Event645	08.11.2006	09.11.2006	Physicians Formula Holdings Inc.	CG	NSB	-
Event646	08.11.2006	09.11.2006	KBW LLC	F&RE	NSB	-
Event647	07.11.2006	08.11.2006	Catalyst Pharmaceuticals, Inc.	HC	NSB	-
Event648	06.11.2006	07.11.2006	Southern National Bancorp of Virginia, Inc.	F&RE	NSB	-
Event649	02.11.2006	03.11.2006	Innophos Holdings, Inc.	I&M	NSB	-
Event650	02.11.2006	03.11.2006	ORBCOMM Inc.	CS	PE	PEx
Event651	01.11.2006	02.11.2006	Globalstar, Inc.	CS	NSB	-
Event652	26.10.2006	27.10.2006	Optium Corporation	IT	VC	NEx
Event653	25.10.2006	26.10.2006	Achillion Pharmaceuticals, Inc.	HC	CO	PEx
Event654	24.10.2006	25.10.2006	Cadence Pharmaceuticals Inc.	HC	VC	PEx
Event655	24.10.2006	25.10.2006	Eagle Rock Energy Partners, L.P.	E&U	NSB	-
Event656	19.10.2006	20.10.2006	LeMaitre Vascular, Inc.	HC	NSB	-
Event657	19.10.2006	20.10.2006	ExlService Holdings, Inc.	IT	NSB	-
Event658	18.10.2006	19.10.2006	Susser Holdings Corporation	CG	NSB	-
Event659	17.10.2006	18.10.2006	Aptevo Research and Development LLC	HC	CO	NEx
Event660	17.10.2006	18.10.2006	First Mercury Financial Corporation	F&RE	NSB	-
Event661	17.10.2006	18.10.2006	Stanley, Inc.	IT	NSB	-
Event662	16.10.2006	17.10.2006	Archrock Partners, L.P.	E&U	NSB	-
Event663	12.10.2006	13.10.2006	Acme Packet, Inc.	IT	VC	NEx
Event664	12.10.2006	13.10.2006	eHealth, Inc.	F&RE	VC	PEx
Event665	12.10.2006	13.10.2006	Leidos Holdings, Inc.	IT	NSB	-

Event666	28.09.2006	29.09.2006	Bare Escentuals, Inc.	CG	NSB	-
Event667	28.09.2006	29.09.2006	Shutterfly, Inc.	CG	CO	NEx
Event668	28.09.2006	29.09.2006	ICF International, Inc.	I&M	VC	PEx
Event669	21.09.2006	22.09.2006	DivX, LLC	IT	CO	PEx
Event670	21.09.2006	22.09.2006	Limestone Bancorp, Inc.	F&RE	NSB	-
Event671	21.09.2006	22.09.2006	Commvault Systems, Inc.	IT	PE	PEx
Event672	20.09.2006	21.09.2006	Trividia Health, Inc.	HC	CO	PEx
Event673	20.09.2006	21.09.2006	Riverbed Technology, Inc.	IT	CO	NEx
Event674	19.09.2006	20.09.2006	Hiland Holdings GP, LP	E&U	NSB	-
Event675	17.08.2006	14.09.2006	Gold Resource Corporation	I&M	NSB	-
Event676	15.08.2006	16.08.2006	InnerWorkings, Inc.	I&M	VC	PEx
Event677	10.08.2006	11.08.2006	Evercore Inc.	F&RE	NSB	-
Event678	07.08.2006	08.08.2006	Aircastle Limited	I&M	NSB	-
Event679	03.08.2006	04.08.2006	Osiris Therapeutics, Inc.	HC	NSB	-
Event680	03.08.2006	04.08.2006	Buckeye GP Holdings L.P.	E&U	PE	NEx
Event681	25.07.2006	26.07.2006	Chart Industries, Inc.	I&M	CO	CEx
Event682	22.07.2006	23.07.2006	Home Bancshares, Inc.	F&RE	NSB	-
Event683	20.07.2006	21.07.2006	Cleveland BioLabs, Inc.	HC	PE	PEx
Event684	20.07.2006	21.07.2006	Targa Energy LP	E&U	NSB	-
Event685	13.07.2006	14.07.2006	Summit State Bank	F&RE	NSB	-
Event686	13.07.2006	14.07.2006	NuStar GP Holdings, LLC	E&U	NSB	-
Event687	12.07.2006	13.07.2006	Cowen Group, Inc.	F&RE	NSB	-
Event688	28.06.2006	29.06.2006	Replidyne, Inc.	HC	CO	NEx
Event689	27.06.2006	28.06.2006	Adobe Analytics	IT	CO	NEx
Event690	27.06.2006	28.06.2006	PGT Innovations, Inc.	I&M	PE	NEx
Event691	27.06.2006	28.06.2006	J.Crew Group, Inc.	CG	NSB	-
Event692	21.06.2006	22.06.2006	Techwell LLC	IT	CO	PEx
Event693	19.06.2006	20.06.2006	Eastern Insurance Holdings, Inc.	F&RE	NSB	-
Event694	15.06.2006	16.06.2006	Synchronoss Technologies, Inc.	IT	CO	PEx
Event695	14.06.2006	15.06.2006	Volcano Corporation	HC	CO	NEx
Event696	14.06.2006	15.06.2006	Houston Wire & Cable Company	I&M	PE	PEx
Event697	14.06.2006	15.06.2006	Golfsmith International Holdings Inc.	CG	PE	NEx
Event698	06.06.2006	07.06.2006	LoopNet, Inc.	CS	VC	PEx
Event699	02.06.2006	03.06.2006	Luna Innovations Incorporated	IT	NSB	-
Event700	02.06.2006	03.06.2006	Alphatec Holdings, Inc.	HC	CO	NEx
Event701	01.06.2006	02.06.2006	Town Sports International Holdings, Inc.	CG	NSB	-
Event702	25.05.2006	26.05.2006	Mueller Water Products, Inc.	I&M	NSB	-
Event703	24.05.2006	25.05.2006	Mastercard Incorporated	IT	NSB	-

Event704	23.05.2006	24.05.2006	Vonage Holdings Corp.	CS	CO	NEx
Event705	18.05.2006	19.05.2006	Allied World Underwriters, Inc.	F&RE	NSB	-
Event706	16.05.2006	17.05.2006	Restore Medical Incorporated	HC	VC	CEx
Event707	12.05.2006	13.05.2006	BioMimetic Therapeutics Inc.	HC	CO	NEx
Event708	09.05.2006	10.05.2006	Novacea, Inc.	HC	VC	PEx
Event709	09.05.2006	10.05.2006	Alliance Holdings GP, L.P.	E&U	NSB	-
Event710	03.05.2006	04.05.2006	Delek US Holdings, Inc.	E&U	NSB	-
Event711	03.05.2006	04.05.2006	Delta Tucker Holdings, Inc.	I&M	NSB	-
Event712	27.04.2006	28.04.2006	CPI International Holding Corp.	IT	PE	NEx
Event713	20.04.2006	21.04.2006	Omrix Biopharmaceuticals, Inc.	HC	VC	CEx
Event714	20.04.2006	21.04.2006	Complete Production Services, Inc.	E&U	PE	PEx
Event715	12.04.2006	13.04.2006	Vanda Pharmaceuticals Inc.	HC	CO	PEx
Event716	11.04.2006	12.04.2006	Targacept, Inc.	HC	VC	NEx
Event717	06.04.2006	07.04.2006	Sealy Corporation	CG	PE	PEx
Event718	05.04.2006	06.04.2006	Goodman Global, Inc.	I&M	PE	PEx
Event719	05.04.2006	06.04.2006	Castle Brands Inc.	CG	PE	NEx
Event720	04.04.2006	05.04.2006	VISICU, Inc.	HC	VC	PEx
Event721	03.04.2006	04.04.2006	Lake Shore Bancorp, Inc.	F&RE	NSB	-
Event722	23.03.2006	24.03.2006	Global Traffic Network Inc.	CS	NSB	-
Event723	23.03.2006	24.03.2006	Clayton Holdings LLC	I&M	NSB	-
Event724	21.03.2006	22.03.2006	Nextest Systems Corporation	IT	CO	NEx
Event725	14.03.2006	15.03.2006	TransDigm Group Incorporated	I&M	PE	PEx
Event726	08.03.2006	09.03.2006	Eagle Test Systems, Inc.	IT	NSB	-
Event727	22.02.2006	23.02.2006	Liquidity Services, Inc.	CG	PE	CEx
Event728	13.02.2006	14.02.2006	Morgans Hotel Group Co.	CG	PE	PEx
Event729	09.02.2006	10.02.2006	Magellan Midstream Holdings, L.P.	E&U	NSB	-
Event730	09.02.2006	10.02.2006	Acorda Therapeutics, Inc.	HC	VC	PEx
Event731	09.02.2006	10.02.2006	AmCOMP Incorporated	F&RE	CO	PEx
Event732	08.02.2006	09.02.2006	Morton's Restaurant Group, Inc.	CG	NSB	-
Event733	08.02.2006	09.02.2006	NTELOS Holdings Corp.	CS	NSB	-
Event734	08.02.2006	09.02.2006	NightHawk Radiology Holdings, Inc.	HC	PE	PEx
Event735	07.02.2006	08.02.2006	Crocs, Inc.	CG	NSB	-
Event736	03.02.2006	04.02.2006	Energy Transfer LP	E&U	NSB	-
Event737	02.02.2006	03.02.2006	SMART Modular Technologies	IT	PE	PEx
Event738	02.02.2006	03.02.2006	HealthSpring Inc.	HC	PE	PEx
Event739	02.02.2006	03.02.2006	Digital Music Group, Inc.	CS	NSB	-
Event740	01.02.2006	02.02.2006	Thomas Weisel Partners Group, Inc.	F&RE	CO	PEx
Event741	01.02.2006	02.02.2006	Valneva USA, Inc.	HC	PE	PEx
Event742	01.02.2006	02.02.2006	Valera Pharmaceuticals	HC	PE	PEx
Event743	31.01.2006	01.02.2006	FortuNet, Inc	CG	NSB	-
Event744	31.01.2006	01.02.2006	Koppers Holdings Inc.	I&M	NSB	-
Event745	31.01.2006	01.02.2006	SGX Pharmaceuticals, Inc.	HC	VC	PEx

Event746	30.01.2006	31.01.2006	H&E Equipment Services, Inc.	I&M	NSB	-
Event747	30.01.2006	31.01.2006	Regency Energy Partners LP	E&U	NSB	-
Event748	25.01.2006	26.01.2006	Chipotle Mexican Grill, Inc.	CG	NSB	-
Event749	25.01.2006	26.01.2006	Calumet Specialty Products Partners, L.P.	E&U	NSB	-
Event750	25.01.2006	26.01.2006	Traffic.com, Inc.	CS	CO	PEx
Event751	19.01.2006	20.01.2006	American Railcar Industries, Inc.	I&M	NSB	-
Event752	18.01.2006	19.01.2006	Western Refining, Inc.	E&U	NSB	-
Event753	21.12.2005	22.12.2005	Westaim Holdings Limited	HC	NSB	-
Event754	15.12.2005	16.12.2005	Envision Healthcare Corporation	HC	NSB	-
Event755	14.12.2005	15.12.2005	Pernix Sleep, Inc.	HC	NSB	-
Event756	12.12.2005	13.12.2005	Dealertrack Technologies, Inc.	IT	CO	PEx
Event757	08.12.2005	09.12.2005	Cynosure, Inc.	HC	NSB	-
Event758	07.12.2005	08.12.2005	International Coal Group, Inc.	E&U	NSB	-
Event759	06.12.2005	07.12.2005	Vocus Inc.	IT	CO	NEx
Event760	02.12.2005	03.12.2005	DCP Midstream, LP	E&U	NSB	-
Event761	21.11.2005	22.11.2005	Union Drilling, Inc.	E&U	NSB	-
Event762	21.11.2005	22.11.2005	Brookdale Senior Living Inc.	HC	PE	PEx
Event763	17.11.2005	18.11.2005	Dover Saddlery, Inc.	CG	NSB	-
Event764	17.11.2005	18.11.2005	Under Armour, Inc.	CG	PE	CEx
Event765	17.11.2005	18.11.2005	Amerisafe, Inc.	F&RE	PE	CEx
Event766	16.11.2005	17.11.2005	SunPower Corporation	IT	NSB	-
Event767	15.11.2005	16.11.2005	Intercontinental Exchange, Inc.	F&RE	NSB	-
Event768	10.11.2005	11.11.2005	Clear Channel Outdoor Holdings, Inc.	CS	NSB	-
Event769	09.11.2005	10.11.2005	iRobot Corporation	CG	CO	PEx
Event770	09.11.2005	10.11.2005	Zalicus Inc.	HC	NSB	-
Event771	08.11.2005	09.11.2005	Boardwalk Pipeline Partners, LP	E&U	NSB	-
Event772	01.11.2005	02.11.2005	Fusion CB Holdings, Inc.	CS	NSB	-
Event773	01.11.2005	02.11.2005	Web.com Group, Inc.	IT	VC	PEx
Event774	28.10.2005	29.10.2005	STRATA Skin Sciences, Inc.	HC	NSB	-
Event775	27.10.2005	28.10.2005	NxStage Medical, Inc.	HC	NSB	-
Event776	24.10.2005	28.10.2005	Legacy Bancorp Inc.	F&RE	NSB	-
Event777	20.10.2005	24.10.2005	NCI, Inc.	IT	NSB	-
Event778	17.10.2005	19.10.2005	CBOT Holdings Inc.	F&RE	NSB	-
Event779	13.10.2005	14.10.2005	PokerTek, Inc.	CG	NSB	-
Event780	11.10.2005	12.10.2005	TAL International Group, Inc.	I&M	PE	NEx
Event781	11.10.2005	12.10.2005	Investors Bancorp, Inc.	F&RE	NSB	-
Event782	04.10.2005	05.10.2005	Waterstone Financial, Inc.	F&RE	NSB	-
Event783	29.09.2005	30.09.2005	BBVA USA Bancshares, Inc.	F&RE	NSB	-
Event784	29.09.2005	30.09.2005	Avalon Pharmaceuticals, Inc.	HC	NSB	-
Event785	28.09.2005	29.09.2005	Caribou Coffee Company, Inc.	CG	NSB	-
Event786	28.09.2005	29.09.2005	Genomic Health, Inc.	HC	NSB	-
Event787	28.09.2005	29.09.2005	WebMD Health Corp.	CS	NSB	-

Event788	28.09.2005	29.09.2005	Global Partners LP	E&U	NSB	-
Event789	28.09.2005	29.09.2005	Ottawa Bancorp, Inc.	F&RE	NSB	-
Event790	28.09.2005	29.09.2005	Taleo Corp.	IT	PE	PEx
Event791	27.09.2005	28.09.2005	Sunesis Pharmaceuticals, Inc.	HC	NSB	-
Event792	23.09.2005	24.09.2005	North Pointe Holdings Corporation	F&RE	NSB	-
Event793	22.09.2005	23.09.2005	Everi Holdings Inc.	CG	NSB	-
Event794	21.09.2005	22.09.2005	Ikanos Communications, Inc.	IT	NSB	-
Event795	23.08.2005	24.08.2005	Enterprise ETE LLC	E&U	NSB	-
Event796	16.08.2005	17.08.2005	Bronco Drilling Co. Inc.	E&U	NSB	-
Event797	16.08.2005	17.08.2005	Rockwood Holdings, Inc.	I&M	PE	NEx
Event798	10.08.2005	11.08.2005	CF Industries Holdings, Inc.	I&M	NSB	-
Event799	10.08.2005	11.08.2005	Heartland Payment Systems, Inc.	IT	NSB	-
Event800	09.08.2005	10.08.2005	RBC Bearings Incorporated	I&M	NSB	-
Event801	09.08.2005	10.08.2005	Coley Pharmaceutical Group, Inc.	HC	NSB	-
Event802	08.08.2005	09.08.2005	K&F Industries Holdings, Inc.	I&M	NSB	-
Event803	08.08.2005	09.08.2005	James River Group, Inc.	F&RE	CO	NEx
Event804	08.08.2005	09.08.2005	Ruth's Hospitality Group, Inc.	CG	PE	PEx
Event805	05.08.2005	06.08.2005	AtriCure, Inc.	HC	CO	NEx
Event806	04.08.2005	05.08.2005	Dresser-Rand Group Inc.	E&U	NSB	-
Event807	04.08.2005	05.08.2005	Eschelon Telecom Inc.	CS	NSB	-
Event808	03.08.2005	04.08.2005	Republic Companies Group, Inc	F&RE	NSB	-
Event809	03.08.2005	04.08.2005	MWI Veterinary Supply, Inc.	HC	NSB	-
Event810	03.08.2005	04.08.2005	Advanced Analogic Technologies Incorporated	IT	CO	CEx
Event811	02.08.2005	03.08.2005	Unica Corporation	IT	PE	PEx
Event812	29.07.2005	30.07.2005	Golf Galaxy, LLC	CG	PE	NEx
Event813	28.07.2005	29.07.2005	Alon USA Energy, Inc.	E&U	NSB	-
Event814	28.07.2005	29.07.2005	Superior Well Services, Inc.	E&U	NSB	-
Event815	27.07.2005	28.07.2005	Maidenform Brands LLC	CG	NSB	-
Event816	26.07.2005	27.07.2005	Pike Corporation	I&M	PE	PEx
Event817	25.07.2005	26.07.2005	ITC Holdings Corp.	E&U	PE	PEx
Event818	21.07.2005	22.07.2005	Hittite Microwave Corporation	IT	PE	CEx
Event819	21.07.2005	22.07.2005	Consolidated Communications Holdings, Inc.	CS	NSB	-
Event820	20.07.2005	21.07.2005	Diamond Foods, LLC	CG	NSB	-
Event821	20.07.2005	21.07.2005	Adams Respiratory Therapeutics, Inc.	HC	PE	PEx
Event822	13.07.2005	14.07.2005	CryoCor, Inc.	HC	NSB	-
Event823	11.07.2005	13.07.2005	United Financial Bancorp, Inc.	F&RE	NSB	-
Event824	01.07.2005	02.07.2005	Western Alliance Bancorporation	F&RE	NSB	-
Event825	30.06.2005	01.07.2005	Colonial Financial Services, Inc.	F&RE	NSB	-
Event826	29.06.2005	30.06.2005	Heritage Financial Group, Inc.	F&RE	NSB	-
Event827	29.06.2005	30.06.2005	VOLCOM, Inc.	CG	NSB	-

Event828	28.06.2005	29.06.2005	CIFC LLC	F&RE	NSB	-
Event829	28.06.2005	29.06.2005	HemoSense, Inc.	HC	NSB	-
Event830	28.06.2005	29.06.2005	Neustar, Inc.	IT	CO	PEx
Event831	24.06.2005	25.06.2005	Kenexa Corp.	IT	CO	NEx
Event832	23.06.2005	24.06.2005	KKR Financial Holdings LLC	F&RE	NSB	-
Event833	23.06.2005	24.06.2005	BankFinancial Corporation	F&RE	NSB	-
Event834	22.06.2005	23.06.2005	Allion Healthcare, Inc.	HC	CO	NEx
Event835	22.06.2005	23.06.2005	Lincoln Educational Services Corporation	CG	NSB	-
Event836	22.06.2005	23.06.2005	Builders FirstSource, Inc.	I&M	CO	PEx
Event837	16.06.2005	17.06.2005	ev3 Inc.	HC	NSB	-
Event838	16.06.2005	17.06.2005	Micrus Endovascular LLC	HC	NSB	-
Event839	13.06.2005	14.06.2005	Murphy-Brown of Missouri, LLC	CG	PE	PEx
Event840	09.06.2005	10.06.2005	Silicon Graphics International Corp.	IT	PE	NEx
Event841	08.06.2005	09.06.2005	Hercules Capital, Inc.	F&RE	NSB	-
Event842	08.06.2005	09.06.2005	LHC Group, Inc.	HC	PE	PEx
Event843	02.06.2005	03.06.2005	Xenoport, Inc.	HC	NSB	-
Event844	27.05.2005	02.06.2005	North Penn Bancorp Inc.	F&RE	NSB	-
Event845	26.05.2005	27.05.2005	SSA Global Technologies, Inc.	IT	NSB	-
Event846	24.05.2005	25.05.2005	TransMontaigne Partners LLC	E&U	NSB	-
Event847	17.05.2005	18.05.2005	Citi Trends, Inc.	CG	NSB	-
Event848	16.05.2005	17.05.2005	Xerium Technologies, Inc.	I&M	NSB	-
Event849	10.05.2005	11.05.2005	Warner Music Group Corp.	CS	NSB	-
Event850	06.05.2005	07.05.2005	Bois d'Arc Energy Inc.	E&U	NSB	-
Event851	05.05.2005	06.05.2005	Zumiez Inc.	CG	PE	CEx
Event852	02.05.2005	03.05.2005	Coffee Holding Co., Inc.	CG	NSB	-
Event853	02.05.2005	03.05.2005	Morningstar, Inc.	F&RE	NSB	-
Event854	29.04.2005	30.04.2005	VeriFone Systems, Inc.	IT	NSB	-
Event855	20.04.2005	21.04.2005	National Atlantic Holdings Corporation	F&RE	NSB	-
Event856	14.04.2005	15.04.2005	Earle M. Jorgensen Company	I&M	CO	NEx
Event857	13.04.2005	14.04.2005	DexCom, Inc.	HC	NSB	-
Event858	05.04.2005	06.04.2005	FreightCar America, Inc.	I&M	PE	CEx
Event859	05.04.2005	06.04.2005	Brooklyn Federal Bancorp Inc.	F&RE	NSB	-
Event860	04.04.2005	05.04.2005	Benjamin Franklin Bancorp Inc.	F&RE	NSB	-
Event861	31.03.2005	01.04.2005	OC Financial Inc.	F&RE	NSB	-
Event862	31.03.2005	01.04.2005	ValueClick Media, Inc.	CS	VC	CEx
Event863	16.03.2005	17.03.2005	Intelsat Holding Corporation	CS	NSB	-
Event864	14.03.2005	15.03.2005	Axos Financial, Inc.	F&RE	NSB	-
Event865	08.03.2005	09.03.2005	International Securities Exchange Holdings, Inc.	F&RE	NSB	-

Event866	16.02.2005	17.02.2005	Dolby Laboratories, Inc.	IT	NSB	-
Event867	15.02.2005	16.02.2005	WEX Inc.	IT	NSB	-
Event868	14.02.2005	15.02.2005	Manitex International, Inc.	I&M	NSB	-
Event869	11.02.2005	12.02.2005	Prestige Consumer Healthcare Inc.	HC	NSB	-
Event870	10.02.2005	11.02.2005	Huntsman Corporation	I&M	PE	CEx
Event871	10.02.2005	11.02.2005	Universal Logistics Holdings, Inc.	I&M	NSB	-
Event872	10.02.2005	11.02.2005	Hiland Partners Holdings, LLC	E&U	NSB	-
Event873	09.02.2005	10.02.2005	Emageon, Inc.	HC	NSB	-
Event874	09.02.2005	10.02.2005	Syniverse Holdings, Inc.	IT	NSB	-
Event875	08.02.2005	09.02.2005	FTD Group, Inc.	CG	NSB	-
Event876	08.02.2005	09.02.2005	Icagen, Inc.	HC	NSB	-
Event877	08.02.2005	09.02.2005	Valor Communications Group Inc.	CS	NSB	-
Event878	03.02.2005	04.02.2005	ARC Document Solutions, Inc.	I&M	NSB	-
Event879	03.02.2005	04.02.2005	Threshold Pharmaceuticals, Inc.	HC	NSB	-
Event880	27.01.2005	28.01.2005	National Interstate Corporation	F&RE	NSB	-
Event881	27.01.2005	28.01.2005	W&T Offshore, Inc.	E&U	NSB	-
Event882	27.01.2005	28.01.2005	DFC Global Corp.	F&RE	PE	PEx
Event883	26.01.2005	27.01.2005	optionsXpress Holdings, Inc.	F&RE	PE	PEx
Event884	20.01.2005	21.01.2005	Celanese Corporation	I&M	NSB	-
Event885	20.01.2005	21.01.2005	SeaBright Holdings, Inc.	F&RE	NSB	-
Event886	20.01.2005	21.01.2005	ViaCell, Inc.	HC	CO	PEx
Event887	16.12.2004	17.12.2004	ICS Group Holdings Inc.	CS	VC	PEx
Event888	15.12.2004	16.12.2004	Herbalife Nutrition Ltd.	CG	PE	PEx
Event889	15.12.2004	16.12.2004	Advance America, Cash Advance Centers Inc.	F&RE	NSB	-
Event890	15.12.2004	16.12.2004	KMG America Corporation	F&RE	NSB	-
Event891	15.12.2004	16.12.2004	Interline Brands Inc.	I&M	NSB	-
Event892	15.12.2004	16.12.2004	Macquarie Infrastructure Corporation	I&M	NSB	-
Event893	14.12.2004	15.12.2004	Conor Medsystems, LLC	HC	CO	PEx
Event894	14.12.2004	15.12.2004	Las Vegas Sands Corp.	CG	NSB	-
Event895	14.12.2004	15.12.2004	Comstock Holding Companies, Inc.	CG	NSB	-
Event896	14.12.2004	15.12.2004	Great Wolf Resorts, Inc.	CG	NSB	-
Event897	14.12.2004	15.12.2004	Cascade Microtech Inc.	IT	VC	PEx
Event898	13.12.2004	14.12.2004	Knoll, Inc.	I&M	NSB	-
Event899	13.12.2004	14.12.2004	BlueLinx Holdings Inc.	I&M	PE	NEx
Event900	10.12.2004	11.12.2004	Cytyc Prenatal Products Corp.	HC	NSB	-
Event901	09.12.2004	10.12.2004	Market Leader, Inc.	IT	CO	PEx
Event902	08.12.2004	09.12.2004	Foundation Coal Holdings Inc.	E&U	NSB	-
Event903	08.12.2004	09.12.2004	Symmetry Medical, Inc.	HC	NSB	-
Event904	07.12.2004	08.12.2004	CABG Medical Inc.	HC	NSB	-

Event905	22.11.2004	23.11.2004	UAP Holding Corp.	I&M	PE	PEx
Event906	18.11.2004	19.11.2004	PortalPlayer LLC	IT	CO	PEx
Event907	18.11.2004	19.11.2004	Monolithic Power Systems, Inc.	IT	VC	PEx
Event908	17.11.2004	18.11.2004	Specialty Underwriters' Alliance, Inc.	F&RE	NSB	-
Event909	17.11.2004	18.11.2004	Windstream Iowa Communications, LLC	CS	NSB	-
Event910	10.11.2004	11.11.2004	Nalco Holding Company	I&M	PE	NEx
Event911	10.11.2004	11.11.2004	Ormat Technologies, Inc.	E&U	NSB	-
Event912	09.11.2004	10.11.2004	Copano Energy, L.L.C.	E&U	NSB	-
Event913	09.11.2004	10.11.2004	zipRealty Inc.	F&RE	NSB	-
Event914	04.11.2004	05.11.2004	MarketAxess Holdings Inc.	F&RE	CO	PEx
Event915	28.10.2004	29.10.2004	Build-A-Bear Workshop, Inc.	CG	PE	PEx
Event916	27.10.2004	28.10.2004	Foxhollow Technologies, Inc.	HC	NSB	-
Event917	27.10.2004	28.10.2004	Calamos Asset Management Inc.	F&RE	NSB	-
Event918	27.10.2004	28.10.2004	DreamWorks Animation, LLC	CS	NSB	-
Event919	20.10.2004	21.10.2004	VNUS Medical Technologies, Inc.	HC	CO	CEx
Event920	19.10.2004	20.10.2004	Celebrate Express Inc.	CG	VC	CEx
Event921	15.10.2004	16.10.2004	CoTherix, Inc.	HC	NSB	-
Event922	12.10.2004	13.10.2004	Huron Consulting Group Inc.	I&M	PE	PEx
Event923	06.10.2004	07.10.2004	Gold Kist, Inc.	CG	NSB	-
Event924	06.10.2004	07.10.2004	IntraLase Corp.	HC	NSB	-
Event925	06.10.2004	07.10.2004	RTW Retailwinds, Inc.	CG	NSB	-
Event926	06.10.2004	07.10.2004	Thomas Properties Group Inc.	F&RE	NSB	-
Event927	05.10.2004	06.10.2004	Innoviva, Inc.	HC	NSB	-
Event928	04.10.2004	05.10.2004	Texas Roadhouse, Inc.	CG	NSB	-
Event929	30.09.2004	01.10.2004	Aegis USA, Inc.	I&M	NSB	-
Event930	29.09.2004	30.09.2004	Ness Technologies Inc.	IT	PE	PEx
Event931	28.09.2004	29.09.2004	EA Mobile LLC	CS	CO	PEx
Event932	27.09.2004	28.09.2004	Visual Sciences, Inc.	IT	PE	PEx
Event933	23.09.2004	24.09.2004	Valley Bancorp	F&RE	NSB	-
Event934	23.09.2004	24.09.2004	3M Cogent, Inc.	IT	NSB	-
Event935	22.09.2004	23.09.2004	Beacon Roofing Supply, Inc.	I&M	PE	NEx
Event936	22.09.2004	23.09.2004	Educate, Inc.	CG	NSB	-
Event937	20.09.2004	21.09.2004	Nephros, Inc.	CG	NSB	-
Event938	14.09.2004	15.09.2004	StoneMor Inc.	CG	PE	NEx
Event939	09.09.2004	01.10.2004	Naugatuck Valley Financial Corporation	F&RE	NSB	-
Event940	01.09.2004	02.09.2004	PFSweb Retail Connect, Inc.	CG	NSB	-
Event941	18.08.2004	19.08.2004	Alphabet Inc.	CS	VC	PEx
Event942	12.08.2004	13.08.2004	Cohen & Steers, Inc.	F&RE	NSB	-
Event943	12.08.2004	13.08.2004	Archipelago Holdings, Inc.	F&RE	PE	PEx
Event944	11.08.2004	12.08.2004	Stereotaxis, Inc.	HC	CO	PEx

Event945	10.08.2004	11.08.2004	Westlake Chemical Corporation	I&M	NSB	-
Event946	10.08.2004	11.08.2004	Placer Sierra Bancshares	F&RE	NSB	-
Event947	06.08.2004	07.08.2004	HERE Holding Corporation	IT	NSB	-
Event948	05.08.2004	06.08.2004	Rightnow Technologies, Inc.	IT	CO	PEx
Event949	05.08.2004	06.08.2004	New River Pharmaceuticals Inc.	HC	NSB	-
Event950	04.08.2004	05.08.2004	Commercial Vehicle Group, Inc.	I&M	CO	PEx
Event951	29.07.2004	30.07.2004	EnerSys	I&M	PE	PEx
Event952	28.07.2004	29.07.2004	Volterra Semiconductor Corporation	IT	NSB	-
Event953	28.07.2004	29.07.2004	MannKind Corporation	HC	NSB	-
Event954	23.07.2004	24.07.2004	Auxilium Pharmaceuticals, LLC	HC	NSB	-
Event955	22.07.2004	23.07.2004	Lumera Corporation	IT	NSB	-
Event956	22.07.2004	23.07.2004	NeuroMetrix, Inc.	HC	NSB	-
Event957	22.07.2004	23.07.2004	Caterpillar Global Mining LLC	I&M	PE	PEx
Event958	22.07.2004	23.07.2004	Capgemini Financial Services International Inc.	IT	CO	PEx
Event959	21.07.2004	22.07.2004	Dex Media Holdings, Inc.	CS	PE	PEx
Event960	21.07.2004	22.07.2004	Blackbaud, Inc.	IT	PE	NEx
Event961	21.07.2004	22.07.2004	Idenix Pharmaceuticals, Inc.	HC	NSB	-
Event962	20.07.2004	21.07.2004	McCormick & Schmick's Seafood Restaurants, Inc.	CG	NSB	-
Event963	16.07.2004	17.07.2004	Xenogen Corporation	HC	CO	NEx
Event964	16.07.2004	17.07.2004	NXP USA, Inc.	IT	NSB	-
Event965	15.07.2004	16.07.2004	Greenfield Online, Inc.	CS	VC	PEx
Event966	14.07.2004	15.07.2004	Phase Forward Inc.	HC	NSB	-
Event967	12.07.2004	13.07.2004	Domino's Pizza, Inc.	CG	PE	PEx
Event968	08.07.2004	09.07.2004	NetLogic I LLC	IT	NSB	-
Event969	07.07.2004	08.07.2004	Holly Energy Partners, L.P.	E&U	NSB	-
Event970	30.06.2004	01.07.2004	Life Time, Inc.	CG	PE	PEx
Event971	30.06.2004	01.07.2004	WellCare Health Plans, Inc.	HC	NSB	-
Event972	29.06.2004	04.08.2004	First Ipswich Bancorp	F&RE	NSB	-
Event973	25.06.2004	26.06.2004	Multi-Fineline Electronix, Inc.	IT	NSB	-
Event974	24.06.2004	25.06.2004	Cabela's Incorporated	CG	NSB	-
Event975	22.06.2004	23.06.2004	Philips Solid-State Lighting Solutions, Inc.	IT	NSB	-
Event976	22.06.2004	23.06.2004	WCA Waste Corporation	I&M	CO	NEx
Event977	22.06.2004	23.06.2004	salesforce.com, inc.	IT	NSB	-
Event978	21.06.2004	22.06.2004	Senomyx, Inc.	I&M	NSB	-
Event979	21.06.2004	22.06.2004	Momenta Pharmaceuticals, Inc.	HC	NSB	-
Event980	18.06.2004	19.06.2004	21st Century Oncology Holdings, Inc.	HC	NSB	-
Event981	17.06.2004	18.06.2004	Blackboard Inc.	IT	NSB	-

Event982	16.06.2004	17.06.2004	ADESA, Inc.	I&M	NSB	-
Event983	16.06.2004	17.06.2004	InfoSonics Corporation	IT	NSB	-
Event984	15.06.2004	16.06.2004	Metabasis Therapeutics, Inc.	HC	NSB	-
Event985	09.06.2004	10.06.2004	Digirad Corporation	HC	CO	PEx
Event986	09.06.2004	10.06.2004	CBRE Group, Inc.	F&RE	NSB	-
Event987	03.06.2004	04.06.2004	Inhibitex, Inc.	HC	NSB	-
Event988	27.05.2004	28.05.2004	Alnylam Pharmaceuticals, Inc.	HC	NSB	-
Event989	27.05.2004	28.05.2004	SP Plus Corporation	I&M	NSB	-
Event990	26.05.2004	27.05.2004	AngioDynamics, Inc.	HC	NSB	-
Event991	26.05.2004	27.05.2004	ACADIA Pharmaceuticals Inc.	HC	NSB	-
Event992	24.05.2004	25.05.2004	Genworth Financial, Inc.	F&RE	NSB	-
Event993	19.05.2004	20.05.2004	Blue Nile, Inc.	CG	NSB	-
Event994	19.05.2004	20.05.2004	Animas LLC	HC	NSB	-
Event995	12.05.2004	13.05.2004	NuVasive, Inc.	HC	NSB	-
Event996	10.05.2004	11.05.2004	Arkhan Corporation	E&U	NSB	-
Event997	06.05.2004	07.05.2004	InfraSource Services, Inc.	I&M	NSB	-
Event998	05.05.2004	06.05.2004	Greenhill & Co., Inc.	F&RE	NSB	-
Event999	29.04.2004	30.04.2004	Cytokinetics, Incorporated	HC	NSB	-
Event1000	29.04.2004	30.04.2004	Intersections Inc.	I&M	NSB	-
Event1001	28.04.2004	29.04.2004	Barrier Therapeutics, Inc.	HC	NSB	-
Event1002	21.04.2004	22.04.2004	CSR Technology Holdings Inc.	IT	VC	PEx
Event1003	20.04.2004	21.04.2004	ProCentury Corporation	F&RE	NSB	-
Event1004	14.04.2004	15.04.2004	Corcept Therapeutics Incorporated	HC	CO	PEx
Event1005	05.04.2004	06.04.2004	Memory Pharmaceuticals Corp.	HC	NSB	-
Event1006	31.03.2004	01.04.2004	Santarus, Inc.	HC	CO	PEx
Event1007	30.03.2004	31.03.2004	Cutera, Inc.	HC	NSB	-
Event1008	30.03.2004	31.03.2004	Marchex, Inc.	CS	NSB	-
Event1009	26.03.2004	27.03.2004	Anadys Pharmaceuticals Inc.	HC	CO	PEx
Event1010	24.03.2004	25.03.2004	Ultra Clean Holdings, Inc.	IT	PE	PEx
Event1011	16.03.2004	17.03.2004	TNS Inc.	IT	CO	PEx
Event1012	16.03.2004	17.03.2004	Xcyte Therapies Inc.	HC	NSB	-
Event1013	16.03.2004	17.03.2004	Ipsen Biopharmaceuticals, Inc.	HC	NSB	-
Event1014	11.03.2004	02.04.2004	NewAlliance Bancshares, Inc.	F&RE	NSB	-
Event1015	01.03.2004	16.03.2004	1st Century Bancshares, Inc.	F&RE	NSB	-
Event1016	23.02.2004	24.02.2004	Acelity L.P. Inc.	HC	NSB	-
Event1017	19.02.2004	20.02.2004	Cherokee International Corporation	IT	NSB	-
Event1018	19.02.2004	20.02.2004	Dynavax Technologies Corporation	HC	CO	CEx
Event1019	11.02.2004	12.02.2004	Bristol West Holdings, Inc.	F&RE	PE	PEx
Event1020	11.02.2004	12.02.2004	Qualcomm Atheros, Inc.	IT	NSB	-
Event1021	06.02.2004	07.02.2004	Alphasmart Inc.	IT	NSB	-
Event1022	05.02.2004	06.02.2004	Symbion, Inc.	HC	NSB	-

Event1023	04.02.2004	05.02.2004	Asset Acceptance Capital Corp.	F&RE	NSB	-
Event1024	04.02.2004	05.02.2004	Assurant, Inc.	F&RE	NSB	-
Event1025	04.02.2004	05.02.2004	Evotec	HC	NSB	-
Event1026	04.02.2004	05.02.2004	TODCO	E&U	NSB	-
Event1027	02.02.2004	03.02.2004	ZF TRW Automotive Holdings Corp.	CG	NSB	-
Event1028	02.02.2004	03.02.2004	GTx, Inc.	HC	NSB	-
Event1029	29.01.2004	30.01.2004	Oldtech, Inc.	HC	CO	PEx
Event1030	23.01.2004	24.01.2004	L.B. Foster Rail Technologies, Inc.	I&M	PE	PEx
Event1031	21.01.2004	04.03.2004	Clifton Bancorp Inc.	F&RE	NSB	-
Event1032	13.01.2004	14.01.2004	Enlink Midstream, Inc.	E&U	PE	NEx
Event1033	08.01.2004	09.01.2004	Kirby Offshore Marine, LLC	E&U	NSB	-
Event1034	05.01.2004	06.01.2004	Cheviot Financial Corp.	F&RE	NSB	-
Event1035	19.12.2003	20.12.2003	Kintera, Inc.	IT	NSB	-
Event1036	18.12.2003	19.12.2003	Knology, Inc.	CS	CO	NEx
Event1037	17.12.2003	18.12.2003	Tempur Sealy International, Inc.	CG	NSB	-
Event1038	17.12.2003	18.12.2003	Provide Commerce, Inc.	CG	VC	PEx
Event1039	16.12.2003	17.12.2003	Universal Technical Institute, Inc.	CG	PE	PEx
Event1040	16.12.2003	17.12.2003	Orbitz, Inc.	CG	NSB	-
Event1041	15.12.2003	16.12.2003	Mercer Insurance Group, Inc.	F&RE	NSB	-
Event1042	11.12.2003	12.12.2003	Compass Minerals International, Inc.	I&M	PE	PEx
Event1043	11.12.2003	12.12.2003	Central Freight Lines, Inc.	I&M	NSB	-
Event1044	11.12.2003	12.12.2003	NPtest Holding Corp.	IT	NSB	-
Event1045	11.12.2003	12.12.2003	ArcelorMittal USA LLC	I&M	NSB	-
Event1046	10.12.2003	11.12.2003	Nelnet, Inc.	F&RE	NSB	-
Event1047	03.12.2003	04.12.2003	American Equity Investment Life Holding Company	F&RE	NSB	-
Event1048	25.11.2003	26.11.2003	SYNNEX Corporation	IT	PE	PEx
Event1049	25.11.2003	26.11.2003	Open Solutions, LLC	IT	NSB	-
Event1050	24.11.2003	25.11.2003	Conn's, Inc.	CG	CO	PEx
Event1051	24.11.2003	25.11.2003	Nexstar Media Group, Inc.	CS	PE	PEx
Event1052	20.11.2003	21.11.2003	Oxford Square Capital Corp.	F&RE	NSB	-
Event1053	20.11.2003	21.11.2003	Buffalo Wild Wings, Inc.	CG	NSB	-
Event1054	19.11.2003	20.11.2003	Callidus Software Inc.	IT	VC	PEx
Event1055	19.11.2003	20.11.2003	Whiting Petroleum Corporation	E&U	NSB	-
Event1056	12.11.2003	13.11.2003	Xperi Corporation	IT	NSB	-
Event1057	11.11.2003	12.11.2003	Marlin Business Services Corp.	F&RE	NSB	-
Event1058	10.11.2003	11.11.2003	Cinedigm Corp.	CS	NSB	-
Event1059	06.11.2003	07.11.2003	Quality Distribution Inc.	I&M	NSB	-

Event1060	05.11.2003	06.11.2003	Coast Financial Holdings Inc.	F&RE	NSB	-
Event1061	05.11.2003	06.11.2003	Pharmion LLC	HC	VC	PEx
Event1062	05.11.2003	06.11.2003	NitroMed, Inc.	HC	NSB	-
Event1063	30.10.2003	31.10.2003	Cognition Financial Corporation	F&RE	NSB	-
Event1064	30.10.2003	31.10.2003	UPS Ground Freight, Inc.	I&M	NSB	-
Event1065	29.10.2003	30.10.2003	Gilead Colorado, Inc.	HC	VC	NEx
Event1066	29.10.2003	30.10.2003	CancerVax Corp.	HC	CO	PEx
Event1067	23.10.2003	24.10.2003	Carter's, Inc.	CG	NSB	-
Event1068	09.10.2003	10.10.2003	Digitalnet Holdings Inc.	IT	PE	PEx
Event1069	02.10.2003	03.10.2003	LKQ Corporation	CG	NSB	-
Event1070	23.09.2003	24.09.2003	AMIS Holdings, Inc.	IT	PE	PEx
Event1071	23.09.2003	24.09.2003	Journal Communications, Inc.	CS	NSB	-
Event1072	18.09.2003	19.09.2003	Sigmatel Inc.	IT	CO	PEx
Event1073	17.09.2003	18.09.2003	NFP Corp.	F&RE	NSB	-
Event1074	18.08.2003	19.08.2003	The Providence Service Corporation	HC	NSB	-
Event1075	13.08.2003	14.08.2003	Texas Capital Bancshares, Inc.	F&RE	NSB	-
Event1076	11.08.2003	12.08.2003	DIRECT GENERAL INSURANCE AGENCY OF TENNESSEE, INC	F&RE	VC	PEx
Event1077	11.08.2003	09.01.2004	Cove Apparel, Inc.	CG	NSB	-
Event1078	06.08.2003	07.08.2003	CapitalSource Inc.	F&RE	NSB	-
Event1079	30.07.2003	31.07.2003	NETGEAR, Inc.	IT	VC	PEx
Event1080	23.07.2003	24.07.2003	iPass Inc.	IT	NSB	-
Event1081	23.07.2003	24.07.2003	Integrated Alarm Services Group Inc.	I&M	NSB	-
Event1082	16.07.2003	17.07.2003	InterVideo, Inc.	IT	VC	PEx
Event1083	09.07.2003	10.07.2003	DTS, Inc.	IT	CO	NEx
Event1084	02.07.2003	03.07.2003	Molina Healthcare, Inc.	HC	NSB	-
Event1085	26.06.2003	27.06.2003	Community First Bancorp Inc.	F&RE	NSB	-
Event1086	16.06.2003	17.06.2003	CN Bancorp, Inc.	F&RE	NSB	-
Event1087	11.06.2003	12.06.2003	FormFactor, Inc.	IT	VC	NEx
Event1088	12.05.2003	13.05.2003	iPayment Inc.	IT	NSB	-
Event1089	14.02.2003	15.02.2003	Accredited Home Lenders Holding Co.	F&RE	NSB	-
Event1090	12.02.2003	13.02.2003	Infinity Property and Casualty Corporation	F&RE	NSB	-
Event1091	15.01.2003	16.01.2003	Provident Financial Services, Inc.	F&RE	NSB	-
Event1092	17.12.2002	18.12.2002	Commercial Capital Bancorp, Inc.	F&RE	NSB	-
Event1093	17.12.2002	18.12.2002	VistaCare, LLC	HC	CO	CEx
Event1094	11.12.2002	12.12.2002	EnLink Midstream Partners, LP	E&U	NSB	-
Event1095	05.12.2002	06.12.2002	CME Group Inc.	F&RE	NSB	-

Event1096	21.11.2002	22.11.2002	Safety Insurance Group, Inc.	F&RE	NSB	-
Event1097	20.11.2002	21.11.2002	IMPAC Medical Systems, Inc.	HC	NSB	-
Event1098	11.11.2002	12.11.2002	Serco Services Inc.	IT	PE	PEx
Event1099	07.11.2002	08.11.2002	PRA Group, Inc.	F&RE	PE	PEx
Event1100	07.11.2002	08.11.2002	WellChoice Inc.	HC	NSB	-
Event1101	31.10.2002	01.11.2002	Martin Midstream Partners L.P.	E&U	NSB	-
Event1102	25.10.2002	26.10.2002	Wynn Resorts, Limited	CG	NSB	-
Event1103	22.10.2002	23.10.2002	Atlantic Liberty Financial Corp.	F&RE	NSB	-
Event1104	21.10.2002	22.10.2002	USI Holdings Corporation	F&RE	NSB	-
Event1105	15.10.2002	16.10.2002	DICK'S Sporting Goods, Inc.	CG	NSB	-
Event1106	15.10.2002	16.10.2002	Taylor Capital Group Inc.	F&RE	NSB	-
Event1107	10.10.2002	11.10.2002	Drive Shack Inc.	CG	NSB	-
Event1108	10.10.2002	11.10.2002	Enbridge Energy Management, L.L.C.	E&U	NSB	-
Event1109	10.10.2002	11.10.2002	Natural Resource Partners L.P.	E&U	NSB	-
Event1110	17.09.2002	18.09.2002	Synergy Financial Group Inc.	F&RE	NSB	-
Event1111	24.07.2002	25.07.2002	LeapFrog Enterprises Inc.	CG	NSB	-
Event1112	22.07.2002	23.07.2002	Pacific Energy Partners LP	E&U	NSB	-
Event1113	18.07.2002	19.07.2002	Red Robin Gourmet Burgers, Inc.	CG	NSB	-
Event1114	10.07.2002	11.07.2002	Kirkland's, Inc.	CG	NSB	-
Event1115	02.07.2002	03.07.2002	Minden Bancorp, Inc.	F&RE	NSB	-
Event1116	30.06.2002	04.09.2002	Galectin Therapeutics, Inc.	HC	NSB	-
Event1117	27.06.2002	28.06.2002	BAE Systems Science and Technology, Inc.	I&M	NSB	-
Event1118	27.06.2002	28.06.2002	Montana Mills Bread Co., Inc.	CG	NSB	-
Event1119	27.06.2002	28.06.2002	Inveresk Research Group Inc.	HC	NSB	-
Event1120	26.06.2002	27.06.2002	Aon Hewitt LLC	I&M	NSB	-
Event1121	25.06.2002	26.06.2002	Big 5 Sporting Goods Corporation	CG	PE	PEx
Event1122	20.06.2002	21.06.2002	Siemens Molecular Imaging, Inc.	HC	NSB	-
Event1123	18.06.2002	19.06.2002	Printcafe Software, Inc.	IT	NSB	-
Event1124	12.06.2002	13.06.2002	XPO Intermodal, Inc.	I&M	PE	PEx
Event1125	04.06.2002	05.06.2002	Veridian Corporation	I&M	NSB	-
Event1126	03.06.2002	04.06.2002	Plumtree Software, Inc.	IT	NSB	-
Event1127	29.05.2002	30.05.2002	Overstock.com, Inc.	CG	NSB	-
Event1128	23.05.2002	24.05.2002	SRA Companies, Inc.	IT	NSB	-
Event1129	23.05.2002	24.05.2002	Eon Labs, Inc.	HC	NSB	-
Event1130	22.05.2002	23.05.2002	Netflix, Inc.	CS	NSB	-
Event1131	22.05.2002	23.05.2002	Altiris Inc.	IT	NSB	-
Event1132	21.05.2002	22.05.2002	Computer Programs and Systems, Inc.	HC	NSB	-
Event1133	21.05.2002	22.05.2002	MarkWest Energy Partners, L.P.	E&U	NSB	-
Event1134	15.05.2002	16.05.2002	Verint Systems Inc.	IT	NSB	-

Event1135	08.05.2002	09.05.2002	Regal Entertainment Group	CS	NSB	-
Event1136	02.05.2002	03.05.2002	LIN Media LLC	CS	NSB	-
Event1137	29.04.2002	30.04.2002	Premcor Inc.	E&U	NSB	-
Event1138	17.04.2002	18.04.2002	ExpressJet Holdings Inc.	I&M	NSB	-
Event1139	12.04.2002	13.04.2002	Ribapharm Inc.	HC	NSB	-
Event1140	11.04.2002	12.04.2002	JetBlue Airways Corporation	I&M	NSB	-
Event1141	05.04.2002	08.04.2002	RSV Bancorp Inc.	F&RE	NSB	-
Event1142	27.03.2002	28.03.2002	MedSource Technologies, Inc.	HC	PE	CEx
Event1143	21.03.2002	22.03.2002	The Travelers Companies, Inc.	F&RE	NSB	-
Event1144	13.03.2002	14.03.2002	Asbury Automotive Group, Inc.	CG	NSB	-
Event1145	11.03.2002	12.03.2002	Anteon International Corporation	IT	PE	CEx
Event1146	28.02.2002	01.03.2002	Heritage Bancshares, Inc.	F&RE	NSB	-
Event1147	26.02.2002	27.02.2002	Integrated Defense Technologies Inc.	I&M	NSB	-
Event1148	21.02.2002	22.02.2002	PETCO Animal Supplies, Inc.	CG	NSB	-
Event1149	14.02.2002	15.02.2002	PayPal Holdings, Inc.	IT	NSB	-
Event1150	12.02.2002	13.02.2002	GameStop Corp.	CG	NSB	-
Event1151	07.02.2002	08.02.2002	ManTech International Corporation	IT	NSB	-
Event1152	04.02.2002	05.02.2002	Sunoco Logistics Partners L.P.	E&U	NSB	-
Event1153	31.01.2002	01.02.2002	ZymoGenetics, Inc.	HC	NSB	-
Event1154	31.01.2002	28.02.2002	Heritage Companies, Inc.	I&M	NSB	-
Event1155	29.01.2002	30.01.2002	Synaptics Incorporated	IT	VC	CEx
Event1156	27.12.2001	28.12.2001	Clover Leaf Financial Corp.	F&RE	NSB	-
Event1157	27.12.2001	28.12.2001	Western New England Bancorp, Inc.	F&RE	NSB	-
Event1158	20.12.2001	21.12.2001	PHSB Financial Corp.	F&RE	NSB	-
Event1159	14.12.2001	15.12.2001	Bruker AXS, Inc.	IT	NSB	-
Event1160	13.12.2001	14.12.2001	BAE Systems Land & Armaments LP	I&M	NSB	-
Event1161	12.12.2001	13.12.2001	Centene Corporation	HC	NSB	-
Event1162	12.12.2001	13.12.2001	Nassda Corporation	IT	NSB	-
Event1163	12.12.2001	13.12.2001	Prudential Financial, Inc.	F&RE	NSB	-
Event1164	11.12.2001	12.12.2001	NetScreen Technologies Inc.	IT	NSB	-
Event1165	10.12.2001	11.12.2001	Aramark Corporation	I&M	NSB	-
Event1166	06.12.2001	07.12.2001	Infor	IT	PE	PEx
Event1167	20.11.2001	21.11.2001	VCA Inc.	HC	NSB	-
Event1168	19.11.2001	20.11.2001	Magma Design Automation LLC	IT	NSB	-
Event1169	16.11.2001	17.11.2001	Henry Bros. Electronics, Inc.	I&M	NSB	-
Event1170	14.11.2001	15.11.2001	WW International, Inc.	CG	NSB	-
Event1171	14.11.2001	15.11.2001	DJO Opco Holdings, Inc.	HC	NSB	-

Event1172	12.11.2001	13.11.2001	The Advisory Board Company	I&M	NSB	-
Event1173	12.11.2001	13.11.2001	AMN Healthcare Services, Inc.	HC	NSB	-
Event1174	05.11.2001	06.11.2001	AMERIGROUP Corporation	HC	NSB	-
Event1175	31.10.2001	01.11.2001	LogicVision, Inc.	IT	NSB	-
Event1176	30.10.2001	31.10.2001	Odyssey HealthCare, Inc.	HC	NSB	-
Event1177	29.10.2001	30.10.2001	Anthem, Inc.	HC	NSB	-
Event1178	24.10.2001	25.10.2001	Penn Virginia Resource Partners LP	E&U	NSB	-
Event1179	24.10.2001	25.10.2001	Cross Country Healthcare, Inc.	HC	NSB	-
Event1180	22.10.2001	23.10.2001	Principal Financial Group, Inc.	F&RE	NSB	-
Event1181	16.10.2001	17.10.2001	Charter Financial Corporation	F&RE	NSB	-
Event1182	11.10.2001	12.10.2001	Abbott Diabetes Care, Inc.	HC	NSB	-
Event1183	11.10.2001	12.10.2001	PFS Bancorp Inc.	F&RE	NSB	-
Event1184	09.08.2001	10.08.2001	Mykrolis Corp.	IT	NSB	-
Event1185	07.08.2001	08.08.2001	Omnicell, Inc.	HC	NSB	-
Event1186	01.08.2001	02.08.2001	Bunge Limited	CG	NSB	-
Event1187	26.07.2001	27.07.2001	Alliance Healthcare Services, Inc.	HC	NSB	-
Event1188	26.07.2001	27.07.2001	Southern Connecticut Bancorp Inc.	F&RE	NSB	-
Event1189	26.07.2001	27.07.2001	PDF Solutions, Inc.	IT	NSB	-
Event1190	25.07.2001	26.07.2001	Inergy, L.P.	E&U	NSB	-
Event1191	23.07.2001	24.07.2001	MedCath Corp.	HC	NSB	-
Event1192	19.07.2001	20.07.2001	Natus Medical Incorporated	HC	NSB	-
Event1193	10.10.2000	11.10.2000	inVentiv Health Clinical, Inc.	HC	NSB	-
Event1194	26.06.2001	27.06.2001	Galyan's Trading Company, LLC	CG	NSB	-
Event1195	20.06.2001	21.06.2001	Multilink Technology Corp.	IT	NSB	-
Event1196	19.06.2001	20.06.2001	The Nassau Companies of New York	F&RE	NSB	-
Event1197	13.06.2001	14.06.2001	Odyssey Group Holdings, Inc.	F&RE	NSB	-
Event1198	13.06.2001	14.06.2001	FMC Technologies, Inc.	E&U	NSB	-
Event1199	12.06.2001	13.06.2001	Mondelez International, Inc.	CG	NSB	-
Event1200	07.06.2001	08.06.2001	United Surgical Partners International Inc.	HC	NSB	-
Event1201	07.06.2001	08.06.2001	Alliance Data Systems Corporation	IT	NSB	-
Event1202	05.06.2001	06.06.2001	Unilab Corporation	HC	NSB	-
Event1203	23.05.2001	24.05.2001	The Smith & Wollensky Restaurant Group, Inc.	CG	PE	PEx
Event1204	17.05.2001	18.05.2001	Instinet Group, LLC	F&RE	NSB	-
Event1205	17.05.2001	18.05.2001	Tellium, Inc.	IT	NSB	-
Event1206	14.05.2001	15.05.2001	Kinder Morgan Management, LLC	E&U	NSB	-
Event1207	02.05.2001	03.05.2001	Chesterfield Financial Corp.	F&RE	NSB	-
Event1208	02.05.2001	03.05.2001	Simplex Solutions, Inc.	IT	NSB	-
Event1209	30.04.2001	01.05.2001	RRI Energy, Inc.	E&U	NSB	-
Event1210	04.04.2001	05.04.2001	Select Medical Corporation	HC	NSB	-
Event1211	29.03.2001	22.05.2001	Dynamic Ventures, Inc.	I&M	NSB	-
Event1212	27.03.2001	28.03.2001	Agere Systems LLC	IT	NSB	-

Event1213	20.03.2001	21.03.2001	Verisity Ltd.	IT	NSB	-
Event1214	14.03.2001	15.03.2001	Bucs Financial Corp.	F&RE	NSB	-
Event1215	08.03.2001	09.03.2001	Encore Acquisition Company	E&U	NSB	-
Event1216	08.03.2001	09.03.2001	Opsware Inc.	IT	NSB	-
Event1217	06.03.2001	07.03.2001	Seattle Genetics, Inc.	HC	NSB	-
Event1218	02.03.2001	03.03.2001	Popeyes Louisiana Kitchen, Inc.	CG	NSB	-
Event1219	16.02.2001	30.03.2001	Arena Resources, Inc.	E&U	NSB	-
Event1220	09.02.2001	10.02.2001	Third Wave Technologies, Inc.	HC	NSB	-
Event1221	08.02.2001	09.02.2001	Oil States International, Inc.	E&U	PE	PEx
Event1222	05.02.2001	06.02.2001	Magellan Midstream Partners, L.P.	E&U	NSB	-
Event1223	30.01.2001	31.01.2001	Exact Sciences Corporation	HC	PE	PEx
Event1224	25.01.2001	26.01.2001	Align Technology, Inc.	HC	NSB	-
Event1225	25.01.2001	26.01.2001	Peet's Coffee & Tea, Inc.	CG	NSB	-
Event1226	19.12.2000	29.12.2000	Lawrence Financial Holdings Inc.	F&RE	NSB	-
Event1227	14.12.2000	15.12.2000	Resources Connection, Inc.	I&M	CO	CEx
Event1228	11.12.2000	12.12.2000	GenVec, Inc.	HC	CO	PEx
Event1229	08.12.2000	09.12.2000	American Physicians Capital, Inc.	F&RE	NSB	-
Event1230	07.12.2000	08.12.2000	Quest Diagnostics Nichols Institute of Valencia	HC	NSB	-
Event1231	06.12.2000	07.12.2000	Harvard Bioscience, Inc.	HC	VC	CEx
Event1232	30.11.2000	01.12.2000	First Federal Bancshares Inc.	F&RE	NSB	-
Event1233	28.11.2000	29.11.2000	Rigel Pharmaceuticals, Inc.	HC	NSB	-
Event1234	20.11.2000	21.11.2000	Alliance Fiber Optic Products Inc.	IT	NSB	-
Event1235	17.11.2000	18.11.2000	Array BioPharma Inc.	HC	NSB	-
Event1236	15.11.2000	16.11.2000	Inseego Corp.	IT	NSB	-
Event1237	15.11.2000	22.01.2001	James Monroe Bancorp Inc.	F&RE	NSB	-
Event1238	14.11.2000	15.11.2000	NRG Power Generation LLC	E&U	NSB	-
Event1239	13.11.2000	14.11.2000	Finger Lakes Bancorp, Inc	F&RE	NSB	-
Event1240	13.11.2000	14.11.2000	Adolor Corporation	HC	NSB	-
Event1241	10.11.2000	11.11.2000	Aerogen, Inc.	HC	NSB	-
Event1242	10.11.2000	11.11.2000	LeCroy Protocol Solutions Group	IT	NSB	-
Event1243	09.11.2000	10.11.2000	Source Photonics, Inc.	IT	NSB	-
Event1244	06.11.2000	07.11.2000	Transmeta Corporation	IT	CO	CEx
Event1245	03.11.2000	04.11.2000	Optical Communication Products, Inc.	IT	NSB	-
Event1246	02.11.2000	03.11.2000	UTi Worldwide Inc.	I&M	NSB	-
Event1247	01.11.2000	02.11.2000	Bank Mutual Corporation	F&RE	NSB	-
Event1248	26.10.2000	27.10.2000	MediChem Life Sciences, Inc.	HC	NSB	-
Event1249	17.10.2000	18.10.2000	Ixia	IT	PE	CEx
Event1250	17.10.2000	18.10.2000	Endwave Corporation	IT	NSB	-
Event1251	17.10.2000	18.10.2000	Monsanto Company	I&M	NSB	-
Event1252	12.10.2000	13.10.2000	Waypoint Financial Corp.	F&RE	NSB	-

Event1253	12.10.2000	13.10.2000	Synplicity, Inc.	IT	NSB	-
Event1254	11.10.2000	12.10.2000	WTW Delaware Holdings LLC	I&M	NSB	-
Event1255	06.10.2000	24.10.2000	First Shares Bancorp Inc.	F&RE	NSB	-
Event1256	05.10.2000	06.10.2000	Kosan Biosciences Incorporated	HC	NSB	-
Event1257	04.10.2000	05.10.2000	Tapestry, Inc.	CG	NSB	-
Event1258	03.10.2000	04.10.2000	Oplink Communications, Inc.	IT	NSB	-
Event1259	02.10.2000	03.10.2000	InforMax, Inc.	IT	NSB	-
Event1260	29.09.2000	30.09.2000	Integer Holdings Corporation	HC	PE	CEx
Event1261	29.09.2000	30.09.2000	Docent Inc.	CS	NSB	-
Event1262	29.09.2000	30.09.2000	STEC, Inc.	IT	NSB	-
Event1263	28.09.2000	29.09.2000	@Road, Inc.	IT	NSB	-
Event1264	28.09.2000	29.09.2000	Elastic Networks Inc.	IT	NSB	-
Event1265	28.09.2000	29.09.2000	Livingston International Technology Services Corporation	IT	NSB	-
Event1266	28.09.2000	29.09.2000	Vermillion, Inc.	HC	NSB	-
Event1267	28.09.2000	29.09.2000	Genomica Corp.	IT	NSB	-
Event1268	27.09.2000	28.09.2000	Hydril Company LP	E&U	NSB	-
Event1269	27.09.2000	28.09.2000	AvantGo, Inc.	IT	NSB	-
Event1270	27.09.2000	28.09.2000	DURECT Corporation	HC	CO	CEx
Event1271	26.09.2000	27.09.2000	EDEN Bioscience Corp.	I&M	NSB	-
Event1272	25.09.2000	27.09.2000	CBCT Bancshares Inc	F&RE	NSB	-
Event1273	21.09.2000	22.09.2000	Inrange Technologies Corporation	IT	NSB	-
Event1274	20.09.2000	21.09.2000	TTM Technologies, Inc.	IT	PE	PEx
Event1275	20.09.2000	21.09.2000	Zengine Inc.	IT	NSB	-
Event1276	18.09.2000	19.09.2000	Chiles Offshore Inc.	E&U	PE	CEx
Event1277	07.09.2000	08.09.2000	MediaLive International, Inc.	CS	NSB	-
Event1278	21.08.2000	22.08.2000	ISTA Pharmaceuticals, Inc.	HC	NSB	-
Event1279	18.08.2000	19.08.2000	TriQuint WJ, Inc.	IT	PE	CEx
Event1280	18.08.2000	21.08.2000	Pinnacle Financial Partners, Inc.	F&RE	NSB	-
Event1281	18.08.2000	02.10.2000	Commercefirst Bancorp Inc.	F&RE	NSB	-
Event1282	17.08.2000	18.08.2000	Integrated Telecom Express Inc.	IT	NSB	-
Event1283	17.08.2000	18.08.2000	PECO II, Inc.	I&M	NSB	-
Event1284	15.08.2000	16.08.2000	Baran Telecom, Inc.	I&M	CO	CEx
Event1285	15.08.2000	16.08.2000	PeoplePC Inc.	CS	NSB	-
Event1286	14.08.2000	15.08.2000	SynQuest Inc.	IT	NSB	-
Event1287	14.08.2000	15.08.2000	Dyax Corp.	HC	CO	PEx
Event1288	14.08.2000	15.08.2000	Micron Consumer Products Group, Inc.	IT	NSB	-

Event1289	11.08.2000	12.08.2000	Telik Inc.	HC	NSB	-
Event1290	10.08.2000	11.08.2000	American Medical Systems Holdings Inc.	HC	CO	PEx
Event1291	10.08.2000	11.08.2000	Vina Technologies, Inc.	IT	NSB	-
Event1292	10.08.2000	11.08.2000	RTI Surgical Holdings, Inc.	HC	NSB	-
Event1293	09.08.2000	10.08.2000	McDATA Corporation	IT	NSB	-
Event1294	09.08.2000	10.08.2000	Certara Strategic Consulting	HC	VC	CEx
Event1295	09.08.2000	10.08.2000	H Power Corp.	I&M	NSB	-
Event1296	09.08.2000	10.08.2000	Esperion Therapeutics, Inc.	HC	CO	NEx
Event1297	08.08.2000	09.08.2000	STATS ChipPAC, Inc.	IT	NSB	-
Event1298	07.08.2000	08.08.2000	Microsemi Corp. - Power Products Group	IT	NSB	-
Event1299	07.08.2000	08.08.2000	The Medicines Company	HC	NSB	-
Event1300	07.08.2000	08.08.2000	Pemstar Inc.	IT	NSB	-
Event1301	07.08.2000	08.08.2000	TeleCommunication Systems Inc.	IT	NSB	-
Event1302	04.08.2000	05.08.2000	Lantronix, Inc.	IT	NSB	-
Event1303	04.08.2000	05.08.2000	Microtune, Inc.	IT	NSB	-
Event1304	04.08.2000	05.08.2000	EXE Technologies, Inc.	IT	CO	CEx
Event1305	04.08.2000	05.08.2000	Rosetta Inpharmatics LLC	HC	NSB	-
Event1306	03.08.2000	04.08.2000	3-Dimensional Pharmaceuticals, Inc.	HC	NSB	-
Event1307	03.08.2000	04.08.2000	Innovative Solutions and Support, Inc.	I&M	NSB	-
Event1308	03.08.2000	04.08.2000	Bruker Corporation	HC	NSB	-
Event1309	02.08.2000	03.08.2000	California Pizza Kitchen, Inc.	CG	CO	CEx
Event1310	02.08.2000	03.08.2000	Danisco US Inc.	I&M	NSB	-
Event1311	02.08.2000	03.08.2000	Entravision Communications Corporation	CS	PE	NEx
Event1312	02.08.2000	03.08.2000	Signalsoft Corporation	IT	NSB	-
Event1313	02.08.2000	03.08.2000	Vicuron Pharmaceuticals, Inc.	HC	NSB	-
Event1314	02.08.2000	03.08.2000	Resonate, Inc.	IT	NSB	-
Event1315	02.08.2000	03.08.2000	Inspire Pharmaceuticals, Inc.	HC	NSB	-
Event1316	02.08.2000	03.08.2000	Pinnacor Inc.	IT	NSB	-
Event1317	01.08.2000	02.08.2000	Cogenics, Inc.	HC	NSB	-
Event1318	01.08.2000	02.08.2000	OPNET Technologies, Inc.	IT	CO	NEx
Event1319	31.07.2000	01.08.2000	Virage Logic Corporation	IT	NSB	-
Event1320	31.07.2000	01.08.2000	SpeechWorks International, Inc.	IT	CO	CEx
Event1321	31.07.2000	01.08.2000	Convergent Group Corporation	IT	NSB	-
Event1322	28.07.2000	29.07.2000	Keryx Biopharmaceuticals, Inc.	HC	NSB	-
Event1323	28.07.2000	29.07.2000	Arena Pharmaceuticals, Inc.	HC	NSB	-
Event1324	27.07.2000	28.07.2000	ValiCert, Inc.	IT	NSB	-
Event1325	27.07.2000	28.07.2000	Broadwing Corporation	CS	NSB	-
Event1326	27.07.2000	28.07.2000	Illumina, Inc.	HC	NSB	-

Event1327	27.07.2000	28.07.2000	Cisco WebEx LLC	CS	NSB	-
Event1328	27.07.2000	28.07.2000	Lexent, Inc.	CS	CO	NEx
Event1329	26.07.2000	27.07.2000	Applied Molecular Evolution, Inc.	HC	NSB	-
Event1330	26.07.2000	27.07.2000	Mainspring, Inc.	I&M	NSB	-
Event1331	24.07.2000	25.07.2000	Blue Martini Software Inc.	IT	NSB	-
Event1332	24.07.2000	25.07.2000	Raindance Communications Inc.	CS	NSB	-
Event1333	21.07.2000	22.07.2000	Talarian Corporation	IT	NSB	-
Event1334	21.07.2000	22.07.2000	Variagenics, Inc.	HC	NSB	-
Event1335	20.07.2000	21.07.2000	Corio, Inc.	IT	NSB	-
Event1336	19.07.2000	20.07.2000	Vascular Solutions, Inc.	HC	NSB	-
Event1337	18.07.2000	19.07.2000	Support.com, Inc.	IT	NSB	-
Event1338	14.07.2000	15.07.2000	OmniVision Technologies, Inc.	IT	NSB	-
Event1339	13.07.2000	14.07.2000	UNICOM Engineering, Inc.	IT	NSB	-
Event1340	13.07.2000	14.07.2000	Cassava Sciences, Inc.	HC	NSB	-
Event1341	10.07.2000	11.07.2000	Axcelis Technologies, Inc.	IT	NSB	-
Event1342	10.07.2000	11.07.2000	Entegris, Inc.	IT	NSB	-
Event1343	29.06.2000	30.06.2000	StorageNetworks, Inc.	IT	NSB	-
Event1344	28.06.2000	29.06.2000	Accord Networks Ltd.	IT	VC	CEx
Event1345	28.06.2000	29.06.2000	Capstone Turbine Corporation	I&M	CO	PEx
Event1346	28.06.2000	29.06.2000	CareScience, Inc.	IT	PE	CEx
Event1347	28.06.2000	29.06.2000	Autonomy Virage, Inc.	IT	NSB	-
Event1348	27.06.2000	28.06.2000	Berkshire Hills Bancorp, Inc.	F&RE	NSB	-
Event1349	26.06.2000	27.06.2000	Stratos International, Inc.	IT	NSB	-
Event1350	26.06.2000	27.06.2000	Huron Technologies Inc.	IT	NSB	-
Event1351	23.06.2000	24.06.2000	Charles River Laboratories International, Inc.	HC	PE	CEx
Event1352	23.06.2000	24.06.2000	Qualstar Corporation	IT	NSB	-
Event1353	22.06.2000	23.06.2000	Accelerated Networks, Inc.	IT	NSB	-
Event1354	22.06.2000	23.06.2000	Manufacturers' Services Limited	IT	NSB	-
Event1355	21.06.2000	22.06.2000	Cepheid	HC	NSB	-
Event1356	20.06.2000	21.06.2000	Handspring Inc.	IT	NSB	-
Event1357	14.06.2000	15.06.2000	Pacific Mercantile Bancorp	F&RE	NSB	-
Event1358	14.06.2000	15.06.2000	August Technology Corporation	IT	NSB	-
Event1359	14.06.2000	15.06.2000	OSCA, Inc.	E&U	NSB	-
Event1360	13.06.2000	14.06.2000	Intuitive Surgical, Inc.	HC	CO	PEx
Event1361	08.06.2000	09.06.2000	Community Health Systems, Inc.	HC	VC	CEx

Event1362	07.06.2000	08.06.2000	UbiquiTel Inc.	CS	NSB	-
Event1363	02.06.2000	03.06.2000	Exult Inc.	I&M	CO	PEx
Event1364	01.06.2000	02.06.2000	CrossWorlds Software	IT	CO	CEx
Event1365	31.05.2000	01.06.2000	ONI Systems Corp.	IT	CO	NEx
Event1366	31.05.2000	01.06.2000	Shionogi Pharma, Inc.	HC	NSB	-
Event1367	30.05.2000	31.05.2000	NRG Energy, Inc.	E&U	NSB	-
Event1368	25.05.2000	26.05.2000	Universal Compression Holdings, Inc.	E&U	PE	CEx
Event1369	24.05.2000	25.05.2000	Ribbon Communications Inc.	IT	NSB	-
Event1370	24.05.2000	25.05.2000	Sirenza Microdevices Inc.	IT	NSB	-
Event1371	24.05.2000	25.05.2000	Centillium Communications, Inc.	IT	NSB	-
Event1372	22.05.2000	23.05.2000	Integrated Circuit Systems, Inc.	IT	CO	PEx
Event1373	19.05.2000	20.05.2000	Q Interactive, LLC	CS	NSB	-
Event1374	18.05.2000	19.05.2000	Pixelworks, Inc.	IT	NSB	-
Event1375	17.05.2000	18.05.2000	US Unwired Inc.	CS	PE	CEx
Event1376	17.05.2000	18.05.2000	Nogatech, Inc	IT	NSB	-
Event1377	17.05.2000	18.05.2000	New Focus, Inc.	IT	VC	CEx
Event1378	16.05.2000	17.05.2000	Bancorp 34, Inc.	F&RE	NSB	-
Event1379	18.02.2000	19.02.2000	Westborough Financial Services, Inc.	F&RE	NSB	-
Event1380	12.05.2000	13.05.2000	Sequoia Software Corp.	IT	VC	CEx
Event1381	05.05.2000	15.05.2000	DemandStar.com, Inc.	CS	NSB	-
Event1382	05.05.2000	06.05.2000	Genomic Solutions Inc.	HC	NSB	-
Event1383	04.05.2000	05.05.2000	Cellmark Forensics, Inc.	HC	CO	PEx
Event1384	03.05.2000	04.05.2000	Crown Media Holdings, Inc.	CS	NSB	-
Event1385	02.05.2000	03.05.2000	Monogram Biosciences, Inc.	HC	NSB	-
Event1386	01.05.2000	02.05.2000	Sonic Innovations, Inc.	HC	VC	CEx
Event1387	27.04.2000	28.04.2000	ON Semiconductor Corporation	IT	CO	CEx
Event1388	27.04.2000	28.04.2000	SeeBeyond Technology Corp.	IT	NSB	-
Event1389	26.04.2000	27.04.2000	Praecis Pharmaceuticals Inc.	HC	CO	CEx
Event1390	19.04.2000	20.04.2000	Packard BioScience Company	HC	NSB	-
Event1391	19.04.2000	20.04.2000	Embarcadero Technologies, Inc.	IT	NSB	-
Event1392	19.04.2000	20.04.2000	Camber Government Solutions Inc.	IT	NSB	-
Event1393	12.04.2000	13.04.2000	Nuance Communications Inc.	IT	CO	CEx
Event1394	12.04.2000	13.04.2000	Corillian Corporation	IT	NSB	-
Event1395	11.04.2000	12.04.2000	Port Financial Corp.	F&RE	NSB	-
Event1396	10.04.2000	11.04.2000	Exelixis, Inc.	HC	CO	PEx
Event1397	10.04.2000	11.04.2000	HealthStream, Inc.	HC	NSB	-
Event1398	07.04.2000	08.04.2000	Lexicon Pharmaceuticals, Inc.	HC	CO	PEx

Event1399	07.04.2000	08.04.2000	LivePerson, Inc.	IT	NSB	-
Event1400	07.04.2000	08.04.2000	Numerical Technologies, Inc.	IT	NSB	-
Event1401	06.04.2000	07.04.2000	Sangamo Therapeutics, Inc.	HC	CO	CEx
Event1402	06.04.2000	07.04.2000	Tanox Inc.	HC	NSB	-
Event1403	06.04.2000	07.04.2000	Saba Software, Inc.	IT	NSB	-
Event1404	06.04.2000	07.04.2000	i3 Mobile Inc.	CS	NSB	-
Event1405	05.04.2000	06.04.2000	ORATEC Interventions, Inc.	HC	NSB	-
Event1406	04.04.2000	05.04.2000	Cabot Microelectronics Corpo-ration	IT	NSB	-
Event1407	04.04.2000	05.04.2000	Ulticom, Inc.	IT	NSB	-
Event1408	04.04.2000	05.04.2000	Eagle Bancorp Montana, Inc.	F&RE	NSB	-
Event1409	04.04.2000	05.04.2000	Krispy Kreme Doughnuts, Inc.	CG	NSB	-
Event1410	04.04.2000	05.04.2000	MetLife, Inc.	F&RE	NSB	-
Event1411	30.03.2000	31.03.2000	Luminex Corporation	HC	NSB	-
Event1412	30.03.2000	31.03.2000	ArrowPoint Communications	IT	VC	CEx
Event1413	30.03.2000	31.03.2000	Conversant LLC	CS	NSB	-
Event1414	28.03.2000	29.03.2000	DirecTV Broadband, Inc.	IT	NSB	-
Event1415	27.03.2000	28.03.2000	Websense, Inc.	IT	CO	NEx
Event1416	27.03.2000	28.03.2000	Allos Therapeutics, Inc.	HC	NSB	-
Event1417	27.03.2000	28.03.2000	Moldflow Corporation	IT	NSB	-
Event1418	24.03.2000	25.03.2000	InterMune, Inc.	HC	NSB	-
Event1419	24.03.2000	25.03.2000	eMachines, Inc.	IT	NSB	-
Event1420	23.03.2000	24.03.2000	Silicon Laboratories Inc.	IT	NSB	-
Event1421	23.03.2000	24.03.2000	Eprise Corporation	IT	NSB	-
Event1422	23.03.2000	24.03.2000	Blaze Advisor	IT	NSB	-
Event1423	23.03.2000	24.03.2000	Viasystems Group, Inc.	IT	PE	CEx
Event1424	22.03.2000	23.03.2000	inSilicon Corporation	IT	NSB	-
Event1425	22.03.2000	23.03.2000	PartsBase, Inc.	CS	NSB	-
Event1426	21.03.2000	22.03.2000	IGN Entertainment, Inc.	CS	NSB	-
Event1427	20.03.2000	21.03.2000	Aclara Biosciences Inc.	IT	CO	CEx
Event1428	17.03.2000	18.03.2000	TippingPoint Technologies, Inc.	IT	NSB	-
Event1429	15.03.2000	16.03.2000	Loudeye Corp.	CS	NSB	-
Event1430	13.03.2000	14.03.2000	Digitas, Inc.	CS	PE	CEx
Event1431	10.03.2000	11.03.2000	OTG Software, Inc.	IT	NSB	-
Event1432	09.03.2000	10.03.2000	OraPharma, Inc.	HC	VC	CEx
Event1433	09.03.2000	10.03.2000	HomeGrocer.com, Inc.	CG	NSB	-
Event1434	02.03.2000	03.03.2000	Register.com, Inc.	IT	CO	CEx

Event1435	02.03.2000	03.03.2000	UTStarcom Holdings Corp.	IT	NSB	-
Event1436	02.03.2000	03.03.2000	Prime Response, Inc.	IT	NSB	-
Event1437	02.03.2000	03.03.2000	CBS Switchboard, Inc.	IT	NSB	-
Event1438	01.03.2000	02.03.2000	Connecticut Bancshares Inc.	F&RE	NSB	-
Event1439	01.03.2000	02.03.2000	Palm, Inc.	IT	NSB	-
Event1440	29.02.2000	01.03.2000	net.Genesis Corp.	IT	CO	CEx
Event1441	29.02.2000	01.03.2000	Onvia, Inc.	IT	CO	CEx
Event1442	29.02.2000	01.03.2000	Dassault Systèmes Enovia Corp.	IT	NSB	-
Event1443	28.02.2000	29.02.2000	Niku, LLC	IT	NSB	-
Event1444	28.02.2000	29.02.2000	aQuantive, Inc.	CS	NSB	-
Event1445	25.02.2000	26.02.2000	Hotels.com	CG	NSB	-
Event1446	24.02.2000	25.02.2000	Intersil Corporation	IT	NSB	-
Event1447	24.02.2000	25.02.2000	Digitalthink Inc.	CG	NSB	-
Event1448	22.02.2000	23.02.2000	Nextel Partners, Inc.	CS	NSB	-
Event1449	17.02.2000	18.02.2000	Inforte Corp.	IT	NSB	-
Event1450	17.02.2000	18.02.2000	Apropos Technology, Inc.	IT	NSB	-
Event1451	16.02.2000	17.02.2000	Eloquent, Inc.	IT	NSB	-
Event1452	15.02.2000	16.02.2000	BASF Enzymes LLC	E&U	NSB	-
Event1453	15.02.2000	16.02.2000	LendingTree, LLC	F&RE	NSB	-
Event1454	15.02.2000	16.02.2000	Varsity Group, Inc.	CG	NSB	-
Event1455	14.02.2000	15.02.2000	Chordiant Software, Inc.	IT	NSB	-
Event1456	14.02.2000	15.02.2000	Cyxtera Data Centers, Inc.	IT	NSB	-
Event1457	11.02.2000	12.02.2000	Beasley Broadcast Group, Inc.	CS	NSB	-
Event1458	10.02.2000	11.02.2000	Lante Corp.	IT	CO	CEx
Event1459	10.02.2000	11.02.2000	Software AG USA, Inc.	IT	NSB	-
Event1460	10.02.2000	11.02.2000	Fargo Electronics, Inc.	IT	CO	NEx
Event1461	10.02.2000	11.02.2000	Lightspan, Inc.	CS	NSB	-
Event1462	09.02.2000	10.02.2000	Cypress Communications, Inc.	CS	NSB	-
Event1463	09.02.2000	10.02.2000	Organic, Inc.	CS	NSB	-
Event1464	09.02.2000	10.02.2000	Verint Americas Inc.	IT	NSB	-
Event1465	09.02.2000	10.02.2000	Healthvision, Inc.	HC	NSB	-
Event1466	08.02.2000	09.02.2000	Vicinity Corporation	IT	CO	CEx
Event1467	08.02.2000	09.02.2000	Landacorp, Inc.	HC	NSB	-
Event1468	08.02.2000	10.02.2000	Access Plans USA, Inc.	F&RE	NSB	-
Event1469	07.02.2000	08.02.2000	Rakuten Commerce LLC	CG	VC	CEx

Event1470	07.02.2000	08.02.2000	eOn Communications Corporation	IT	NSB	-
Event1471	04.02.2000	05.02.2000	FirePond, Inc.	IT	CO	CEx
Event1472	03.02.2000	04.02.2000	Oclaro, Inc.	IT	NSB	-
Event1473	03.02.2000	04.02.2000	Agenus Inc.	HC	NSB	-
Event1474	03.02.2000	04.02.2000	Mediacom Communications Corporation	CS	PE	CEx
Event1475	03.02.2000	04.02.2000	Dobson Communications Corporation	CS	PE	CEx
Event1476	03.02.2000	04.02.2000	Centra Software Inc.	IT	NSB	-
Event1477	03.02.2000	04.02.2000	Therma-Wave Inc.	IT	NSB	-
Event1478	01.02.2000	02.02.2000	Telaxis Communications Corporation	IT	VC	NEx
Event1479	01.02.2000	02.02.2000	Quantum Effect Devices, Inc.	IT	VC	CEx
Event1480	31.01.2000	01.02.2000	Sequenom Inc.	HC	CO	CEx
Event1481	31.01.2000	11.02.2000	SSI Investments II Limited	I&M	CO	CEx
Event1482	28.01.2000	29.01.2000	Caminus Corporation	IT	CO	CEx
Event1483	27.01.2000	28.01.2000	MutualFirst Financial, Inc.	F&RE	NSB	-
Event1484	27.01.2000	28.01.2000	Packaging Corporation of America	I&M	NSB	-
Event1485	27.01.2000	28.01.2000	Aspect Medical Systems, Inc.	HC	NSB	-
Event1486	27.01.2000	28.01.2000	NATCO Group Inc.	E&U	VC	CEx
Event1487	26.01.2000	27.01.2000	Extensity, Inc.	IT	NSB	-
Event1488	26.01.2000	27.01.2000	T/R Systems Inc.	IT	VC	CEx
Event1489	26.01.2000	27.01.2000	John Hancock Financial Services, Inc.	F&RE	NSB	-
Event1490	26.01.2000	28.01.2000	Targa Pipeline Partners LP	E&U	NSB	-
Event1491	24.01.2000	25.01.2000	Neoforma, Inc.	CS	NSB	-
Event1492	05.01.2000	06.01.2000	Security Financial Bancorp, Inc.	F&RE	NSB	-

Appendix A – table 2: Sample list with market and financial data

Event ID	Operation status	Offer price	Adj. Offer Price	Market cap in USDm	Revenue in USDm	GP %	EBITDA %	D/E ratio
Event1	Operating	18.00	12.95	1846.65	2670.97	17.68%	14.87%	2.87
Event2	Operating	21.00	21.00	2384.60	53.84	62.02%	NM	0.00
Event3	Operating	20.00	18.31	3761.35	0.00	NA	NA	NA
Event4	Bankrupt	17.00	16.29	1070.31	1347.00	60.28%	40.98%	0.26
Event5	Operating	7.00	7.00	183.58	0.00	NA	NA	0.00
Event6	Operating	20.00	39.29	21759.99	6152.00	35.18%	27.21%	7.42
Event7	Operating	20.00	18.64	5477.02	13945.66	9.21%	7.58%	6.44
Event8	Operating	23.00	19.53	820.80	115.89	70.25%	64.60%	0.02
Event9	Operating	5.50	5.50	230.97	9.52	NM	NM	NM
Event10	Operating	5.00	64.95	43.09	1.13	0.27%	NM	NM
Event11	Operating	20.00	200.00	1039.31	240.35	45.02%	21.75%	NM

Event12	Operating	22.00	22.00	4601.86	331.24	27.26%	NM	0.00
Event13	Operating	11.00	11.00	263.85	0.00	NA	NA	0.00
Event14	Operating	15.00	150.00	466.90	2.48	NM	NM	0.23
Event15	Operating	12.00	12.00	2254.68	1285.64	49.12%	12.15%	0.13
Event16	Operating	12.50	12.50	725.75	213.33	33.87%	11.31%	0.16
Event17	Operating	20.00	14.84	4710.58	1011.46	52.05%	41.81%	4.79
Event18	Acquired	8.64	8.64	1440.54	511.40	60.56%	23.62%	0.61
Event19	Operating	13.00	13.00	808.32	0.01	NM	NM	0.00
Event20	Operating	16.00	16.00	2369.81	288.78	25.45%	9.89%	NM
Event21	Acquired	10.00	10.00	213.80	73.84	58.75%	NM	1.25
Event22	Operating	26.00	26.00	22686.62	316.93	59.37%	NM	0.22
Event23	Operating	11.00	11.00	253.16	76.22	28.46%	11.16%	0.59
Event24	Operating	18.00	12.00	806.27	5357.90	7.76%	5.80%	0.00
Event25	Operating	16.00	16.00	459.10	0.63	NM	NM	NM
Event26	Operating	19.00	12.81	231.20	22.86	68.22%	47.49%	0.31
Event27	Operating	18.00	18.00	1002.38	198.93	77.33%	NM	NM
Event28	Operating	18.00	18.00	1627.80	706.76	58.81%	10.40%	1.28
Event29	Operating	12.00	12.00	496.60	385.72	40.31%	13.48%	0.00
Event30	Operating	13.00	12.16	258.18	11.63	34.78%	NM	0.00
Event31	Operating	24.00	24.00	1001.25	713.64	44.09%	24.74%	2.33
Event32	Operating	10.00	10.00	10.84	0.00	NA	NA	NM
Event33	Operating	18.00	9.65	0.18	4043.91	3.01%	0.69%	3.99
Event34	Operating	12.00	12.00	1420.18	292.16	18.82%	3.06%	16.11
Event35	Operating	15.00	14.99	2321.73	3321.89	31.93%	16.99%	2.09
Event36	Operating	8.50	8.50	78.68	1.12	40.16%	NM	0.41
Event37	Operating	20.00	20.00	5085.70	129.55	55.99%	23.56%	0.00
Event38	Operating	17.00	14.71	2232.63	413.21	85.32%	NA	10.69
Event39	Operating	22.00	41.02	2822.40	37797.00	5.95%	5.08%	1.10
Event40	Operating	16.00	16.71	626.97	63.83	28.82%	14.36%	NM
Event41	Operating	16.00	16.00	455.05	86.22	100.00%	NA	3.80
Event42	Operating	22.00	17.66	1108.61	3474.92	NM	NM	0.00
Event43	Operating	44.00	44.00	13863.33	264.98	55.64%	100.77%	0.88
Event44	Operating	15.00	15.00	458.12	90.92	83.75%	2.04%	12.13
Event45	Operating	14.00	14.00	861.78	274.91	31.13%	9.38%	0.19
Event46	Operating	18.00	13.06	1513.40	224.63	40.60%	33.93%	5.27
Event47	Operating	22.00	19.03	330.96	143.68	100.00%	44.38%	NM
Event48	Operating	17.00	17.00	1780.78	4144.66	38.95%	7.30%	NM
Event49	Operating	6.00	6.00	133.14	2.67	NM	NM	0.99
Event50	Operating	13.00	13.00	1105.63	114.53	60.79%	NM	296.89
Event51	Operating	27.00	27.92	1072.03	869.29	72.69%	46.23%	0.45
Event52	Operating	22.00	14.36	826.74	101.84	65.78%	66.82%	2.27
Event53	Operating	10.00	10.26	459.77	90.73	47.57%	NM	0.00
Event54	Operating	10.00	10.00	127.30	63.42	29.85%	4.92%	0.79
Event55	Operating	22.00	22.00	850.93	0.00	NA	NA	NM
Event56	Operating	18.00	18.00	995.32	10.65	46.63%	NM	0.06
Event57	Operating	12.00	12.00	67.65	0.00	NA	NA	NM
Event58	Operating	29.00	29.00	1822.91	106.59	43.70%	NM	0.16
Event59	Operating	20.00	20.00	4228.95	83.32	78.84%	NM	1.36
Event60	Operating	7.00	22.59	43.12	83.96	22.56%	8.69%	0.96
Event61	Operating	14.00	12.51	924.67	754.94	26.83%	20.54%	5.54

Event62	Operating	15.00	15.00	571.16	15.25	35.98%	NM	NM
Event63	Operating	26.50	26.50	1222.89	81.74	46.97%	NM	NM
Event64	Operating	13.00	13.00	209.98	9.98	NM	NM	0.00
Event65	Operating	19.00	11.20	0.02	462.60	33.46%	30.91%	0.19
Event66	Acquired	4.00	36.00	101.91	0.00	NA	NA	0.28
Event67	Acquired	23.00	23.00	4439.12	3300.12	17.30%	12.48%	4.92
Event68	Operating	21.00	21.00	1272.92	83.47	75.35%	12.99%	0.00
Event69	Operating	20.00	15.46	649.53	74.11	67.47%	63.80%	0.08
Event70	Acquired	14.00	14.00	167.24	942.40	22.79%	NM	1.05
Event71	Operating	21.00	19.08	594.19	162.20	81.57%	69.17%	0.24
Event72	Operating	16.00	15.95	2769.67	13.77	NM	NM	0.00
Event73	Operating	15.00	15.00	671.86	235.87	26.64%	14.14%	2.00
Event74	Operating	9.00	7.34	282.08	116.74	46.05%	7.73%	0.02
Event75	Operating	16.00	16.00	442.98	109.51	47.75%	3.31%	0.13
Event76	Operating	12.00	12.00	251.18	7.14	39.31%	NM	NM
Event77	Operating	20.00	20.25	2235.20	157.11	77.07%	76.52%	0.86
Event78	Operating	18.00	18.00	6451.22	1794.82	29.55%	7.30%	1.38
Event79	Acquired	20.00	17.55	354.82	51.05	58.82%	18.10%	3.92
Event80	Operating	15.00	2250.00	413.93	46.19	100.00%	NM	0.00
Event81	Operating	11.00	11.00	149.52	0.00	NA	NA	0.17
Event82	Operating	12.00	12.00	159.55	6.58	NM	NM	0.02
Event83	Operating	15.00	15.00	401.72	241.01	18.38%	5.88%	0.79
Event84	Operating	18.00	18.00	836.95	25.11	NM	NM	0.00
Event85	Operating	10.00	100.00	56.55	0.00	NM	NM	NM
Event86	Operating	23.00	17.58	2108.10	145.30	62.77%	50.31%	0.00
Event87	Operating	21.00	21.00	1390.73	144.69	93.70%	45.41%	0.13
Event88	Operating	14.00	14.00	1183.70	523.67	81.30%	18.91%	NM
Event89	Acquired	15.00	15.00	110.05	58.13	26.53%	4.45%	0.28
Event90	Operating	17.00	17.00	722.63	24.68	NM	NM	0.00
Event91	Operating	22.00	7.85	548.10	175.00	34.86%	30.86%	1.05
Event92	Operating	18.00	18.00	1050.91	300.41	22.06%	11.33%	9.08
Event93	Operating	10.00	10.00	444.81	105.19	41.71%	NM	0.06
Event94	Operating	11.00	8.58	57.49	51.69	63.03%	41.48%	NM
Event95	Operating	18.00	18.00	3453.04	7647.00	28.14%	7.94%	NM
Event96	Operating	17.00	15.95	3136.91	10128.20	16.48%	7.16%	29.45
Event97	Operating	6.00	6.00	150.14	0.00	NA	NA	0.00
Event98	Operating	10.00	10.00	117.05	22.97	46.19%	NM	0.95
Event99	Operating	17.00	17.00	108.97	233.52	51.55%	4.06%	0.81
Event100	Operating	15.00	15.00	401.50	33.95	NM	NM	NM
Event101	Operating	17.00	17.00	595.13	0.34	NM	NM	0.00
Event102	Operating	17.50	14.71	6707.19	4611.30	60.46%	14.05%	2.55
Event103	Operating	19.00	19.00	768.93	96.72	79.03%	9.34%	NM
Event104	Operating	15.00	15.00	354.68	27.08	75.07%	NM	NA
Event105	Operating	15.00	15.00	635.54	45.22	14.90%	0.17%	0.00
Event106	Operating	14.00	14.00	382.62	53.59	72.48%	NM	0.69
Event107	Operating	11.00	10.50	273.59	1650.50	11.10%	5.90%	NM
Event108	Operating	21.00	21.00	1524.91	1121.30	21.78%	10.91%	NM
Event109	Operating	14.50	14.50	513.33	72.04	30.99%	17.00%	0.00

Event110	Operating	13.00	13.00	826.61	58.41	57.79%	NM	0.08
Event111	Operating	31.00	31.00	1781.23	127.73	91.89%	6.35%	0.00
Event112	Operating	25.00	1138.39	810.88	398.33	14.08%	2.31%	2.36
Event113	Operating	8.00	8.00	119.56	17.63	NM	NM	NM
Event114	Operating	21.50	16.06	897.08	258.86	40.38%	29.62%	0.69
Event115	Acquired	11.00	11.00	494.74	95.87	40.22%	NM	0.83
Event116	Acquired	14.00	14.00	249.99	8.65	NM	NM	NM
Event117	Operating	11.50	11.50	351.96	55.37	100.00%	NA	0.13
Event118	Operating	40.00	40.00	5464.72	3692.30	33.39%	13.16%	NM
Event119	Operating	18.00	17.55	217.78	277.34	97.62%	NA	1.71
Event120	Operating	19.50	19.22	5390.10	9728.70	42.60%	11.00%	0.36
Event121	Operating	23.00	23.00	1350.86	959.07	24.67%	9.62%	0.00
Event122	Operating	5.00	5.71	150.12	77.45	18.83%	8.01%	29.97
Event123	Operating	27.00	23.65	3108.54	1423.75	40.36%	27.30%	4.07
Event124	Operating	15.00	15.00	965.37	1116.00	19.44%	20.88%	4.28
Event125	Operating	14.00	14.00	405.07	56.85	78.46%	NM	NM
Event126	Operating	8.00	8.08	183.11	0.00	NA	NA	0.00
Event127	Operating	20.00	18.01	1488.98	342.49	53.38%	36.51%	6.24
Event128	Operating	14.00	14.00	443.53	33.72	10.72%	NM	1.03
Event129	Operating	22.00	22.00	686.01	1041.18	19.85%	9.48%	0.85
Event130	Operating	26.00	24.43	330.33	64.54	100.00%	NA	1.76
Event131	Operating	20.00	17.51	2505.75	2478.49	23.58%	15.81%	2.94
Event132	Operating	14.00	98.00	502.61	59.56	58.42%	NM	0.33
Event133	Operating	20.00	17.27	1573.35	2042.53	58.59%	29.93%	NM
Event134	Operating	15.50	14.90	395.52	84.26	51.89%	NM	NM
Event135	Operating	14.00	14.00	283.03	41.71	100.00%	51.46%	0.00
Event136	Operating	7.00	140.00	140.07	7.60	NM	NM	NM
Event137	Acquired	17.00	17.00	996.51	196.74	16.12%	NM	NM
Event138	Operating	30.00	16.22	427.24	505.58	24.23%	9.79%	NM
Event139	Operating	8.00	64.00	45.49	6.15	86.91%	41.31%	0.53
Event140	Operating	16.00	16.00	811.58	80.02	66.53%	NM	0.70
Event141	Acquired	28.00	28.00	139.12	31.62	100.00%	NA	1.14
Event142	Operating	14.00	14.00	62.07	41.94	100.00%	10.75%	0.52
Event143	Operating	18.00	18.00	385.22	28.66	42.37%	NM	482.27
Event144	Operating	21.00	19.52	1131.57	2779.06	13.52%	3.57%	2.81
Event145	Operating	26.00	24.69	15505.00	4336.00	64.18%	24.10%	0.14
Event146	Operating	10.00	10.00	77.61	0.00	NA	NA	NM
Event147	Operating	22.00	22.00	1780.51	1070.94	22.98%	14.75%	1.49
Event148	Operating	9.00	9.00	150.00	54.80	81.64%	5.89%	1.14
Event149	Operating	19.00	8.73	573.40	740.20	19.82%	16.85%	0.37
Event150	Operating	19.00	19.00	5490.19	2276.25	35.05%	25.18%	1.48
Event151	Operating	25.00	13.78	3660.48	8281.70	14.34%	9.98%	0.79
Event152	Acquired	18.00	9.88	509.20	118.79	68.18%	52.80%	1.46
Event153	Operating	8.00	8.00	856.49	59.55	20.85%	NM	0.45
Event154	Operating	26.00	19.14	553.91	14960.34	7.39%	2.34%	0.72
Event155	Operating	16.00	9.45	1178.13	3207.97	12.06%	11.57%	5.20
Event156	Operating	15.00	15.00	902.65	120.02	60.67%	7.34%	1.78
Event157	Operating	5.00	900.00	52.32	0.00	NM	NM	0.64

Event158	Operating	21.00	11.94	509.55	744.08	5.86%	2.39%	0.28
Event159	Operating	24.00	24.00	1149.83	958.08	37.19%	6.01%	0.50
Event160	Operating	17.00	17.00	2897.75	2025.75	33.79%	12.03%	0.40
Event161	Operating	22.00	14.83	1939.58	410.60	53.26%	40.99%	0.01
Event162	Operating	20.00	10.14	294.89	1623.56	2.65%	1.89%	NM
Event163	Operating	28.00	28.00	1926.37	134.43	51.37%	NM	NM
Event164	Operating	17.50	17.21	395.71	49.37	69.82%	37.08%	0.66
Event165	Operating	15.00	15.00	299.72	1.81	100.00%	NM	NM
Event166	Acquired	10.00	9.92	42.92	6.83	100.00%	NA	0.00
Event167	Operating	27.00	25.20	4642.52	4093.00	52.80%	11.04%	NM
Event168	Operating	16.00	16.00	331.69	12.99	90.85%	NM	0.00
Event169	Operating	17.00	15.96	722.44	120.27	62.17%	20.26%	NM
Event170	Operating	15.00	15.00	708.71	2344.20	22.85%	3.45%	0.01
Event171	Operating	6.00	6.00	157.53	97.26	66.63%	12.74%	0.00
Event172	Operating	16.00	15.79	1689.00	4766.00	16.41%	14.92%	NM
Event173	Operating	9.00	9.00	706.87	193.95	67.71%	4.76%	NM
Event174	Operating	20.00	9.44	1030.58	103.86	71.25%	54.43%	0.55
Event175	Operating	12.00	12.00	425.52	76.21	82.62%	10.86%	NM
Event176	Operating	20.50	10.95	472.08	3874.98	1.11%	0.60%	0.01
Event177	Operating	17.00	17.00	607.46	38.52	84.96%	NM	3.30
Event178	Operating	19.25	17.50	1030.47	164.43	100.00%	NA	0.04
Event179	Acquired	18.00	17.49	922.68	193.74	100.00%	NA	0.42
Event180	Operating	17.00	12.05	265.85	20.35	68.32%	57.24%	4.48
Event181	Operating	9.00	9.00	478.58	162.97	58.84%	32.13%	2.43
Event182	Operating	11.00	10.03	1617.53	3841.26	16.43%	8.85%	52.34
Event183	Operating	14.00	14.00	453.96	107.77	34.16%	NM	0.33
Event184	Operating	12.00	12.00	1220.24	331.48	79.25%	34.93%	0.00
Event185	Acquired	11.50	11.50	478.96	71.35	67.70%	NM	NM
Event186	Operating	13.00	13.00	290.26	198.63	25.96%	15.46%	0.73
Event187	Operating	10.00	10.00	161.59	0.00	NA	NA	NM
Event188	Operating	15.00	15.00	336.54	59.69	63.76%	3.00%	NM
Event189	Operating	14.00	8.78	1346.55	4037.90	12.68%	1.12%	0.97
Event190	Operating	15.00	14.74	419.71	264.54	29.25%	5.73%	1.79
Event191	Operating	13.00	13.00	145.70	130.58	19.90%	11.58%	2.15
Event192	Operating	42.00	42.00	3538.51	118.60	72.79%	NM	NM
Event193	Operating	26.00	26.00	1249.98	224.53	91.72%	16.41%	0.00
Event194	Operating	17.00	17.00	1471.63	297.11	35.29%	11.21%	0.00
Event195	Operating	9.00	9.00	163.78	0.00	NA	NA	0.00
Event196	Operating	10.00	9.19	32.40	13.54	100.00%	NA	0.33
Event197	Operating	18.00	18.00	2959.13	128.07	63.60%	3.31%	0.00
Event198	Operating	10.00	10.83	139.98	45.93	73.71%	14.23%	NM
Event199	Operating	13.50	13.50	373.12	0.00	NA	NA	0.00
Event200	Operating	21.00	13.49	839.24	109.61	76.08%	60.29%	0.78
Event201	Operating	38.00	38.00	81742.84	3711.00	82.73%	56.02%	0.14
Event202	Operating	17.00	17.00	387.88	97.67	53.20%	10.22%	0.00
Event203	Operating	9.00	9.00	281.53	135.64	58.97%	14.35%	0.25
Event204	Operating	15.50	11.19	463.96	400.62	32.24%	12.63%	0.08

Event205	Operating	17.00	13.74	2293.50	614.93	19.21%	12.78%	0.27
Event206	Operating	22.00	12.81	672.53	2845.30	83.20%	74.91%	0.97
Event207	Operating	10.00	9.52	1221.21	766.79	100.00%	NA	1.60
Event208	Operating	5.00	5.00	137.25	0.80	100.00%	NM	2.91
Event209	Operating	11.00	11.00	170.87	1675.21	12.59%	7.16%	NM
Event210	Operating	4.00	4.00	34.26	0.00	NA	NA	0.05
Event211	Operating	9.00	9.00	222.33	50.65	63.49%	4.37%	0.05
Event212	Operating	16.00	16.00	937.22	132.84	78.29%	1.18%	0.00
Event213	Operating	13.00	13.00	417.58	81.84	63.67%	NM	NM
Event214	Operating	17.00	17.00	3349.58	120.96	90.41%	NM	1.64
Event215	Operating	18.00	18.00	1778.12	329.97	57.28%	21.37%	16.85
Event216	Operating	6.10	6.13	32.56	1.71	41.35%	NM	0.00
Event217	Operating	21.00	21.00	2110.93	4832.42	14.09%	5.43%	2.12
Event218	Operating	20.00	20.00	1818.19	1128.13	32.13%	19.19%	1.02
Event219	Operating	43.00	26.99	1269.05	155.77	NM	NM	0.02
Event220	Operating	6.00	6.00	288.39	149.52	19.44%	NM	2.42
Event221	Acquired	13.00	13.00	1759.92	103.68	38.66%	0.01%	0.00
Event222	Operating	7.00	33.29	571.93	34.22	NM	NM	NM
Event223	Operating	19.00	19.00	325.15	175.48	42.91%	9.32%	0.07
Event224	Operating	18.00	17.96	1910.08	1674.90	35.38%	19.29%	NM
Event225	Operating	19.00	19.00	631.22	117.62	38.95%	13.29%	0.00
Event226	Operating	16.00	16.00	541.54	79.50	60.37%	1.51%	2.31
Event227	Operating	15.00	16.45	156.58	101.12	82.34%	46.59%	4.38
Event228	Operating	19.00	19.00	1697.03	207.49	66.17%	NM	0.17
Event229	Operating	17.00	17.00	2509.64	1622.42	53.36%	24.56%	1.43
Event230	Operating	23.00	21.12	4452.78	2162.80	44.13%	31.66%	4.21
Event231	Operating	19.00	19.00	984.41	310.30	42.50%	18.71%	0.00
Event232	Operating	16.00	16.00	755.95	56.55	65.15%	3.76%	1.29
Event233	Operating	14.00	14.00	1265.34	272.47	100.00%	NA	4.84
Event234	Operating	15.00	15.00	1471.68	83.29	92.88%	NM	0.00
Event235	Operating	12.00	12.00	938.70	64.48	60.28%	NM	NM
Event236	Operating	16.00	16.00	373.98	98.94	60.25%	31.47%	0.02
Event237	Operating	13.00	104.00	348.65	6.62	NM	NM	NM
Event238	Operating	11.00	11.00	377.16	63.56	68.19%	NM	0.45
Event239	Operating	44.00	10.71	64.84	140.40	100.00%	NA	1.51
Event240	Operating	5.00	5.00	134.31	91.06	46.56%	7.37%	0.18
Event241	Operating	10.00	9.55	392.39	31.67	10.46%	NM	0.17
Event242	Operating	8.50	7.78	451.37	3841.98	27.00%	5.72%	4.63
Event243	Operating	9.00	9.00	1831.62	8539.70	46.62%	20.46%	19.12
Event244	Operating	12.00	12.00	572.06	334.53	38.62%	19.20%	0.00
Event245	Acquired	6.00	30.00	119.80	0.00	NA	NA	NM
Event246	Operating	12.00	12.00	656.64	67.00	79.59%	77.87%	0.42
Event247	Operating	10.00	10.00	370.09	89.84	55.02%	5.24%	0.00
Event248	Operating	17.00	14.70	847.06	295.60	38.70%	26.79%	2.32
Event249	Operating	10.00	10.00	224.40	0.00	NA	NA	0.00
Event250	Operating	10.00	9.61	29.32	9.86	100.00%	NA	0.64
Event251	Operating	13.00	13.00	852.20	172.47	60.37%	10.67%	0.00
Event252	Operating	10.00	10.00	205.63	824.03	15.44%	12.40%	0.27
Event253	Acquired	17.00	15.34	1311.94	163.20	71.57%	59.68%	0.00
Event254	Operating	10.00	10.00	6643.76	597.46	70.53%	21.02%	0.00

Event255	Operating	17.00	17.00	2206.57	242.00	83.52%	75.24%	1.20
Event256	Operating	18.00	12.96	316.11	17.45	64.26%	51.70%	0.13
Event257	Operating	12.00	12.00	885.99	46.27	57.41%	NM	1.23
Event258	Acquired	20.00	14.43	335.59	208.08	29.54%	16.06%	0.00
Event259	Operating	10.00	10.00	400.26	42.67	50.96%	6.95%	0.00
Event260	Operating	12.00	7.26	150.00	255.47	69.31%	59.97%	NM
Event261	Operating	19.00	19.00	725.65	497.31	52.73%	10.79%	NM
Event262	Operating	13.00	13.00	870.92	59.04	68.27%	NM	NM
Event263	Operating	13.00	13.00	274.91	0.00	NA	NA	0.00
Event264	Operating	7.50	7.50	686.94	96.55	54.79%	24.09%	0.00
Event265	Operating	8.25	825000.00	1732.50	0.00	NA	NA	0.25
Event266	Operating	19.00	11.80	298.28	115.62	71.35%	74.52%	0.07
Event267	Acquired	7.00	63.00	144.69	2.08	NM	NM	0.75
Event268	Operating	18.00	18.00	552.55	55.38	77.73%	NM	0.49
Event269	Operating	20.00	14.15	759.26	179.86	42.57%	44.41%	NM
Event270	Operating	20.00	20.00	16653.04	312.94	86.29%	NM	1.37
Event271	Operating	13.00	13.00	514.30	25.46	51.71%	NM	0.17
Event272	Operating	15.00	14.49	1140.08	197.87	40.84%	31.48%	0.00
Event273	Acquired	10.00	10.00	63.95	6.56	100.00%	NA	0.97
Event274	Acquired	10.00	10.00	92.72	14.90	100.00%	NA	2.14
Event275	Acquired	10.00	9.11	37.46	10.62	100.00%	NA	1.16
Event276	Operating	10.00	10.00	312.00	38.56	57.77%	NM	NM
Event277	Operating	17.00	17.00	1072.74	124.70	62.89%	22.34%	NM
Event278	Operating	15.00	15.00	366.84	330.12	25.98%	6.88%	NM
Event279	Operating	15.00	15.00	1281.84	656.04	38.75%	24.87%	1.15
Event280	Operating	19.00	15.95	4067.19	577.14	77.35%	41.69%	6.09
Event281	Acquired	21.00	11.85	192.03	212.25	12.36%	8.05%	0.66
Event282	Operating	17.00	204.00	1120.59	135.18	60.93%	24.43%	NM
Event283	Operating	16.00	14.70	1221.50	1316.50	21.24%	16.14%	2.20
Event284	Operating	20.00	6.67	893.41	30.47	83.68%	NM	0.00
Event285	Operating	20.00	20.00	522.25	160.58	53.25%	11.57%	NM
Event286	Operating	21.50	9.53	925.82	116.45	72.16%	58.62%	1.42
Event287	Operating	10.00	9.37	56.15	14.41	100.00%	NA	0.57
Event288	Acquired	10.00	10.00	22.40	7.03	100.00%	NA	1.24
Event289	Operating	10.00	7.10	91.91	0.05	100.00%	NM	0.00
Event290	Acquired	27.00	27.00	3089.42	167.88	84.72%	18.10%	0.00
Event291	Operating	18.00	18.00	1282.39	3224.40	19.44%	9.68%	6.88
Event292	Operating	15.00	15.00	1534.00	220.60	61.32%	32.30%	0.48
Event293	Operating	20.00	8.49	285.14	81.41	53.35%	35.75%	5.59
Event294	Operating	16.00	16.00	2117.99	137.76	41.26%	0.91%	0.17
Event295	Operating	19.00	19.00	1867.42	36.22	55.77%	NM	0.00
Event296	Operating	15.00	15.36	996.08	279.60	56.60%	5.00%	0.23
Event297	Acquired	18.00	18.00	4473.36	4458.00	37.91%	21.98%	NM
Event298	Operating	12.00	12.00	824.55	781.27	25.45%	9.32%	NM

Event299	Operating	45.00	45.00	8796.88	243.10	81.56%	14.90%	0.00
Event300	Operating	21.00	9.02	299.50	939.18	4.82%	1.78%	1.41
Event301	Operating	18.00	17.18	6735.18	5.11	100.00%	NM	2.89
Event302	Operating	12.00	12.00	370.34	241.06	45.51%	21.88%	1.68
Event303	Operating	19.00	19.45	1242.56	94.87	54.04%	74.51%	0.32
Event304	Operating	13.50	13.50	396.19	80.42	43.46%	21.58%	0.01
Event305	Operating	0.25	0.92	38.06	2.74	76.63%	27.25%	0.00
Event306	Acquired	10.00	9.73	171.20	12.50	100.00%	NA	1.50
Event307	Operating	12.00	12.00	679.25	94.07	56.50%	20.37%	0.01
Event308	Operating	21.00	12.87	717.28	29.06	NM	NM	0.00
Event309	Operating	16.00	16.00	539.69	74.06	12.21%	NM	0.34
Event310	Operating	26.50	24.83	2688.50	62.26	66.25%	NM	0.74
Event311	Operating	6.00	6.00	138.11	43.23	71.08%	6.62%	0.00
Event312	Operating	18.00	18.00	1042.59	186.10	34.10%	3.80%	0.84
Event313	Operating	13.00	12.84	475.34	2030.63	8.53%	5.91%	3.61
Event314	Operating	16.00	8.97	532.35	180.47	27.91%	16.47%	0.00
Event315	Acquired	4.00	48.00	101.57	8.54	NM	NM	NM
Event316	Acquired	10.00	10.00	17.46	2.70	100.00%	NA	1.41
Event317	Operating	16.00	14.52	1463.40	1822.17	35.25%	14.44%	1.27
Event318	Operating	19.00	8.58	2177.50	2074.46	100.00%	NA	0.62
Event319	Operating	10.00	10.00	797.87	152.94	38.64%	0.68%	0.51
Event320	Operating	13.00	13.00	851.11	43.73	67.35%	NM	NM
Event321	Operating	30.00	23.39	16033.18	28035.00	37.77%	19.93%	NM
Event322	Operating	5.00	5.00	88.14	0.00	NA	NA	NM
Event323	Operating	30.00	20.89	21952.35	7852.00	37.88%	30.43%	1.87
Event324	Operating	13.50	13.50	266.61	33.56	26.73%	NM	NM
Event325	Operating	15.00	90000.09	414.62	16.40	17.99%	NM	1.02
Event326	Operating	6.00	6.00	105.52	0.00	NA	NA	NM
Event327	Acquired	10.00	8.55	133.31	10.70	100.00%	NA	5.54
Event328	Operating	7.00	7.00	121.15	14.56	NM	NM	NM
Event329	Operating	16.00	16.00	498.67	103.99	69.49%	15.58%	0.00
Event330	Operating	11.00	11.00	328.64	177.68	30.56%	10.48%	0.25
Event331	Operating	27.00	21.44	2640.40	611.81	100.00%	NA	1.83
Event332	Operating	23.00	18.66	6905.02	5103.00	58.36%	23.24%	2.98
Event333	Acquired	10.00	10.00	25.53	21.93	100.00%	NA	3.06
Event334	Operating	17.00	33.68	1790.93	252.94	48.08%	19.90%	0.00
Event335	Acquired	10.00	8.10	30.86	5.40	100.00%	NA	1.83
Event336	Operating	10.00	8.23	71.15	8.58	100.00%	NA	0.00
Event337	Acquired	20.00	13.83	699.59	72.80	38.41%	NM	6.49
Event338	Operating	11.00	11.00	222.83	180.80	25.67%	14.42%	0.97
Event339	Operating	6.00	30.00	42.50	0.00	NA	NA	NM
Event340	Operating	11.00	13.57	1474.25	2571.35	20.32%	14.93%	NM
Event341	Operating	12.00	12.00	67.02	80.94	56.55%	33.53%	5.24
Event342	Operating	10.00	9.56	214.74	84.81	100.00%	NA	1.95
Event343	Operating	23.00	23.00	2152.97	354.07	72.41%	46.85%	0.76
Event344	Operating	9.00	6.72	269.43	153.35	87.93%	NA	3.73
Event345	Operating	25.50	66.30	3515.29	1023.06	100.00%	NA	0.85
Event346	Operating	22.00	12.99	129.24	4542.30	11.23%	8.64%	1.52
Event347	Operating	5.00	5.00	135.47	18.64	NM	NM	NM
Event348	Operating	4.00	32.00	133.25	0.00	NA	NA	0.48
Event349	Operating	13.50	13.50	1110.38	655.05	52.36%	24.67%	6.02
Event350	Operating	33.00	25.51	51390.00	104589.00	NM	NM	0.55

Event351	Operating	30.00	23.99	3494.19	2749.51	20.89%	13.23%	1.64
Event352	Operating	17.00	7.30	2451.22	5122.63	21.62%	5.76%	3.12
Event353	Operating	12.00	12.26	375.89	58.85	63.86%	15.70%	0.00
Event354	Operating	9.00	9.00	198.47	0.62	100.00%	NM	0.82
Event355	Operating	22.00	22.00	1540.99	861.93	32.09%	9.90%	1.44
Event356	Operating	12.00	12.00	128.14	46.98	17.48%	NM	NM
Event357	Acquired	10.00	10.00	16.22	9.53	100.00%	NA	0.93
Event358	Operating	16.00	16.00	517.46	49.63	35.48%	6.73%	2.05
Event359	Operating	10.00	8.69	222.14	141.87	93.60%	75.67%	3.59
Event360	Operating	16.00	16.00	850.43	0.14	100.00%	NM	0.00
Event361	Operating	9.50	9.50	72.45	0.00	NA	NA	NM
Event362	Operating	14.00	14.87	326.10	311.71	17.39%	10.64%	NM
Event363	Operating	16.00	16.00	1089.63	288.94	52.31%	19.96%	0.39
Event364	Operating	11.00	11.00	1172.69	225.00	52.63%	15.96%	0.67
Event365	Operating	13.00	12.17	243.33	1634.41	5.97%	7.60%	28.63
Event366	Operating	10.00	10.00	270.69	39.04	28.48%	0.14%	0.00
Event367	Operating	16.00	239.99	724.22	64.61	NM	NM	0.28
Event368	Operating	9.50	9.50	246.80	36.18	79.29%	18.84%	0.02
Event369	Operating	4.00	4.00	31.39	14.30	72.56%	15.01%	0.56
Event370	Acquired	6.50	3.80	175.32	8.81	100.00%	NA	0.74
Event371	Operating	11.00	11.00	934.58	140.90	58.47%	14.48%	10.08
Event372	Operating	11.50	11.55	196.03	65.08	94.92%	20.60%	0.00
Event373	Operating	10.00	10.00	139.79	0.00	NA	NA	0.77
Event374	Operating	13.00	13.00	627.52	140.70	65.37%	12.30%	2.63
Event375	Operating	5.00	5.00	128.85	5.02	100.00%	NM	79.15
Event376	Operating	9.00	9.00	309.80	77.92	31.49%	9.45%	0.00
Event377	Acquired	21.00	16.19	3163.69	466.30	61.72%	56.23%	0.02
Event378	Operating	10.00	10.00	406.46	428.52	18.60%	7.87%	1.13
Event379	Operating	36.00	36.00	1801.31	270.62	84.50%	21.59%	0.33
Event380	Operating	16.00	16.00	929.42	149.85	6.45%	NM	NM
Event381	Operating	10.00	10.00	959.46	157.36	88.95%	9.07%	0.48
Event382	Acquired	10.00	9.48	75.41	15.62	100.00%	NA	1.14
Event383	Operating	17.00	17.00	2218.80	111.94	8.52%	NM	0.02
Event384	Operating	12.00	12.00	833.68	77.61	65.82%	34.23%	3.89
Event385	Operating	9.00	9.07	207.88	68.89	75.94%	NM	NM
Event386	Operating	14.00	14.00	1471.77	33.95	74.40%	30.17%	0.20
Event387	Operating	29.00	24.34	3289.28	426.08	92.24%	48.46%	0.00
Event388	Operating	6.00	6.00	63.31	1.00	NM	NM	0.00
Event389	Operating	13.00	13.00	414.13	203.12	44.75%	NM	0.00
Event390	Operating	12.00	12.00	1219.71	510.19	19.50%	4.21%	0.00
Event391	Operating	8.00	7.51	377.96	110.88	81.74%	39.98%	0.00
Event392	Operating	17.00	16.44	1529.11	1721.07	41.65%	12.02%	2.96
Event393	Operating	14.00	350.00	409.16	483.32	10.73%	3.84%	1.03
Event394	Operating	20.50	12.85	1291.34	281.16	85.22%	71.55%	0.86
Event395	Operating	11.25	7.23	165.71	174.34	32.74%	24.35%	2.15
Event396	Operating	18.00	18.21	395.58	185.08	20.84%	3.45%	0.16
Event397	Operating	21.50	17.12	734.35	72.18	63.61%	53.02%	1.04
Event398	Operating	9.00	8.82	165.72	63.09	60.72%	6.31%	0.15

Event399	Operating	12.00	6.14	117.14	37.75	68.96%	8.81%	0.46
Event400	Operating	11.00	165.15	341.87	0.00	NA	NA	NM
Event401	Operating	13.00	13.00	477.04	82.91	79.88%	NM	0.23
Event402	Acquired	21.00	20.85	710.88	1098.70	12.31%	4.78%	NM
Event403	Operating	15.00	13.63	0.00	2220.40	46.91%	34.69%	0.10
Event404	Operating	15.00	7.20	1055.81	270.92	49.16%	38.03%	0.61
Event405	Operating	15.00	15.00	283.21	69.49	60.03%	NM	NM
Event406	Operating	13.00	12.27	551.12	232.95	35.24%	NM	0.14
Event407	Operating	14.50	10.64	662.37	298.48	100.00%	NA	1.18
Event408	Operating	14.00	14.00	548.62	51.35	66.80%	10.58%	0.02
Event409	Operating	12.00	11.54	659.35	84.98	65.20%	10.02%	0.33
Event410	Operating	9.00	90.00	266.51	20.72	85.71%	NM	NM
Event411	Operating	18.00	18.00	3096.98	1134.94	34.62%	26.11%	5.97
Event412	Operating	14.00	11.73	312.49	0.00	NA	NA	NM
Event413	Operating	10.00	10.00	623.50	2271.03	17.81%	19.40%	NM
Event414	Operating	15.00	15.00	653.48	260.53	30.30%	19.21%	0.49
Event415	Operating	13.00	8.57	879.73	588.25	40.09%	26.89%	NM
Event416	Operating	11.25	9.68	1102.89	34.32	NM	NM	201.80
Event417	Acquired	10.00	10.00	48.10	7.55	100.00%	NA	1.95
Event418	Operating	13.00	13.00	239.46	519.02	10.58%	10.92%	3.91
Event419	Operating	12.00	9.92	1688.16	1714.30	27.16%	13.25%	0.31
Event420	Acquired	10.00	9.92	140.21	45.30	100.00%	NA	1.36
Event421	Operating	5.00	5.07	112.82	185.68	80.02%	94.66%	2.28
Event422	Operating	13.50	13.50	404.04	1226.03	20.81%	11.41%	3.08
Event423	Operating	12.00	12.00	803.72	1331.32	20.23%	11.32%	NM
Event424	Operating	12.00	3.62	1586.20	1771.40	40.56%	18.89%	3.58
Event425	Operating	13.00	13.00	118.19	189.43	17.50%	9.08%	0.86
Event426	Operating	16.50	16.50	2056.16	31.42	93.98%	32.47%	1.76
Event427	Operating	12.50	6.25	1087.61	211.79	69.09%	4.33%	NM
Event428	Operating	19.00	19.00	547.02	391.41	33.82%	8.68%	1.06
Event429	Operating	21.00	19.77	7742.86	10457.67	29.27%	8.27%	1.48
Event430	Operating	25.00	24.50	4864.72	2510.00	35.98%	25.22%	0.35
Event431	Operating	13.50	13.50	591.52	197.59	78.67%	29.34%	0.61
Event432	Operating	17.00	17.00	405.18	601.54	41.80%	8.83%	1.13
Event433	Operating	10.00	10.00	94.47	236.31	29.22%	7.17%	1.44
Event434	Operating	12.50	12.50	0.01	7619.95	9.94%	5.06%	5.09
Event435	Operating	14.50	14.50	740.83	166.90	84.04%	27.39%	NM
Event436	Operating	10.00	10.00	58.06	78.66	NM	NM	0.05
Event437	Operating	15.00	15.00	791.29	508.47	37.02%	30.38%	1.47
Event438	Operating	12.50	12.50	334.70	209.13	37.28%	13.80%	1.88
Event439	Operating	10.00	10.00	180.09	1.17	100.00%	NM	NM
Event440	Operating	22.00	21.81	4740.03	893.55	56.70%	40.88%	NM
Event441	Operating	14.00	14.00	302.21	202.81	21.25%	3.16%	0.30
Event442	Acquired	19.00	19.00	2714.30	1365.59	37.11%	17.33%	NM
Event443	Operating	10.00	8.02	1574.98	2105.56	20.13%	12.74%	5.15
Event444	Bankrupt	26.00	24.22	504.40	422.15	47.15%	27.41%	0.00

Event445	Operating	12.00	12.00	329.31	143.60	26.51%	3.15%	2.72
Event446	Operating	15.50	15.50	1333.29	853.60	36.56%	22.52%	0.98
Event447	Operating	17.00	17.00	290.55	35.08	91.32%	23.00%	0.39
Event448	Operating	15.00	12.25	3875.64	1699.00	42.26%	19.48%	0.91
Event449	Operating	16.00	15.19	429.58	51.72	88.46%	NM	0.00
Event450	Operating	14.00	7.00	364.59	105.72	52.66%	NM	NM
Event451	Operating	20.00	18.01	620.28	55.84	68.20%	8.19%	0.00
Event452	Operating	19.00	19.00	919.86	275.20	89.64%	59.92%	0.69
Event453	Operating	18.00	18.00	573.89	209.38	86.30%	17.16%	0.13
Event454	Operating	10.50	10.50	640.34	218.29	71.22%	16.43%	0.00
Event455	Operating	24.00	20.64	5432.00	2882.40	62.54%	27.85%	NM
Event456	Operating	12.00	12.00	540.08	99.33	56.88%	7.70%	1.75
Event457	Operating	10.00	8.35	22.86	6.07	100.00%	NA	0.27
Event458	Operating	10.00	9.13	102.57	17.61	100.00%	NA	0.34
Event459	Operating	12.50	12.50	1016.32	362.02	67.34%	22.56%	1.15
Event460	Operating	8.50	8.50	471.02	35.41	58.06%	27.34%	0.04
Event461	Operating	7.75	7.75	57.29	10.09	25.58%	13.39%	0.02
Event462	Operating	10.00	8.96	63.35	13.69	100.00%	NA	1.62
Event463	Operating	16.50	8.95	875.70	556.87	39.65%	35.00%	0.00
Event464	Operating	18.00	18.00	844.48	506.31	34.68%	16.68%	2.34
Event465	Operating	19.00	12.13	569.67	144.04	72.63%	68.71%	0.00
Event466	Operating	21.50	15.64	3329.60	2214.22	44.70%	35.43%	1.10
Event467	Operating	32.00	30.94	3674.05	186.89	28.09%	24.35%	9.75
Event468	Operating	44.00	10.12	34386.42	3590.00	100.00%	37.05%	NM
Event469	Operating	18.00	18.00	56.40	64.92	60.68%	7.38%	0.03
Event470	Operating	11.50	11.50	144.91	89.73	72.03%	8.97%	1.73
Event471	Operating	10.00	10.59	179.22	0.77	24.38%	NM	0.00
Event472	Operating	9.00	8.88	267.95	69.83	86.27%	1.66%	0.00
Event473	Acquired	10.00	9.13	133.81	23.12	100.00%	NA	0.89
Event474	Operating	16.00	16.00	303.35	190.00	27.92%	7.98%	0.62
Event475	Operating	17.50	17.50	1372.77	240.30	67.82%	27.50%	3.11
Event476	Operating	10.00	3.86	0.00	24.96	100.00%	NA	0.32
Event477	Acquired	20.00	17.14	671.17	0.00	NA	NA	0.00
Event478	Acquired	10.00	9.82	174.86	42.14	100.00%	NA	2.71
Event479	Operating	10.00	8.66	27.86	8.89	100.00%	NA	1.00
Event480	Operating	26.00	26.00	2329.25	67.20	65.79%	NM	NM
Event481	Operating	13.00	13.00	504.17	48.18	32.58%	6.35%	0.79
Event482	Operating	10.00	10.00	231.81	13.12	66.98%	25.47%	0.00
Event483	Acquired	6.00	6.00	15.91	33.72	43.75%	NM	0.03
Event484	Operating	16.00	16.00	953.68	146.24	89.33%	28.15%	6.28
Event485	Operating	18.00	18.00	52.15	140.56	45.88%	8.34%	0.32
Event486	Operating	10.00	10.53	381.52	293.61	24.63%	17.25%	6.40
Event487	Operating	8.50	8.74	42.25	292.60	16.61%	4.44%	7.38
Event488	Operating	6.00	6.00	500.35	41.47	25.01%	NM	0.05
Event489	Operating	14.50	13.79	385.87	1579.23	20.28%	5.74%	0.53
Event490	Operating	10.00	10.00	634.24	32.57	55.78%	NM	NM

Event491	Operating	8.00	8.00	334.14	84.80	76.05%	22.82%	0.00
Event492	Operating	14.00	140.00	336.70	20.75	9.00%	NM	0.36
Event493	Acquired	20.00	13.14	1774.73	97.70	85.36%	83.21%	0.36
Event494	Operating	14.00	14.00	945.25	66.17	63.92%	NM	0.33
Event495	Operating	18.00	16.81	2443.58	310.70	62.96%	36.27%	0.08
Event496	Operating	17.00	17.00	409.16	54.10	44.60%	3.36%	0.00
Event497	Operating	32.00	149.87	2079.60	1005.83	45.85%	41.35%	0.06
Event498	Operating	19.00	14.65	0.37	88.85	49.33%	40.39%	NM
Event499	Operating	20.00	20.00	612.39	40.05	55.15%	20.08%	0.12
Event500	Bankrupt	18.00	15.80	349.13	72.41	41.77%	30.93%	4.82
Event501	Operating	16.00	3.68	330.00	358.57	15.99%	12.02%	1.20
Event502	Operating	11.00	11.00	146.40	332.06	33.17%	7.25%	0.33
Event503	Operating	10.00	5.61	412.18	40.83	100.00%	NA	0.78
Event504	Operating	16.00	16.00	421.75	90.16	44.53%	NM	0.02
Event505	Operating	8.00	8.00	401.36	47.41	81.51%	NM	0.00
Event506	Operating	14.00	328.13	395.98	1.14	97.27%	NM	0.02
Event507	Operating	18.00	17.55	753.10	228.27	64.23%	22.29%	NM
Event508	Operating	8.00	6.60	119.80	29.07	67.30%	7.11%	0.32
Event509	Operating	14.00	6.06	599.68	52.87	37.73%	26.92%	0.35
Event510	Operating	17.00	17.00	385.79	24.02	45.33%	NM	0.69
Event511	Operating	4.00	100.00	76.52	1.53	NM	NM	0.00
Event512	Operating	16.00	15.72	356.84	209.21	49.84%	19.94%	NM
Event513	Operating	18.00	17.80	1813.54	755.11	31.15%	9.25%	0.33
Event514	Operating	18.00	10.71	119.78	115.09	NM	NM	NM
Event515	Operating	19.00	8.81	1735.99	3037.57	13.35%	14.28%	9.59
Event516	Operating	15.00	15.00	805.56	1113.45	38.84%	1.31%	NM
Event517	Operating	13.50	13.50	607.66	23.33	45.69%	NM	0.00
Event518	Operating	10.00	8.05	267.15	17.60	100.00%	NA	1.41
Event519	Operating	10.00	10.00	187.67	0.00	NA	NA	NM
Event520	Operating	15.00	4.92	125.01	9.76	100.00%	78.08%	1.04
Event521	Operating	12.00	12.00	257.28	0.00	NA	NA	1.64
Event522	Acquired	10.00	7.05	43.07	8.45	100.00%	NA	1.38
Event523	Operating	16.00	16.00	797.38	27.55	71.69%	NM	0.10
Event524	Acquired	10.00	9.20	86.53	16.26	100.00%	NA	2.01
Event525	Operating	16.00	14.75	2104.63	240.83	10.08%	NA	38.14
Event526	Operating	18.00	18.00	1121.80	75.81	51.82%	NM	NM
Event527	Operating	21.00	13.72	497.45	40.91	73.89%	68.28%	0.00
Event528	Operating	29.00	24.09	21648.18	703.90	82.47%	23.95%	NM
Event529	Operating	10.00	10.00	16.96	4.03	100.00%	NA	2.02
Event530	Operating	11.00	11.00	261.89	43.49	67.28%	0.91%	NM
Event531	Operating	17.00	14.74	1082.75	224.34	72.52%	22.32%	0.37
Event532	Operating	15.00	15.00	160.47	58.10	45.36%	12.81%	0.00

Event533	Operating	11.50	11.40	761.03	198.29	81.49%	67.86%	0.86
Event534	Operating	14.00	14.00	270.73	124.66	45.43%	13.79%	0.00
Event535	Operating	11.50	11.25	419.54	59.27	63.51%	25.03%	0.00
Event536	Operating	14.50	14.50	164.10	111.64	65.61%	23.76%	NM
Event537	Acquired	5.00	5.00	47.54	1.33	NM	NM	2.67
Event538	Operating	17.00	17.00	664.20	30.62	83.70%	NM	0.00
Event539	Operating	12.00	10.64	412.11	86.20	86.86%	42.53%	7.35
Event540	Operating	15.00	15.00	1202.24	752.00	84.97%	7.85%	0.00
Event541	Operating	7.00	7.00	454.36	170.27	73.40%	34.95%	0.00
Event542	Operating	11.00	11.00	177.18	59.02	23.67%	14.13%	0.47
Event543	Acquired	12.00	12.00	959.08	79.62	59.68%	NM	0.39
Event544	Operating	22.00	10.38	761.64	28.84	NM	NM	0.59
Event545	Acquired	21.00	21.00	215.51	61.77	100.00%	NA	2.02
Event546	Operating	13.00	13.00	861.26	83.40	94.45%	39.20%	0.66
Event547	Operating	9.50	9.50	501.26	97.83	62.59%	7.23%	0.00
Event548	Operating	5.00	6250.00	21.38	8.24	53.75%	NM	0.47
Event549	Operating	11.00	11.00	337.82	46.03	66.10%	17.60%	0.00
Event550	Operating	19.00	19.00	708.19	478.20	34.48%	28.78%	15.06
Event551	Operating	16.50	16.50	700.79	66.29	68.99%	14.85%	1.86
Event552	Operating	22.00	11.39	1887.33	101.50	73.60%	68.28%	0.15
Event553	Acquired	15.00	15.00	1175.25	46.43	68.72%	NM	0.00
Event554	Acquired	11.00	11.00	265.98	33.17	41.93%	NM	NM
Event555	Operating	15.00	9.46	425.50	0.00	NA	NA	NA
Event556	Operating	31.00	14.23	8227.44	2580.50	100.00%	NA	0.03
Event557	Acquired	10.50	10.40	52.49	0.00	NA	NA	0.00
Event558	Operating	15.00	15.00	319.26	918.50	13.92%	10.68%	3.19
Event559	Acquired	17.00	62.49	1163.29	364.10	96.78%	NA	0.40
Event560	Operating	15.00	15.00	1761.85	65.24	60.67%	21.95%	0.64
Event561	Operating	13.00	13.00	2091.73	58.24	NM	NM	1.99
Event562	Operating	12.00	12.00	917.53	94.35	70.61%	5.31%	0.00
Event563	Operating	15.00	15.00	300.16	0.00	NA	NA	0.08
Event564	Operating	12.00	12.00	532.08	91.55	19.12%	NM	0.00
Event565	Bankrupt	10.00	10.00	304.29	0.00	NA	NA	0.27
Event566	Acquired	22.00	22.00	2037.17	1652.89	36.37%	28.41%	NM
Event567	Operating	26.00	26.00	541.91	26.10	35.48%	NM	0.56
Event568	Operating	11.00	8.76	243.93	948.34	26.97%	15.02%	3.16
Event569	Operating	15.00	13.90	240.89	60.66	72.33%	54.65%	4.71
Event570	Operating	13.00	13.00	588.63	79.20	68.66%	24.02%	0.13
Event571	Acquired	15.50	15.60	584.83	531.66	18.77%	15.55%	1.95
Event572	Operating	15.00	15.00	396.03	3.66	NM	NM	1.76
Event573	Operating	15.00	7.48	2411.07	461.32	84.59%	73.60%	0.29
Event574	Operating	11.00	6.88	255.84	85.12	90.41%	NA	0.00
Event575	Operating	16.00	14.92	1195.67	95.08	53.63%	25.12%	4.14
Event576	Acquired	15.00	1800.00	349.40	0.00	NA	NA	0.00
Event577	Operating	20.00	20.00	2017.52	95.25	100.00%	0.00%	0.00
Event578	Operating	19.00	19.00	1068.43	156.10	34.24%	7.04%	0.00
Event579	Operating	13.50	13.50	660.88	34.21	61.72%	NM	0.50
Event580	Operating	9.00	4.50	186.13	5.42	NM	NM	0.00

Event581	Operating	19.00	11.36	2031.06	1220.59	36.82%	21.55%	2.87
Event582	Operating	10.00	7.65	3918.04	184.22	100.00%	NA	0.10
Event583	Acquired	23.00	14.54	9885.39	1546.86	40.39%	24.50%	2.87
Event584	Acquired	18.00	18.00	77.86	33.87	50.12%	NM	0.60
Event585	Acquired	10.00	9.79	13.20	4.43	100.00%	NA	0.51
Event586	Acquired	8.00	8.00	62.56	99.65	54.12%	NM	0.39
Event587	Operating	5.50	5.46	144.55	43.14	32.25%	10.73%	0.00
Event588	Operating	8.00	8.00	122.69	25.51	47.05%	NM	NM
Event589	Operating	11.00	11.00	1081.28	72.50	58.78%	NM	NM
Event590	Operating	15.00	10.07	122.29	0.00	100.00%	NM	NM
Event591	Operating	11.50	11.50	327.32	46.17	69.53%	NM	0.22
Event592	Operating	21.00	6.79	3506.21	0.00	NA	NA	NM
Event593	Operating	24.00	16.00	452.54	1287.19	8.06%	NA	1.04
Event594	Operating	10.00	7.74	122.50	22.45	100.00%	NA	4.44
Event595	Acquired	13.00	13.00	951.60	176.62	52.78%	11.03%	0.67
Event596	Acquired	15.00	15.00	54.09	44.93	75.36%	NM	0.05
Event597	Operating	10.50	10.48	187.39	15.30	79.69%	NM	NM
Event598	Operating	15.00	3.71	91.76	6.72	100.00%	74.65%	1.26
Event599	Acquired	15.00	15.00	936.23	151.69	20.68%	NM	0.50
Event600	Acquired	7.00	7.00	184.86	0.93	NM	NM	0.00
Event601	Operating	21.00	10.18	673.08	1738.53	9.88%	9.93%	4.26
Event602	Operating	18.50	12.06	2770.07	1521.30	71.34%	64.22%	0.18
Event603	Operating	10.00	10.00	355.01	120.06	34.56%	9.06%	1.69
Event604	Operating	18.00	18.00	1527.20	52.90	48.03%	NM	NM
Event605	Operating	21.00	8.92	988.04	219.30	24.72%	NM	2.86
Event606	Operating	17.00	17.00	605.74	48.54	72.12%	18.68%	0.04
Event607	Acquired	17.00	17.00	652.47	111.03	46.38%	25.96%	NM
Event608	Acquired	10.00	371.56	221.67	0.00	NA	NA	0.14
Event609	Operating	17.00	14.02	1049.03	520.25	48.88%	49.68%	0.00
Event610	Operating	18.00	11.90	297.44	221.68	35.51%	NA	NM
Event611	Acquired	21.00	15.20	475.27	1263.03	4.92%	16.46%	0.00
Event612	Acquired	11.00	11.00	309.03	571.19	19.61%	5.92%	3.11
Event613	Operating	8.00	2549.08	90.14	2.58	NM	NM	0.10
Event614	Operating	17.00	17.00	433.94	139.36	40.73%	14.39%	0.00
Event615	Acquired	10.00	19.22	80.53	11.99	100.00%	NA	1.54
Event616	Operating	17.00	17.00	208.53	278.37	30.70%	29.52%	NM
Event617	Operating	11.00	11.00	259.57	40.71	89.20%	6.50%	NM
Event618	Operating	13.50	11.69	329.93	363.47	25.18%	10.12%	6.96
Event619	Operating	13.00	3.43	328.71	706.91	19.08%	10.74%	NM
Event620	Acquired	13.00	13.00	1397.39	21.08	45.10%	NM	0.74
Event621	Acquired	14.00	14.00	1000.13	16.42	20.88%	NM	0.13
Event622	Operating	17.00	16.87	638.97	10.63	100.00%	NA	6.94
Event623	Operating	11.00	11.00	183.40	64.94	82.18%	35.68%	NM
Event624	Operating	10.00	10.00	149.42	38.60	60.32%	11.64%	0.43
Event625	Operating	11.50	11.50	374.83	39.51	71.27%	7.25%	NM
Event626	Operating	16.50	16.33	1078.44	96.39	35.18%	23.21%	0.69
Event627	Operating	21.00	17.78	838.27	292.65	33.65%	25.47%	0.00
Event628	Operating	4.00	4.00	20.01	9.47	18.21%	NM	19.65
Event629	Operating	15.00	2.29	270.05	0.00	NA	NA	NA
Event630	Operating	21.00	14.71	881.15	43.95	34.13%	16.23%	0.01
Event631	Operating	18.00	15.08	478.05	132.50	22.73%	10.26%	1.10
Event632	Operating	10.00	10.00	71.43	67.26	59.57%	4.78%	0.13

Event633	Operating	26.00	25.50	3756.59	2415.20	12.52%	NM	2.21
Event634	Acquired	59.00	58.15	11568.80	334.11	72.59%	42.72%	0.78
Event635	Operating	20.00	20.00	1716.63	48.06	34.50%	NM	3.71
Event636	Bankrupt	17.00	17.00	725.77	195.55	71.04%	33.40%	41.32
Event637	Operating	12.00	120.00	262.89	0.00	NA	NA	0.22
Event638	Operating	15.00	77.61	5020.64	7469.21	22.50%	16.50%	5.50
Event639	Operating	21.00	92.52	260.48	26.79	83.00%	65.96%	0.00
Event640	Operating	17.00	14.44	3588.10	9351.00	5.27%	4.18%	0.58
Event641	Operating	12.50	11.70	307.11	130.69	61.75%	30.73%	0.20
Event642	Operating	14.00	33015.48	310.31	2.78	NM	NM	NM
Event643	Operating	7.00	7.00	29.22	40.66	69.72%	NM	0.47
Event644	Operating	20.00	17.85	64.17	149.24	52.26%	14.41%	0.04
Event645	Operating	17.00	16.88	263.02	78.71	59.24%	22.87%	14.87
Event646	Operating	21.00	17.36	879.15	299.36	94.19%	NA	0.25
Event647	Operating	6.00	6.00	76.98	0.00	NA	NA	0.00
Event648	Operating	14.00	10.99	94.69	1.09	100.00%	NA	0.38
Event649	Operating	12.00	7.55	250.34	535.50	17.23%	16.29%	49.03
Event650	Operating	11.00	11.00	281.36	15.53	18.32%	NM	0.01
Event651	Operating	17.00	17.00	1161.20	127.15	49.53%	19.68%	0.01
Event652	Acquired	17.50	17.50	480.34	69.48	25.22%	7.90%	0.02
Event653	Operating	11.50	11.50	198.09	8.53	NM	NM	NM
Event654	Operating	9.00	9.00	260.55	0.00	NA	NA	0.00
Event655	Operating	19.00	9.74	773.15	66.38	12.28%	16.12%	1.96
Event656	Operating	7.00	6.46	98.50	30.73	70.95%	8.55%	0.10
Event657	Operating	13.50	13.50	529.19	73.95	35.64%	15.51%	0.39
Event658	Operating	16.50	16.50	216.30	1896.26	10.45%	1.90%	3.03
Event659	Operating	13.00	13.00	224.84	0.35	100.00%	NM	0.30
Event660	Acquired	17.00	14.56	251.97	130.77	31.79%	32.45%	1.33
Event661	Operating	13.00	13.00	336.60	284.80	15.25%	8.06%	2.60
Event662	Operating	21.00	8.02	291.96	0.00	NA	NA	NA
Event663	Operating	9.50	9.50	902.22	36.12	74.45%	4.38%	0.00
Event664	Operating	14.00	14.00	479.72	41.75	79.24%	1.21%	0.00
Event665	Operating	15.00	22.56	25075.52	7518.00	12.64%	7.16%	0.43
Event666	Operating	22.00	22.00	2362.81	259.30	71.26%	30.91%	NM
Event667	Operating	15.00	15.00	367.15	83.90	55.97%	13.13%	0.08
Event668	Operating	12.00	12.18	163.77	177.22	40.14%	6.26%	1.15
Event669	Operating	16.00	16.00	625.16	33.05	88.94%	12.58%	0.05
Event670	Operating	24.00	84.91	206.82	38.18	100.00%	NA	1.43
Event671	Operating	14.50	14.50	708.07	109.47	86.30%	10.63%	0.00
Event672	Operating	12.00	12.00	170.83	100.17	58.92%	18.51%	0.10
Event673	Operating	9.75	4.87	1084.80	22.94	62.54%	NM	0.38
Event674	Operating	18.50	16.28	422.08	166.60	15.70%	14.16%	0.24
Event675	Operating	1.00	0.81	16.00	0.00	NA	NA	0.00
Event676	Operating	9.00	9.00	461.27	76.87	20.29%	6.35%	0.53

Event677	Operating	21.00	15.24	99.28	146.13	100.00%	NA	NA
Event678	Operating	23.00	11.18	1321.19	31.64	64.33%	22.07%	1.21
Event679	Operating	11.00	10.87	38.50	3.97	NM	NM	NM
Event680	Operating	17.00	13.54	459.31	408.45	51.83%	46.10%	1.39
Event681	Operating	15.00	15.00	385.10	403.15	29.71%	14.14%	2.96
Event682	Operating	18.00	3.35	317.55	61.32	100.00%	NA	1.87
Event683	Operating	6.00	120.00	63.80	1.14	NM	NM	0.09
Event684	Operating	23.00	14.81	485.30	371.50	18.50%	14.83%	0.91
Event685	Operating	15.00	6.54	50.42	11.80	100.00%	NA	0.57
Event686	Operating	22.00	9.52	935.00	37.65	100.00%	99.93%	1.88
Event687	Acquired	16.00	16.00	206.40	293.11	88.39%	NA	0.00
Event688	Acquired	10.00	100.00	274.30	0.44	NM	NM	0.00
Event689	Operating	6.50	6.50	308.98	42.80	52.20%	NM	0.19
Event690	Operating	14.00	14.00	390.71	332.81	36.67%	14.45%	1.17
Event691	Operating	20.00	20.00	677.45	953.19	41.75%	11.85%	NM
Event692	Operating	9.00	9.40	181.90	36.05	52.00%	12.55%	0.00
Event693	Operating	10.00	8.84	136.20	44.03	26.09%	4.62%	0.00
Event694	Operating	8.00	7.76	265.31	54.22	44.29%	19.88%	0.04
Event695	Operating	8.00	8.00	290.99	91.90	48.33%	NM	2.23
Event696	Operating	13.00	9.65	320.73	213.96	26.04%	10.51%	85.61
Event697	Acquired	11.50	11.50	169.89	323.79	35.75%	6.80%	1.44
Event698	Acquired	12.00	12.00	525.45	30.98	87.65%	37.78%	0.00
Event699	Operating	6.00	6.00	34.98	16.45	21.22%	NM	0.50
Event700	Operating	9.00	108.00	3450.03	42.33	61.20%	NM	0.12
Event701	Operating	13.00	9.34	4818.66	388.56	30.05%	20.55%	NM
Event702	Operating	16.00	13.31	1935.51	598.10	11.27%	6.99%	NM
Event703	Operating	39.00	3.66	449.30	2937.63	100.00%	19.76%	0.20
Event704	Operating	17.00	17.00	2024.52	269.20	53.75%	NM	13.56
Event705	Operating	16.00	16.00	28.25	89.46	7.92%	7.16%	0.00
Event706	Acquired	8.00	8.00	123.38	4.85	66.19%	NM	0.65
Event707	Operating	8.00	8.00	128.43	4.52	98.44%	NM	0.00
Event708	Acquired	6.50	32.50	145.30	0.06	NM	NM	0.00
Event709	Operating	25.00	10.79	1499.57	838.72	30.09%	26.32%	1.11
Event710	Operating	16.00	11.14	810.98	2031.90	14.85%	6.63%	2.24
Event711	Operating	15.00	15.00	375.50	1966.99	12.45%	7.54%	2.03
Event712	Operating	18.00	18.00	288.36	320.73	32.75%	18.42%	5.40
Event713	Operating	10.00	10.00	143.59	27.50	22.37%	NM	NM
Event714	Operating	24.00	24.00	1877.07	720.19	37.42%	22.36%	2.10
Event715	Operating	10.00	10.02	209.94	0.00	NA	NA	0.00
Event716	Acquired	9.00	63.00	162.39	1.18	NM	NM	0.10
Event717	Operating	16.00	15.38	1234.34	1469.57	44.34%	15.64%	NM
Event718	Operating	18.00	18.00	1401.22	1565.41	23.10%	12.23%	2.88
Event719	Operating	9.00	9.00	108.03	17.37	43.13%	NM	3.83
Event720	Operating	16.00	16.00	743.58	18.35	78.93%	NM	NM
Event721	Operating	10.00	7.27	70.82	11.30	100.00%	NA	1.88
Event722	Operating	5.00	5.00	63.96	15.38	43.38%	16.24%	1.87

Event723	Operating	17.00	17.00	76.41	207.50	34.69%	17.29%	2.19
Event724	Operating	14.00	14.00	276.95	48.45	47.31%	0.56%	0.00
Event725	Operating	21.00	9.18	1072.77	374.25	50.04%	42.10%	2.67
Event726	Operating	15.50	15.50	316.65	63.48	58.10%	15.91%	1.46
Event727	Operating	10.00	10.00	334.79	89.42	38.22%	7.36%	0.41
Event728	Operating	20.00	20.00	659.62	263.16	61.50%	29.81%	NM
Event729	Acquired	24.50	20.46	1503.53	1138.20	28.63%	23.22%	0.68
Event730	Operating	6.00	6.00	128.00	5.15	0.26%	NM	NM
Event731	Acquired	9.00	9.00	140.02	267.30	10.88%	11.68%	0.56
Event732	Operating	17.00	17.00	289.45	300.69	19.99%	8.95%	2.69
Event733	Acquired	12.00	10.20	1436.72	265.86	67.88%	35.62%	497.30
Event734	Operating	16.00	16.00	646.88	64.06	65.03%	29.15%	NM
Event735	Operating	21.00	10.50	1033.34	108.58	56.00%	27.84%	0.46
Event736	Operating	21.00	2.24	5676.79	6168.80	7.73%	6.55%	2.08
Event737	Operating	9.00	9.00	419.66	607.30	16.68%	8.81%	3.21
Event738	Operating	19.50	19.50	709.60	856.76	22.94%	8.61%	0.69
Event739	Acquired	9.75	30.48	82.90	0.68	65.84%	NM	0.02
Event740	Operating	15.00	15.00	424.91	250.89	89.29%	NA	0.17
Event741	Operating	7.00	7.08	108.14	2.37	100.00%	NM	2.19
Event742	Acquired	9.00	9.00	144.61	26.83	77.77%	NM	0.19
Event743	Operating	9.00	2.56	101.99	14.68	84.15%	42.37%	0.06
Event744	Operating	14.00	10.86	334.53	978.40	16.29%	10.83%	NM
Event745	Operating	6.00	6.00	85.20	21.64	100.00%	NM	3.05
Event746	Operating	18.00	8.92	848.81	600.21	30.26%	12.58%	NM
Event747	Operating	20.00	10.20	750.78	731.64	10.18%	5.24%	1.86
Event748	Operating	22.00	22.00	1371.27	627.70	31.71%	9.90%	0.01
Event749	Operating	21.50	8.65	561.15	1289.07	11.01%	6.21%	6.86
Event750	Acquired	12.00	12.00	231.89	43.29	22.47%	NM	NM
Event751	Operating	21.00	16.75	457.56	608.16	8.56%	5.51%	0.56
Event752	Operating	17.00	12.31	1265.39	3406.63	7.88%	6.55%	0.84
Event753	Operating	10.00	2.23	142.99	24.68	71.07%	21.57%	NM
Event754	Operating	14.00	14.00	539.70	1670.83	17.24%	8.53%	0.06
Event755	Bankrupt	11.00	88.00	184.77	0.00	NA	NA	0.00
Event756	Operating	17.00	17.00	649.90	70.04	57.65%	22.69%	0.02
Event757	Operating	15.00	15.00	193.90	41.63	50.84%	6.09%	0.07
Event758	Operating	11.00	15.74	1169.25	547.96	16.49%	13.42%	1.16
Event759	Acquired	9.00	9.00	150.75	20.39	78.58%	NM	NM
Event760	Operating	21.50	6.85	403.38	835.90	6.64%	5.37%	0.00
Event761	Operating	14.00	14.00	307.33	67.83	26.17%	15.19%	0.18
Event762	Operating	19.00	16.68	1641.97	660.87	22.05%	15.44%	5.19
Event763	Operating	10.00	10.00	51.42	58.70	37.21%	8.05%	NM
Event764	Operating	13.00	1.63	1173.33	205.18	46.51%	13.92%	1.62
Event765	Operating	9.00	6.04	156.82	248.96	12.50%	6.90%	0.41
Event766	Operating	18.00	18.00	210.75	10.89	NM	NM	NM
Event767	Operating	26.00	4.79	3822.29	108.41	99.97%	37.93%	0.17

Event768	Operating	18.00	4.79	8283.23	2447.04	48.41%	25.98%	0.59
Event769	Operating	24.00	31.01	850.21	95.04	28.78%	1.85%	0.00
Event770	Acquired	7.00	422.68	167.41	0.18	100.00%	NM	0.08
Event771	Operating	19.50	9.90	1912.47	263.62	81.66%	54.51%	1.01
Event772	Operating	12.00	12.00	301.88	113.31	72.00%	14.50%	13.18
Event773	Operating	10.00	10.00	165.11	23.40	51.97%	4.51%	0.00
Event774	Operating	5.00	250.00	13.95	0.00	NA	NA	0.00
Event775	Operating	10.00	9.44	224.13	1.88	NM	NM	0.24
Event776	Acquired	10.00	9.21	137.62	23.76	100.00%	NA	2.76
Event777	Operating	10.50	10.29	82.50	171.25	15.83%	6.27%	1.50
Event778	Acquired	54.00	54.00	4201.96	378.34	64.87%	33.61%	0.18
Event779	Operating	11.00	27.50	94.65	0.00	NA	NA	0.30
Event780	Acquired	18.00	9.18	600.06	312.97	86.80%	65.23%	5.35
Event781	Operating	10.00	3.32	1008.06	96.81	100.00%	NA	3.22
Event782	Operating	10.00	7.09	322.39	40.16	100.00%	NA	0.70
Event783	Acquired	26.00	25.68	311.17	67.28	100.00%	NA	0.44
Event784	Acquired	10.50	10.29	78.17	1.90	NM	NM	0.93
Event785	Operating	14.00	14.00	218.62	160.49	18.78%	9.85%	0.59
Event786	Operating	12.00	12.00	281.44	0.33	NM	NM	0.00
Event787	Acquired	17.50	17.50	1355.70	134.15	60.96%	9.16%	0.00
Event788	Operating	22.00	6.13	266.32	3187.57	2.38%	0.79%	8.33
Event789	Operating	10.00	8.62	10.76	-2.98	100.00%	NA	0.00
Event790	Operating	14.00	14.00	90.45	58.65	60.95%	NM	0.63
Event791	Operating	7.00	242.31	135.17	10.30	NM	NM	0.31
Event792	Acquired	12.00	12.00	106.93	82.44	10.34%	10.96%	0.58
Event793	Operating	14.00	14.00	481.34	403.00	32.98%	21.73%	NM
Event794	Operating	12.00	120.00	296.50	66.68	39.69%	NM	0.11
Event795	Operating	28.00	21.63	2860.02	8321.20	5.06%	6.84%	0.92
Event796	Acquired	17.00	17.02	334.50	21.87	14.64%	7.00%	0.36
Event797	Operating	20.00	18.60	1414.34	1642.50	24.54%	11.87%	4.71
Event798	Operating	16.00	2.53	986.15	1650.70	13.09%	17.14%	0.32
Event799	Operating	18.00	16.63	858.45	602.85	8.56%	3.34%	2.15
Event800	Operating	14.50	14.04	239.75	243.02	28.15%	17.66%	NM
Event801	Operating	16.00	16.00	452.60	14.34	93.88%	NM	0.68
Event802	Acquired	17.50	17.50	231.69	353.32	43.17%	32.28%	2.54
Event803	Operating	18.00	17.75	288.56	79.46	40.11%	16.50%	0.47
Event804	Operating	18.00	14.94	246.58	188.58	24.97%	15.86%	NM
Event805	Operating	12.00	12.00	167.57	19.16	72.85%	NM	0.00
Event806	Operating	21.00	21.00	1855.81	915.40	24.88%	12.66%	1.82
Event807	Acquired	14.00	13.29	182.50	158.10	59.94%	16.13%	2.59
Event808	Operating	14.00	13.35	197.44	237.28	13.93%	14.05%	0.23
Event809	Operating	17.00	16.76	205.80	394.28	14.10%	3.48%	1.24
Event810	Operating	10.00	10.00	454.68	51.35	62.77%	15.98%	0.00
Event811	Acquired	10.00	10.00	221.14	48.72	82.01%	10.17%	0.00
Event812	Operating	14.00	14.00	197.94	133.08	29.39%	5.63%	0.00
Event813	Acquired	16.00	11.41	802.32	1707.56	9.48%	5.17%	2.36
Event814	Acquired	13.00	13.00	339.59	76.04	28.40%	20.14%	0.50

Event815	Operating	17.00	15.96	427.27	337.03	38.75%	14.12%	3.66
Event816	Operating	14.00	12.59	462.85	679.20	16.92%	15.51%	868.53
Event817	Operating	23.00	5.89	930.76	126.45	80.58%	44.80%	2.46
Event818	Operating	17.00	16.91	542.34	61.67	63.24%	38.60%	0.02
Event819	Operating	13.00	3.71	137.56	269.61	70.12%	40.09%	3.33
Event820	Operating	17.00	16.37	305.62	359.68	62.22%	51.67%	1.35
Event821	Acquired	17.00	17.00	844.27	160.21	80.57%	28.42%	0.00
Event822	Operating	11.00	11.00	105.98	0.49	NM	NM	0.69
Event823	Acquired	10.00	8.36	175.80	28.54	100.00%	NA	1.46
Event824	Operating	22.00	22.18	575.18	75.95	100.00%	NA	2.10
Event825	Acquired	10.00	10.07	0.00	8.24	100.00%	NA	0.82
Event826	Acquired	10.00	9.85	120.84	18.14	100.00%	NA	1.30
Event827	Operating	19.00	17.88	677.15	113.18	48.57%	21.84%	0.01
Event828	Operating	16.00	85.11	804.20	0.00	NA	NA	NA
Event829	Acquired	5.50	5.48	52.44	3.25	NM	NM	2.41
Event830	Operating	22.00	22.00	1529.96	165.00	70.15%	39.08%	0.16
Event831	Operating	12.00	12.00	200.45	46.30	73.59%	13.55%	0.05
Event832	Operating	24.00	26604446.08	1786.46	15.98	100.00%	NA	2.10
Event833	Operating	10.00	7.70	289.34	43.89	100.00%	NA	2.79
Event834	Operating	13.00	13.47	205.78	60.08	11.51%	NM	0.14
Event835	Operating	20.00	15.74	494.22	261.23	59.87%	13.86%	0.81
Event836	Operating	16.00	16.01	501.15	2058.05	23.49%	6.16%	1.49
Event837	Operating	14.00	13.91	687.67	86.33	53.83%	NM	NM
Event838	Operating	11.00	11.19	153.34	24.01	66.67%	NM	0.00
Event839	Operating	12.50	12.14	397.43	927.57	16.50%	20.23%	0.43
Event840	Operating	12.00	12.00	244.34	109.74	19.13%	0.26%	0.76
Event841	Operating	13.00	3.06	123.31	0.23	100.00%	NM	0.00
Event842	Operating	14.00	14.00	205.45	116.09	50.27%	19.37%	1.02
Event843	Operating	10.50	10.31	196.12	9.96	NM	NM	0.04
Event844	Acquired	10.00	9.27	20.51	3.28	100.00%	NA	0.95
Event845	Acquired	11.00	11.00	716.38	636.50	66.91%	15.54%	1.68
Event846	Operating	21.40	7.95	175.15	34.44	58.68%	46.48%	0.00
Event847	Operating	14.00	13.07	186.52	203.44	37.42%	8.56%	0.29
Event848	Operating	12.00	9.50	25.51	582.48	43.10%	27.31%	NM
Event849	Operating	17.00	15.59	2256.42	3057.60	46.66%	9.62%	4.51
Event850	Acquired	13.00	13.00	811.43	143.06	77.75%	64.60%	0.00
Event851	Operating	18.00	9.00	327.79	153.58	32.84%	11.63%	0.02
Event852	Operating	5.00	4.45	27.88	28.03	25.34%	7.37%	1.02
Event853	Operating	18.50	17.04	830.46	179.66	69.55%	14.45%	0.00
Event854	Operating	10.00	10.00	606.35	390.09	38.06%	14.72%	NM
Event855	Acquired	12.00	12.00	57.43	208.67	12.90%	12.82%	0.00
Event856	Operating	10.00	10.00	436.65	1608.89	26.35%	9.10%	NM
Event857	Operating	12.00	12.00	258.16	0.00	NA	NA	0.00
Event858	Operating	19.00	16.85	267.20	482.18	2.88%	NM	NM
Event859	Acquired	10.00	9.09	36.86	13.37	100.00%	NA	0.28
Event860	Acquired	10.00	9.42	87.69	15.27	100.00%	NA	2.72
Event861	Acquired	10.00	10.00	6.72	2.30	100.00%	NA	4.38

Event862	Acquired	12.00	12.00	232.60	58.02	34.39%	13.34%	0.01
Event863	Operating	18.00	16.50	2163.55	827.07	80.71%	69.00%	8.56
Event864	Operating	11.50	2.88	95.45	7.47	100.00%	NA	3.24
Event865	Operating	18.00	17.87	1073.69	129.62	89.47%	42.89%	0.00
Event866	Operating	18.00	15.01	2392.19	289.04	68.34%	26.33%	0.09
Event867	Operating	18.00	18.00	694.64	189.10	62.37%	48.41%	0.07
Event868	Operating	6.00	6.00	30.15	7.93	18.53%	NM	NM
Event869	Operating	16.00	16.15	896.00	85.28	59.66%	30.29%	1.18
Event870	Operating	23.00	15.25	5401.14	9562.50	12.59%	10.10%	27.57
Event871	Operating	20.00	14.17	344.77	362.02	25.50%	6.21%	NM
Event872	Operating	22.50	16.98	197.00	98.30	11.02%	9.92%	0.61
Event873	Acquired	13.00	13.29	287.62	46.50	29.29%	NM	NM
Event874	Operating	16.00	16.00	1693.20	332.40	58.34%	36.06%	2.00
Event875	Bankrupt	13.00	12.30	181.13	397.06	42.96%	5.75%	1.39
Event876	Operating	8.00	59.79	150.54	6.49	NM	NM	0.08
Event877	Acquired	15.00	12.72	1097.92	507.31	79.32%	53.24%	6.20
Event878	Operating	13.00	12.90	603.74	443.86	40.57%	20.58%	NM
Event879	Acquired	7.00	462.06	208.88	0.00	NA	NA	0.03
Event880	Operating	13.50	10.65	295.47	169.15	25.39%	22.02%	0.45
Event881	Operating	19.00	14.08	1220.43	508.34	82.85%	77.93%	0.10
Event882	Operating	16.00	10.67	175.45	270.60	69.76%	24.02%	NM
Event883	Operating	16.50	12.25	1245.25	93.07	80.71%	NA	0.00
Event884	Operating	16.00	13.37	789.14	4927.00	20.40%	10.82%	8.34
Event885	Operating	10.50	9.88	184.10	86.67	17.49%	14.13%	0.21
Event886	Operating	7.00	7.00	313.29	38.27	89.19%	NM	1.32
Event887	Operating	17.50	63.13	689.65	403.95	5.72%	1.40%	NM
Event888	Operating	14.00	2.99	969.38	1159.43	79.66%	14.47%	1.37
Event889	Operating	15.00	10.06	1763.12	489.53	62.58%	27.89%	2.41
Event890	Operating	9.50	9.50	208.53	156.42	31.01%	9.58%	0.00
Event891	Bankrupt	15.00	15.00	568.33	640.14	38.15%	11.43%	2.97
Event892	Operating	25.00	10.09	631.33	104.71	51.62%	16.39%	NA
Event893	Operating	13.00	12.65	408.78	0.00	NA	NA	0.00
Event894	Operating	29.00	19.34	17277.65	691.75	57.09%	34.69%	9.66
Event895	Operating	16.00	115.54	194.62	55.52	24.79%	14.63%	3.31
Event896	Operating	17.00	17.00	588.71	46.25	30.75%	9.52%	3.90
Event897	Acquired	14.00	14.00	143.98	50.56	40.12%	3.47%	0.31
Event898	Operating	15.00	10.13	862.09	697.25	33.90%	16.47%	NM
Event899	Operating	13.50	116.36	399.73	4271.84	10.71%	2.60%	0.06
Event900	Operating	16.00	16.00	313.03	26.50	77.03%	13.45%	0.00
Event901	Operating	15.00	15.00	390.57	25.10	100.00%	27.37%	0.00
Event902	Acquired	22.00	21.40	839.56	992.74	19.58%	15.02%	1.18
Event903	Operating	15.00	15.00	582.91	122.03	29.42%	20.86%	1.38
Event904	Bankrupt	5.50	5.50	95.25	0.00	NA	NA	0.00
Event905	Acquired	16.00	14.44	810.00	2451.89	14.15%	4.93%	2.77
Event906	Acquired	17.00	17.00	571.01	20.94	41.38%	NM	0.19
Event907	Operating	8.50	7.59	262.57	24.20	54.69%	7.59%	0.00

Event908	Operating	9.50	9.50	135.60	0.00	NA	NA	NM
Event909	Operating	19.00	11.50	635.18	205.51	75.90%	59.24%	3.20
Event910	Operating	15.00	14.54	2375.69	2766.60	51.15%	17.07%	3.07
Event911	Operating	15.00	13.52	491.53	119.44	36.19%	34.97%	11.19
Event912	Operating	20.00	5.56	249.37	384.57	5.29%	3.53%	1.09
Event913	Operating	13.00	13.00	305.45	33.81	41.05%	NM	0.00
Event914	Operating	11.00	9.41	462.91	58.46	45.92%	24.79%	0.00
Event915	Operating	20.00	19.49	477.26	213.67	45.78%	11.69%	0.00
Event916	Operating	14.00	14.00	456.12	2.59	NM	NM	0.00
Event917	Operating	18.00	12.02	390.00	162.39	53.13%	42.73%	0.83
Event918	Operating	28.00	28.00	4105.60	300.99	NM	NM	NM
Event919	Operating	15.00	14.97	215.01	21.84	71.10%	NM	0.00
Event920	Acquired	15.50	13.55	115.30	51.94	48.84%	3.87%	0.45
Event921	Operating	6.00	6.00	117.54	0.02	100.00%	NM	0.00
Event922	Operating	15.50	15.50	319.20	110.29	28.98%	6.15%	1.33
Event923	Acquired	11.00	11.00	567.50	2390.55	16.36%	13.18%	0.95
Event924	Acquired	13.00	13.00	411.71	25.43	32.87%	NM	0.04
Event925	Operating	17.00	17.00	1073.23	961.78	30.53%	7.82%	1.00
Event926	Acquired	12.00	10.32	202.84	45.14	69.38%	54.39%	NM
Event927	Operating	16.00	11.96	948.16	3.61	NM	NM	0.12
Event928	Operating	17.50	7.25	739.93	286.45	38.57%	14.95%	1.50
Event929	Operating	7.00	7.00	111.64	30.01	56.95%	36.51%	0.00
Event930	Operating	12.00	12.11	395.53	225.77	29.58%	4.35%	0.72
Event931	Operating	16.00	16.00	455.63	13.47	85.17%	NM	0.14
Event932	Operating	8.50	8.50	142.33	16.36	80.34%	NM	0.01
Event933	Acquired	18.00	18.62	57.64	6.83	100.00%	NA	0.03
Event934	Operating	12.00	12.00	1402.44	32.18	68.19%	34.43%	0.00
Event935	Operating	13.00	8.67	420.43	559.54	25.18%	6.67%	3.16
Event936	Operating	11.00	11.00	493.86	239.07	31.80%	18.98%	1.18
Event937	Operating	6.00	1080.00	69.34	0.00	NA	NA	0.13
Event938	Operating	20.50	5.90	180.19	79.70	63.24%	15.98%	2.27
Event939	Acquired	10.00	8.84	30.67	9.47	100.00%	NA	1.65
Event940	Operating	5.80	6.16	107.93	109.71	9.39%	0.44%	7.59
Event941	Operating	85.00	42.50	29375.80	1465.93	56.72%	27.58%	0.01
Event942	Operating	13.00	6.14	460.85	70.34	29.69%	18.30%	0.32
Event943	Acquired	11.50	12.62	625.20	458.34	26.31%	6.84%	0.02
Event944	Operating	8.00	75.08	11.85	5.01	19.21%	NM	0.18
Event945	Operating	14.50	5.95	937.03	1423.03	8.57%	10.70%	1.16
Event946	Acquired	20.00	18.98	275.06	72.96	100.00%	NA	0.48
Event947	Operating	22.00	22.00	2216.81	272.62	53.84%	25.48%	0.00
Event948	Operating	7.00	7.05	200.83	35.88	74.91%	NM	NM
Event949	Acquired	8.00	3.77	125.41	0.00	NA	NA	NM
Event950	Operating	13.00	13.00	221.54	287.58	17.28%	11.59%	3.66
Event951	Operating	12.50	11.64	574.32	969.08	25.41%	11.76%	2.14
Event952	Operating	8.00	8.00	187.34	25.12	42.10%	NM	0.16
Event953	Operating	14.00	69.65	458.34	0.00	NA	NA	0.01
Event954	Operating	7.50	7.50	148.23	8.82	57.36%	NM	0.38

Event955	Acquired	6.95	6.95	99.07	1.73	41.22%	NM	0.00
Event956	Operating	8.00	90707.96	68.90	9.17	70.48%	NM	0.97
Event957	Operating	18.00	5.86	449.99	337.70	20.59%	10.15%	19.72
Event958	Operating	13.00	12.49	472.45	107.15	44.71%	10.86%	0.00
Event959	Operating	19.00	18.66	2891.43	883.06	69.95%	53.37%	8.01
Event960	Operating	8.00	6.49	363.25	118.76	66.84%	7.85%	0.09
Event961	Operating	14.00	14.00	594.86	29.57	NM	NM	NM
Event962	Operating	12.00	12.18	172.28	196.72	15.75%	9.48%	0.56
Event963	Operating	7.00	7.00	201.65	20.06	36.49%	NM	0.78
Event964	Operating	13.00	13.00	5668.00	4864.00	29.42%	13.88%	0.01
Event965	Acquired	13.00	13.00	307.87	25.87	65.66%	11.64%	0.42
Event966	Acquired	7.50	7.50	269.83	62.03	50.40%	4.35%	0.31
Event967	Operating	14.00	6.70	922.70	1333.32	25.17%	13.61%	NM
Event968	Operating	12.00	6.00	217.29	13.54	NM	NM	1.12
Event969	Operating	22.25	3.71	357.14	30.80	21.45%	21.45%	0.36
Event970	Operating	18.50	19.38	356.32	256.94	48.69%	30.84%	1.68
Event971	Operating	17.00	17.00	579.05	1045.98	17.68%	5.62%	1.36
Event972	Acquired	13.00	13.00	26.75	14.51	100.00%	NA	8.24
Event973	Operating	10.00	10.00	233.51	129.42	17.00%	9.23%	0.21
Event974	Operating	20.00	20.00	1684.07	1392.42	40.57%	8.02%	0.48
Event975	Operating	10.00	10.03	177.91	28.85	48.78%	0.89%	0.00
Event976	Operating	9.50	9.50	131.29	64.23	35.13%	27.93%	4.50
Event977	Operating	11.00	2.75	1697.07	96.02	82.01%	2.69%	0.00
Event978	Operating	6.00	6.00	151.77	9.54	NM	NM	0.00
Event979	Operating	6.50	6.50	20.25	1.45	NM	NM	0.05
Event980	Operating	13.00	13.00	313.23	135.31	41.59%	23.05%	1.17
Event981	Operating	14.00	14.00	112.18	92.48	67.88%	10.09%	2.04
Event982	Operating	24.00	23.50	2396.86	904.50	47.85%	26.12%	0.39
Event983	Acquired	6.00	75.00	30.13	60.89	7.89%	2.05%	2.56
Event984	Operating	7.00	7.00	32.50	9.12	NM	NM	0.08
Event985	Operating	12.00	89.09	211.85	56.24	29.46%	5.28%	1.92
Event986	Operating	19.00	6.33	1111.69	1630.07	51.14%	9.53%	3.16
Event987	Operating	7.00	7.00	126.32	1.10	100.00%	NM	0.13
Event988	Operating	6.00	6.00	115.89	0.18	100.00%	NM	0.07
Event989	Operating	11.50	5.77	129.24	215.29	28.19%	10.12%	NM
Event990	Operating	11.00	11.00	158.11	38.43	51.68%	10.13%	13.13
Event991	Operating	7.00	7.00	111.29	7.38	NM	NM	0.22
Event992	Operating	19.50	17.34	2827.50	11683.00	13.03%	14.47%	0.28
Event993	Operating	20.50	19.98	569.13	128.89	22.82%	9.44%	0.00
Event994	Operating	15.00	15.00	334.50	34.12	50.88%	NM	0.49
Event995	Operating	11.00	11.00	260.27	22.66	70.02%	NM	0.50
Event996	Acquired	15.50	3.73	236.38	105.05	42.23%	36.02%	0.27
Event997	Operating	13.00	13.00	495.46	517.82	12.70%	6.95%	1.76

Event998	Operating	17.50	10.54	597.00	126.68	91.98%	NA	0.04
Event999	Operating	13.00	78.78	37.52	10.58	100.00%	NM	0.25
Event1000	Operating	17.00	12.16	418.74	147.31	75.79%	12.08%	3.97
Event1001	Operating	15.00	15.00	305.09	0.37	100.00%	NM	0.01
Event1002	Operating	12.00	12.00	723.88	73.15	54.75%	13.47%	0.00
Event1003	Acquired	10.50	10.12	53.26	116.73	8.98%	NM	0.94
Event1004	Operating	12.00	11.77	271.70	0.00	NA	NA	0.05
Event1005	Acquired	7.00	8.29	187.60	7.62	100.00%	NM	0.26
Event1006	Operating	9.00	9.00	321.99	0.00	NA	NA	0.01
Event1007	Operating	14.00	14.00	142.44	39.09	68.49%	14.34%	0.00
Event1008	Operating	6.50	4.81	192.65	21.70	43.18%	1.47%	0.00
Event1009	Operating	7.00	7.00	151.35	2.29	0.92%	NM	0.16
Event1010	Operating	7.00	7.00	121.03	77.52	13.17%	4.16%	3.67
Event1011	Operating	18.00	13.76	490.04	223.35	46.28%	24.41%	1.08
Event1012	Acquired	8.00	75.73	100.29	0.17	100.00%	NM	6.05
Event1013	Operating	9.00	9.00	209.65	0.00	NA	NA	0.00
Event1014	Acquired	10.00	8.82	1658.73	91.95	100.00%	NA	0.68
Event1015	Acquired	10.00	5.00	35.64	0.00	NA	NA	NM
Event1016	Operating	30.00	30.00	1656.95	763.84	45.64%	25.77%	NM
Event1017	Acquired	14.50	14.50	316.45	111.94	29.07%	11.28%	NM
Event1018	Operating	7.50	71.81	213.06	0.83	100.00%	NM	0.00
Event1019	Operating	20.00	19.03	682.94	352.79	28.72%	22.49%	0.52
Event1020	Operating	14.00	14.00	831.77	87.36	41.93%	NM	0.30
Event1021	Acquired	6.00	6.00	90.60	38.86	51.62%	18.47%	2.44
Event1022	Operating	15.00	15.00	365.24	173.52	46.83%	23.25%	0.89
Event1023	Operating	15.00	12.90	632.86	160.19	72.75%	35.80%	1.52
Event1024	Operating	22.00	16.63	3535.36	7076.22	8.19%	8.87%	0.89
Event1025	Operating	12.00	12.00	383.42	4.50	100.00%	NM	0.05
Event1026	Acquired	12.00	11.63	170.03	227.70	0.13%	NM	4.01
Event1027	Operating	28.00	28.00	2572.75	11351.00	10.81%	9.04%	4.89
Event1028	Acquired	14.50	1015.00	305.93	0.00	NA	NA	0.00
Event1029	Operating	21.00	21.00	1248.53	41.42	100.00%	NM	0.03
Event1030	Operating	10.00	8.57	84.89	57.56	28.80%	12.19%	0.48
Event1031	Acquired	10.00	7.53	373.99	14.69	100.00%	NA	0.00
Event1032	Operating	19.50	4.71	294.26	1013.66	5.89%	2.65%	0.45
Event1033	Operating	23.50	14.11	225.33	87.70	42.44%	35.00%	2.76
Event1034	Acquired	10.00	7.66	134.10	8.14	100.00%	NA	0.24
Event1035	Acquired	7.00	7.00	234.92	1.93	83.29%	NM	0.01
Event1036	Acquired	9.00	8.77	208.16	141.87	71.09%	12.52%	1.37
Event1037	Operating	14.00	13.57	1483.31	297.96	53.60%	21.11%	1.29
Event1038	Bankrupt	15.00	16.15	167.57	88.68	37.97%	7.08%	0.02
Event1039	Operating	20.50	16.74	721.69	196.50	52.95%	21.40%	NM
Event1040	Operating	26.00	26.00	839.64	175.51	57.59%	NM	0.00
Event1041	Acquired	10.00	9.28	59.56	42.62	27.22%	10.44%	0.00
Event1042	Operating	13.00	7.31	414.92	502.60	25.05%	24.35%	NM
Event1043	Operating	15.00	15.00	305.93	371.45	85.21%	10.21%	3.39
Event1044	Acquired	12.00	11.75	449.38	243.49	39.14%	7.76%	0.00
Event1045	Operating	28.00	28.00	3343.85	1119.72	19.05%	13.67%	0.23

Event1046	Operating	21.00	16.95	1148.28	306.80	93.27%	NA	86.88
Event1047	Operating	9.00	7.86	313.63	279.71	18.89%	13.30%	1.60
Event1048	Operating	14.50	13.72	365.77	3767.88	4.64%	1.57%	0.27
Event1049	Operating	17.00	17.00	299.25	44.35	51.33%	0.51%	0.10
Event1050	Operating	14.00	14.00	349.63	445.97	37.90%	10.08%	0.63
Event1051	Operating	14.00	12.39	332.22	206.28	74.13%	37.89%	7.67
Event1052	Operating	15.00	2.13	130.44	0.00	NA	NA	NA
Event1053	Operating	17.00	8.50	176.99	96.11	42.40%	12.72%	0.46
Event1054	Operating	14.00	14.00	387.92	26.59	43.12%	NM	2.21
Event1055	Operating	15.50	31.00	305.43	122.71	73.22%	53.38%	2.16
Event1056	Operating	13.00	9.94	688.60	28.27	84.91%	31.00%	0.00
Event1057	Operating	14.00	9.35	178.38	24.30	100.00%	NA	12.83
Event1058	Operating	5.00	53.69	48.53	4.23	26.66%	NM	0.75
Event1059	Operating	17.00	17.00	337.75	516.76	19.05%	11.38%	NM
Event1060	Acquired	12.00	12.00	46.83	5.70	100.00%	NA	0.65
Event1061	Operating	14.00	14.00	311.08	4.74	66.74%	NM	0.00
Event1062	Operating	11.00	11.00	226.76	0.75	NM	NM	0.01
Event1063	Operating	16.00	102.11	1330.33	91.36	78.31%	63.40%	0.13
Event1064	Operating	19.00	18.85	618.55	1351.79	76.98%	9.59%	0.00
Event1065	Operating	14.00	14.00	410.54	2.34	62.55%	NM	0.16
Event1066	Acquired	12.00	12.00	343.31	0.00	NA	NA	0.25
Event1067	Operating	19.00	8.59	672.51	579.55	39.24%	13.86%	1.66
Event1068	Acquired	17.00	17.00	324.34	33.90	20.51%	6.86%	1.32
Event1069	Operating	13.00	1.62	286.80	287.13	46.17%	9.01%	0.28
Event1070	Acquired	20.00	20.00	1438.02	345.32	37.75%	18.88%	0.61
Event1071	Acquired	15.00	12.33	1547.09	801.38	44.04%	20.77%	0.19
Event1072	Acquired	15.00	15.00	664.69	30.92	36.51%	NM	NM
Event1073	Operating	23.00	21.06	824.85	348.17	21.67%	12.89%	0.14
Event1074	Operating	12.00	12.00	106.27	41.94	14.38%	4.08%	14.38
Event1075	Operating	11.00	11.47	240.63	45.24	100.00%	NA	3.68
Event1076	Operating	21.00	20.46	533.41	213.14	52.76%	27.26%	2.02
Event1077	Acquired	0.10	0.10	0.10	0.01	100.00%	NM	0.08
Event1078	Acquired	14.50	8.72	2077.13	75.18	100.00%	NA	1.41
Event1079	Operating	14.00	8.68	469.68	237.33	25.37%	5.04%	0.76
Event1080	Operating	14.00	93.65	298.33	92.83	63.28%	10.99%	0.21
Event1081	Acquired	9.25	9.25	248.74	23.50	34.35%	20.44%	NM
Event1082	Acquired	14.00	14.00	235.54	45.49	62.90%	16.67%	0.00
Event1083	Operating	17.00	16.99	107.21	41.06	74.09%	27.25%	0.00
Event1084	Operating	17.50	12.02	523.22	644.16	17.72%	8.21%	0.04
Event1085	Acquired	10.00	10.00	3.34	1.04	100.00%	NA	0.00
Event1086	Acquired	14.50	13.62	12.66	4.21	100.00%	NA	0.14
Event1087	Operating	14.00	14.00	555.58	78.68	49.31%	13.42%	0.02
Event1088	Operating	16.00	15.53	299.40	115.81	13.96%	13.03%	3.87
Event1089	Bankrupt	8.00	8.00	133.90	155.22	95.52%	NA	27.08
Event1090	Operating	16.00	12.90	329.21	712.15	14.80%	13.72%	0.14
Event1091	Operating	10.00	5.84	975.38	125.41	100.00%	NA	0.99
Event1092	Acquired	8.00	3.86	112.14	10.89	100.00%	NA	10.25
Event1093	Operating	12.00	12.00	267.53	91.36	30.00%	NM	0.79

Event1094	Operating	20.00	3.21	141.75	387.03	4.25%	1.84%	1.46
Event1095	Operating	35.00	4.27	1239.25	396.63	83.86%	47.28%	3.60
Event1096	Operating	12.00	6.22	160.97	481.63	14.48%	3.12%	0.76
Event1097	Operating	15.00	15.62	172.24	39.78	69.37%	12.13%	0.01
Event1098	Operating	14.00	14.00	118.16	146.58	40.60%	6.83%	1.67
Event1099	Operating	13.00	4.25	208.11	32.34	49.42%	29.20%	0.95
Event1100	Acquired	25.00	25.00	2238.56	4624.42	19.15%	3.67%	0.27
Event1101	Operating	19.00	3.51	126.61	163.12	14.03%	9.42%	2.43
Event1102	Operating	13.00	7.17	2.60	1.16	95.76%	NM	0.00
Event1103	Acquired	10.00	9.62	19.45	4.35	100.00%	NA	0.23
Event1104	Operating	10.00	10.00	446.30	311.58	100.00%	17.45%	2.08
Event1105	Operating	12.00	2.45	283.09	1074.57	24.66%	5.42%	1.28
Event1106	Acquired	16.50	15.57	156.37	106.29	100.00%	NA	2.08
Event1107	Operating	13.00	1.60	290.79	113.39	92.81%	73.20%	2.73
Event1108	Operating	39.00	4.39	390.33	0.00	NA	NA	NA
Event1109	Operating	20.00	29.80	440.52	0.00	NA	NA	NA
Event1110	Acquired	10.00	9.50	42.90	11.93	100.00%	NA	1.00
Event1111	Operating	13.00	13.00	455.52	314.24	46.03%	7.07%	0.63
Event1112	Acquired	19.50	14.49	385.11	73.57	53.74%	49.95%	1.15
Event1113	Operating	12.00	12.00	184.46	224.49	22.60%	13.04%	1.70
Event1114	Operating	15.00	14.16	257.67	307.21	34.88%	11.02%	NM
Event1115	Acquired	10.00	4.77	17.31	2.05	100.00%	NA	0.27
Event1116	Operating	3.50	21.00	51.28	0.00	NA	NA	0.16
Event1117	Operating	17.00	17.00	235.35	92.59	18.73%	10.97%	NM
Event1118	Operating	5.00	5.00	47.76	10.81	50.18%	NM	3.95
Event1119	Acquired	13.00	13.00	465.38	156.30	46.27%	19.44%	NM
Event1120	Operating	19.00	19.00	2303.90	1502.09	42.45%	20.58%	0.75
Event1121	Operating	13.00	7.18	205.33	622.48	34.51%	8.80%	NM
Event1122	Operating	17.00	17.00	796.09	188.88	41.63%	18.07%	1.34
Event1123	Operating	10.00	8.74	72.58	41.87	72.30%	NM	1.31
Event1124	Operating	15.00	13.53	368.32	1670.90	13.85%	4.17%	13.86
Event1125	Acquired	16.00	16.00	620.71	690.23	35.28%	8.17%	9.89
Event1126	Operating	8.50	8.50	220.73	81.47	76.70%	NM	0.14
Event1127	Operating	13.00	13.00	186.08	40.00	13.41%	NM	0.42
Event1128	Operating	18.00	9.00	338.21	312.55	29.02%	4.02%	0.10
Event1129	Operating	15.00	7.53	645.49	165.44	55.69%	35.74%	2.49
Event1130	Operating	15.00	1.07	256.00	75.91	15.82%	NM	0.61
Event1131	Acquired	10.00	10.00	80.10	34.45	72.31%	NM	NM
Event1132	Operating	16.50	9.06	194.55	59.67	39.26%	15.81%	0.07
Event1133	Operating	20.50	4.02	106.85	93.68	16.07%	10.68%	0.29
Event1134	Operating	16.00	16.00	287.70	131.24	46.73%	3.60%	2.33
Event1135	Operating	19.00	2.92	2805.26	668.28	43.35%	13.83%	0.94
Event1136	Acquired	22.00	22.00	642.20	271.04	69.98%	57.51%	2.61
Event1137	Acquired	24.00	23.97	891.00	5985.00	11.67%	10.81%	3.56
Event1138	Acquired	16.00	160.00	872.10	980.47	21.29%	12.65%	NM
Event1139	Acquired	10.00	10.00	1620.00	143.62	100.00%	79.84%	0.00
Event1140	Operating	27.00	8.00	196.38	320.41	40.26%	11.62%	2.10

Event1141	Acquired	10.00	9.47	9.48	1.59	100.00%	NA	0.00
Event1142	Acquired	12.00	11.96	317.83	128.46	26.53%	11.23%	1.05
Event1143	Operating	18.50	41.77	5261.64	12230.50	23.93%	14.03%	0.37
Event1144	Operating	16.50	14.89	545.70	4150.79	15.51%	3.51%	2.84
Event1145	Acquired	18.00	18.00	487.62	715.02	12.26%	6.49%	NM
Event1146	Operating	10.00	9.75	5.77	1.44	100.00%	NA	0.49
Event1147	Acquired	22.00	22.00	501.84	263.95	30.54%	16.78%	3.41
Event1148	Operating	19.00	19.00	767.28	1300.95	30.20%	9.18%	NM
Event1149	Operating	13.00	13.00	1189.60	104.83	9.60%	NM	0.04
Event1150	Operating	18.00	6.06	1081.29	1121.14	23.82%	5.74%	NM
Event1151	Operating	16.00	13.89	359.10	431.44	18.10%	8.18%	3.20
Event1152	Acquired	20.25	1.38	305.46	1613.46	6.84%	4.70%	0.53
Event1153	Operating	12.00	12.00	145.31	17.83	NM	NM	0.00
Event1154	Acquired	2.00	10.67	5.36	0.00	NA	NA	NM
Event1155	Operating	11.00	7.37	295.71	73.70	31.02%	3.35%	0.17
Event1156	Acquired	10.00	10.00	8.99	1.66	100.00%	NA	0.49
Event1157	Operating	10.00	1.65	42.63	23.95	100.00%	NA	0.10
Event1158	Acquired	10.00	7.80	30.95	8.89	100.00%	NA	1.26
Event1159	Operating	6.50	6.50	356.40	68.11	36.49%	5.62%	5.87
Event1160	Operating	19.00	18.92	976.28	1183.89	20.27%	11.57%	6.43
Event1161	Operating	14.00	1.17	15.06	223.13	18.21%	4.18%	0.40
Event1162	Acquired	11.00	11.00	367.41	21.94	96.17%	15.36%	0.24
Event1163	Operating	27.50	17.70	19566.41	26788.00	43.58%	11.71%	1.39
Event1164	Acquired	16.00	16.00	1580.75	85.56	69.85%	NM	0.30
Event1165	Acquired	23.00	22.38	3231.84	7369.49	9.99%	8.57%	6.77
Event1166	Operating	14.00	14.00	1438.67	394.32	60.83%	9.08%	2.01
Event1167	Operating	10.00	5.00	319.58	354.69	28.14%	20.40%	4.72
Event1168	Acquired	13.00	13.00	538.90	11.84	50.62%	NM	0.17
Event1169	Operating	7.00	7.00	36.63	14.31	31.04%	6.31%	2.35
Event1170	Operating	24.00	20.91	3120.05	409.76	49.01%	28.95%	NM
Event1171	Acquired	17.00	17.00	253.56	143.59	51.86%	20.12%	NM
Event1172	Operating	19.00	9.50	359.28	63.73	47.21%	0.57%	NM
Event1173	Operating	17.00	17.00	881.06	230.77	26.07%	3.06%	1.84
Event1174	Operating	17.00	8.50	22.04	659.52	20.61%	7.71%	0.07
Event1175	Acquired	9.00	22.55	127.12	9.28	71.89%	NM	0.00
Event1176	Operating	15.00	6.67	259.86	82.56	45.54%	9.82%	2.74
Event1177	Operating	36.00	15.54	4307.82	8771.00	25.31%	5.55%	0.44
Event1178	Acquired	21.00	5.38	173.65	30.19	90.67%	72.42%	3.91
Event1179	Operating	17.00	17.00	489.66	368.33	25.86%	12.27%	1.28
Event1180	Operating	18.50	12.04	7987.29	8594.20	29.41%	13.68%	0.29
Event1181	Acquired	10.00	4.09	465.23	17.58	100.00%	NA	1.31
Event1182	Operating	19.00	19.00	949.20	5.50	NM	NM	3.56
Event1183	Acquired	10.00	7.52	18.48	3.96	100.00%	NA	0.07
Event1184	Acquired	15.00	15.00	641.88	355.54	50.91%	20.87%	0.00
Event1185	Operating	7.00	6.55	181.18	67.37	60.55%	NM	NM
Event1186	Operating	16.00	11.56	1030.08	9667.00	7.57%	5.11%	1.50
Event1187	Operating	13.00	103.61	623.80	345.29	56.06%	44.96%	NM
Event1188	Acquired	12.00	10.13	11.22	0.00	100.00%	NA	NM
Event1189	Operating	12.00	12.00	336.44	21.27	54.09%	NM	0.17
Event1190	Acquired	22.00	5.31	129.32	63.51	18.83%	4.67%	2.52
Event1191	Operating	25.00	2.36	449.76	315.67	43.12%	17.47%	1.61
Event1192	Operating	11.00	11.00	13.06	24.63	64.50%	3.67%	0.00

Event1193	Operating	16.85	11.23	88.45	8.31	37.32%	10.91%	1.08
Event1194	Operating	19.00	19.00	327.06	421.66	29.99%	8.18%	1.10
Event1195	Acquired	9.00	90.00	334.19	72.72	61.66%	NM	0.04
Event1196	Operating	17.50	318.66	1840.65	3008.90	21.34%	9.32%	0.21
Event1197	Operating	18.00	17321.47	1149.77	832.04	9.22%	9.69%	0.00
Event1198	Operating	20.00	4.75	0.02	1875.20	24.21%	8.80%	0.06
Event1199	Operating	31.00	12.63	43868.24	22922.00	39.10%	21.26%	1.84
Event1200	Operating	14.00	9.33	416.12	135.10	41.43%	15.50%	2.08
Event1201	Operating	12.00	11.45	667.27	678.20	19.20%	14.45%	1.20
Event1202	Operating	16.00	16.00	578.94	337.51	85.59%	18.81%	NM
Event1203	Operating	8.50	8.75	73.05	81.46	16.47%	5.81%	0.96
Event1204	Operating	14.50	10.73	4216.58	1428.48	75.35%	NA	0.18
Event1205	Acquired	15.00	15.62	2382.59	15.60	NM	NM	0.02
Event1206	Operating	70.41	14.28	765.91	0.00	NA	NA	NA
Event1207	Acquired	10.00	9.72	59.19	10.87	100.00%	NA	0.00
Event1208	Acquired	12.00	12.02	295.59	22.82	82.89%	0.97%	0.29
Event1209	Acquired	30.00	30.00	9644.76	3475.04	27.49%	18.74%	0.71
Event1210	Operating	9.50	4.71	431.46	776.56	15.47%	11.80%	1.67
Event1211	Acquired	0.01	0.01	0.09	0.00	NA	NA	NM
Event1212	Operating	6.00	60.00	6787.56	4708.00	45.73%	26.93%	0.01
Event1213	Acquired	7.00	7.00	142.30	21.50	88.41%	NM	0.05
Event1214	Acquired	10.00	4.13	5.27	3.37	100.00%	NA	2.50
Event1215	Acquired	14.00	9.33	5.36	108.95	82.86%	41.09%	1.10
Event1216	Acquired	6.00	6.00	450.99	15.49	NM	NM	0.77
Event1217	Operating	7.00	7.00	254.93	0.10	NM	NM	0.00
Event1218	Operating	17.00	8.83	597.99	723.20	30.25%	15.97%	2.57
Event1219	Acquired	0.25	0.13	4.18	0.00	89.00%	NM	0.44
Event1220	Operating	11.00	11.00	423.37	11.42	NM	NM	0.40
Event1221	Operating	9.00	5.14	440.63	304.55	28.55%	16.16%	1.17
Event1222	Operating	21.50	1.82	276.03	426.85	43.76%	31.76%	3.24
Event1223	Operating	14.00	14.00	280.29	0.00	NA	NA	0.00
Event1224	Operating	13.00	13.00	789.73	6.74	NM	NM	0.04
Event1225	Operating	8.00	11.15	103.95	84.30	18.47%	5.19%	2.27
Event1226	Acquired	10.00	8.72	10.09	3.20	100.00%	NA	0.58
Event1227	Operating	12.00	4.54	330.08	127.46	41.42%	14.23%	2.43
Event1228	Operating	9.50	950.00	170.46	16.95	100.00%	NM	0.60
Event1229	Acquired	13.50	6.54	140.37	184.44	7.29%	7.43%	0.04
Event1230	Operating	16.00	16.00	470.63	130.14	42.54%	8.49%	1.01
Event1231	Operating	8.00	6.06	289.64	26.18	48.25%	7.25%	1.01
Event1232	Acquired	10.00	8.99	28.88	5.19	100.00%	NA	0.25
Event1233	Operating	7.00	63.00	279.88	8.98	NM	NM	10.12
Event1234	Operating	11.00	23.69	295.01	7.55	34.96%	NM	0.02
Event1235	Operating	7.50	7.50	192.21	6.77	34.38%	NM	0.68
Event1236	Operating	8.00	120.01	88.98	9.56	NM	NM	0.01
Event1237	Acquired	14.50	4.12	13.92	1.85	100.00%	NA	0.00

Event1238	Operating	20.00	20.00	1811.92	134.07	67.78%	41.41%	1.99
Event1239	Acquired	7.00	5.52	24.77	9.42	100.00%	NA	3.61
Event1240	Acquired	15.00	15.00	406.98	0.01	NM	NM	0.02
Event1241	Bankrupt	12.00	60.00	232.52	0.47	100.00%	NM	0.04
Event1242	Operating	12.00	12.00	283.77	12.51	74.92%	23.76%	0.00
Event1243	Operating	12.00	12.00	1891.50	65.26	33.99%	12.86%	0.00
Event1244	Operating	21.00	420.00	5826.73	5.08	99.65%	NM	0.20
Event1245	Operating	11.00	11.00	498.11	101.87	50.60%	42.13%	0.07
Event1246	Operating	15.00	4.79	437.17	706.96	17.16%	4.42%	0.40
Event1247	Acquired	10.00	1.84	226.21	50.60	100.00%	NA	1.48
Event1248	Operating	7.00	7.28	202.97	15.12	57.86%	18.14%	1.91
Event1249	Operating	13.00	13.00	1226.90	24.50	79.82%	37.87%	0.00
Event1250	Operating	14.00	56.75	496.28	12.42	9.65%	NM	0.00
Event1251	Operating	20.00	7.57	6120.00	5248.00	51.30%	22.47%	0.94
Event1252	Acquired	10.00	8.69	596.93	111.84	100.00%	NA	5.33
Event1253	Operating	8.00	9.85	328.93	18.18	92.13%	NM	NM
Event1254	Operating	12.50	10.45	534.72	624.58	16.45%	7.79%	NM
Event1255	Acquired	8.50	5.67	11.60	2.01	100.00%	NA	0.17
Event1256	Operating	14.00	14.00	333.83	5.35	100.00%	NM	0.21
Event1257	Operating	16.00	1.47	832.23	537.69	59.07%	14.63%	0.02
Event1258	Operating	18.00	156.94	578.23	39.05	8.80%	NM	0.03
Event1259	Acquired	16.00	16.00	426.80	10.01	79.86%	NM	0.72
Event1260	Operating	16.00	14.58	415.25	79.24	48.18%	30.05%	2.87
Event1261	Acquired	11.00	33.00	729.04	0.79	NM	NM	0.24
Event1262	Operating	11.00	11.00	363.99	192.59	20.69%	9.19%	1.10
Event1263	Acquired	9.00	9.00	325.79	0.91	NM	NM	0.00
Event1264	Acquired	13.00	13.00	436.15	8.22	NM	NM	NM
Event1265	Operating	14.00	17.86	798.09	19.13	43.56%	NM	NM
Event1266	Operating	16.00	160.00	820.19	5.01	65.91%	NM	0.75
Event1267	Acquired	19.00	19.00	435.96	0.78	42.78%	NM	0.07
Event1268	Acquired	17.00	17.31	440.87	159.43	16.09%	0.06%	0.97
Event1269	Operating	12.00	13.64	554.62	2.89	47.18%	NM	0.01
Event1270	Operating	12.00	12.00	687.17	0.09	54.65%	NM	0.02
Event1271	Operating	15.00	135.00	690.51	0.11	100.00%	NM	0.06
Event1272	Acquired	10.00	10.00	2.85	1.39	100.00%	NA	2.46
Event1273	Operating	16.00	16.00	3498.04	200.62	50.33%	21.56%	0.05
Event1274	Operating	16.00	16.00	788.79	106.45	22.78%	17.93%	8.01
Event1275	Acquired	13.00	13.00	226.50	0.01	NM	NM	0.00
Event1276	Acquired	19.00	19.00	351.06	8.60	37.45%	17.37%	1.57
Event1277	Operating	6.00	9.41	560.63	251.41	70.51%	35.28%	0.97
Event1278	Acquired	10.50	105.00	154.00	0.00	NA	NA	NM
Event1279	Operating	16.00	16.00	1755.85	82.40	38.68%	9.65%	0.02
Event1280	Operating	10.00	2.34	8.91	0.00	NA	NA	NA
Event1281	Acquired	10.00	10.00	8.22	0.01	100.00%	NA	0.00
Event1282	Bankrupt	18.00	18.00	1027.06	3.05	7.93%	NM	0.00

Event1283	Bankrupt	15.00	150.00	456.27	92.05	28.66%	1.26%	0.85
Event1284	Operating	12.00	12.00	297.99	48.63	26.77%	6.57%	1.53
Event1285	Operating	10.00	10.00	713.47	4.13	NM	NM	1.05
Event1286	Acquired	7.00	70.00	194.54	25.22	68.15%	NM	NM
Event1287	Operating	15.00	15.00	486.52	16.83	1.65%	NM	0.08
Event1288	Operating	8.00	8.00	473.18	29.22	15.38%	NM	0.25
Event1289	Acquired	7.00	210.00	5.12	4.24	100.00%	NM	0.05
Event1290	Operating	11.00	5.50	572.34	81.35	75.64%	20.00%	2.20
Event1291	Acquired	12.00	11.11	407.18	12.70	39.27%	NM	3.03
Event1292	Operating	14.00	13.32	285.01	33.03	36.12%	9.81%	0.37
Event1293	Acquired	28.00	27.73	5115.10	95.26	47.22%	5.04%	0.16
Event1294	Operating	10.00	29.90	166.43	8.86	42.88%	NM	0.24
Event1295	Acquired	16.00	71.11	844.11	3.68	6.05%	NM	0.01
Event1296	Operating	9.00	11.75	26.56	0.00	NA	NA	0.99
Event1297	Operating	12.00	12.00	495.32	375.53	15.46%	21.61%	NM
Event1298	Operating	15.00	15.00	148.68	27.46	34.45%	11.16%	NM
Event1299	Operating	16.00	16.00	701.97	0.00	NA	NA	NM
Event1300	Acquired	11.00	11.00	402.25	393.84	7.58%	4.00%	1.64
Event1301	Operating	17.00	17.00	260.25	45.76	30.33%	8.23%	2.27
Event1302	Operating	10.00	60.00	286.19	44.98	52.14%	6.51%	0.00
Event1303	Operating	16.00	16.00	1133.30	0.00	NA	NA	0.00
Event1304	Operating	8.00	56.00	132.36	96.80	38.43%	NM	0.70
Event1305	Operating	14.00	14.98	572.76	0.98	100.00%	NM	0.09
Event1306	Acquired	15.00	15.00	367.81	4.49	100.00%	NM	NM
Event1307	Operating	11.00	4.30	147.74	22.49	53.00%	30.83%	0.01
Event1308	Operating	13.00	12.72	1049.34	64.69	51.12%	10.30%	1.53
Event1309	Operating	15.00	11.14	242.45	179.19	19.48%	11.65%	1.18
Event1310	Operating	18.00	19.04	1221.28	316.60	44.17%	23.34%	0.64
Event1311	Operating	16.50	11.30	2018.43	59.00	58.57%	NM	5.98
Event1312	Operating	17.00	17.00	467.83	1.96	9.13%	NM	0.01
Event1313	Operating	11.00	11.00	190.09	4.28	100.00%	NM	0.15
Event1314	Operating	21.00	21.00	998.57	9.91	85.78%	NM	0.91
Event1315	Operating	12.00	12.00	358.65	1.10	NM	NM	0.04
Event1316	Acquired	12.00	12.00	484.19	2.99	65.93%	NM	0.05
Event1317	Acquired	13.00	13.00	362.35	0.68	97.06%	NM	NM
Event1318	Acquired	13.00	11.36	214.91	19.24	81.27%	8.12%	0.00
Event1319	Acquired	12.00	12.00	226.06	9.59	72.34%	5.67%	0.49
Event1320	Acquired	20.00	20.00	2000.09	14.01	40.97%	NM	0.10
Event1321	Operating	7.00	7.00	52.11	66.61	36.19%	9.65%	NM
Event1322	Operating	10.00	10.00	189.41	0.00	NA	NA	0.00
Event1323	Operating	18.00	180.00	524.91	0.00	NA	NA	0.58
Event1324	Acquired	10.00	10.00	259.48	1.64	86.12%	NM	0.12
Event1325	Acquired	36.00	360.00	28181.95	0.00	NA	NA	0.23
Event1326	Operating	16.00	8.00	1000.49	0.47	100.00%	NM	0.00

Event1327	Operating	14.00	14.00	1194.38	2.61	73.61%	NM	0.01
Event1328	Operating	15.00	15.00	1019.82	150.86	20.74%	11.74%	1.19
Event1329	Operating	19.00	19.00	577.75	2.59	100.00%	NM	0.01
Event1330	Acquired	12.00	12.00	244.19	7.03	34.03%	NM	0.00
Event1331	Acquired	20.00	140.01	4248.11	11.23	44.81%	NM	0.09
Event1332	Acquired	8.00	8.00	551.61	2.25	NM	NM	0.04
Event1333	Acquired	16.00	16.00	428.95	9.04	87.08%	NM	3.64
Event1334	Acquired	14.00	14.00	522.73	0.40	NM	NM	0.24
Event1335	Acquired	14.00	14.00	961.62	5.78	NM	NM	0.28
Event1336	Operating	12.00	12.00	207.16	1.43	25.46%	NM	0.00
Event1337	Operating	14.00	21.71	1190.41	3.21	68.17%	NM	0.39
Event1338	Operating	13.00	6.50	720.49	40.25	29.97%	10.22%	0.00
Event1339	Operating	17.00	17.88	1004.18	6.03	21.26%	NM	0.09
Event1340	Operating	12.00	48.95	564.97	0.00	NA	NA	0.00
Event1341	Operating	22.00	88.00	2471.06	397.27	39.54%	7.91%	0.00
Event1342	Operating	11.00	10.78	816.68	241.95	38.94%	20.55%	0.57
Event1343	Acquired	27.00	27.00	7989.56	6.26	NM	NM	0.55
Event1344	Acquired	11.00	11.00	183.91	24.84	69.76%	5.40%	0.00
Event1345	Operating	16.00	3200.00	3304.39	6.69	NM	NM	0.48
Event1346	Acquired	12.00	12.00	134.75	4.35	42.35%	NM	0.75
Event1347	Operating	11.00	11.00	349.20	5.56	36.52%	NM	0.02
Event1348	Operating	10.00	6.18	108.87	32.64	100.00%	NA	0.68
Event1349	Operating	21.00	210.00	1977.57	73.24	34.38%	12.65%	0.00
Event1350	Operating	10.00	5.97	669.47	9.95	73.17%	6.20%	0.02
Event1351	Operating	16.00	16.00	711.04	231.41	36.59%	23.89%	NM
Event1352	Operating	7.00	34.08	96.69	29.70	35.83%	22.60%	0.00
Event1353	Acquired	15.00	15.00	2381.16	8.47	25.44%	NM	0.13
Event1354	Acquired	16.00	16.00	657.65	920.72	6.00%	3.43%	1.45
Event1355	Operating	6.00	6.75	236.01	3.60	97.30%	NM	1.09
Event1356	Acquired	20.00	20.00	3170.49	0.00	NA	NA	0.00
Event1357	Operating	8.00	4.51	29.76	0.56	100.00%	NA	0.00
Event1358	Acquired	12.00	12.05	225.01	12.06	57.62%	0.36%	0.44
Event1359	Acquired	15.50	15.50	18.00	91.94	18.82%	6.56%	NM
Event1360	Operating	9.00	5.98	341.54	10.19	9.02%	NM	0.19
Event1361	Operating	13.00	10.67	1811.55	984.80	41.96%	20.73%	6.25
Event1362	Operating	8.00	8.36	315.53	0.00	NA	NA	0.38
Event1363	Acquired	10.00	10.00	845.30	4.86	7.39%	NM	0.19
Event1364	Acquired	10.00	9.94	251.20	19.09	38.59%	NM	NM
Event1365	Acquired	25.00	25.00	9910.16	3.03	65.99%	NM	0.01
Event1366	Operating	8.00	5.37	100.26	18.63	83.14%	11.16%	1.02
Event1367	Operating	15.00	16.63	0.03	432.52	37.60%	18.28%	2.59
Event1368	Acquired	22.00	21.44	7.16	136.30	50.63%	38.30%	5.05
Event1369	Operating	23.00	38.33	2910.15	0.00	NA	NA	0.23
Event1370	Acquired	12.00	12.00	422.33	18.07	43.89%	5.61%	0.18
Event1371	Operating	19.00	24.09	875.76	3.74	16.72%	NM	0.11
Event1372	Operating	13.00	13.00	506.63	139.06	53.62%	27.63%	NM
Event1373	Operating	7.00	7.00	215.19	12.92	85.92%	NM	0.31
Event1374	Operating	10.00	30.00	109.39	12.81	34.62%	NM	0.05
Event1375	Operating	11.00	11.00	663.38	58.63	46.12%	NM	2.70
Event1376	Acquired	12.00	12.00	112.35	8.86	42.29%	NM	0.00

Event1377	Acquired	20.00	11.07	2858.81	22.84	33.51%	NM	0.02
Event1378	Operating	10.00	7.12	0.00	4.00	100.00%	NA	0.45
Event1379	Acquired	10.00	9.40	13.24	6.83	100.00%	NA	0.21
Event1380	Acquired	8.00	8.00	273.66	8.40	20.21%	NM	0.11
Event1381	Acquired	1.00	1.00	11.46	0.33	100.00%	NM	NM
Event1382	Operating	8.00	8.00	190.27	12.09	42.19%	NM	NM
Event1383	Operating	8.00	40.00	345.92	1.79	NM	NM	0.08
Event1384	Operating	14.00	14.00	903.75	31.91	NM	NM	NM
Event1385	Operating	7.00	40.57	137.79	1.07	NM	NM	0.41
Event1386	Operating	14.00	70.00	377.34	28.69	40.37%	NM	NM
Event1387	Operating	16.00	16.00	3656.26	1916.88	28.22%	21.17%	NM
Event1388	Acquired	12.00	12.00	1216.66	55.17	54.07%	NM	NM
Event1389	Acquired	10.00	50.00	594.51	61.51	20.73%	12.89%	0.00
Event1390	Acquired	9.00	9.00	550.26	158.89	52.42%	15.91%	NM
Event1391	Operating	10.00	10.00	408.32	18.85	94.13%	13.51%	1.34
Event1392	Operating	9.50	9.50	224.64	53.20	42.84%	17.97%	0.00
Event1393	Acquired	17.00	17.00	940.71	19.57	72.10%	NM	0.06
Event1394	Operating	8.00	12.46	347.78	7.74	13.31%	NM	0.01
Event1395	Acquired	10.00	9.62	81.87	26.58	100.00%	NA	0.71
Event1396	Operating	13.00	13.00	598.72	10.51	100.00%	NM	NM
Event1397	Operating	9.00	8.63	155.86	2.57	16.73%	NM	0.11
Event1398	Operating	22.00	154.00	890.91	4.74	NM	NM	0.59
Event1399	Operating	8.00	8.00	278.73	0.62	NM	NM	0.00
Event1400	Acquired	14.00	14.00	1034.23	5.49	94.41%	NM	0.00
Event1401	Operating	15.00	14.94	91.98	2.18	100.00%	NM	0.03
Event1402	Acquired	28.50	28.50	1181.98	1.41	100.00%	NM	0.25
Event1403	Operating	15.00	60.00	1414.08	1.94	34.81%	NM	0.05
Event1404	Acquired	16.00	12.76	442.35	1.73	15.46%	NM	0.00
Event1405	Operating	14.00	15.84	610.89	31.37	58.46%	NM	1.70
Event1406	Operating	20.00	14.82	745.89	98.69	51.27%	22.14%	0.00
Event1407	Operating	13.00	4.80	825.05	25.83	65.61%	17.41%	3.94
Event1408	Operating	8.00	4.79	11.01	6.57	100.00%	NA	0.91
Event1409	Operating	21.00	5.25	479.11	220.24	14.25%	7.50%	0.48
Event1410	Operating	14.25	8.51	11601.47	25128.00	28.87%	8.97%	0.96
Event1411	Operating	17.00	15.47	576.87	3.11	62.34%	NM	0.00
Event1412	Acquired	34.00	34.00	4054.30	12.38	58.71%	NM	0.08
Event1413	Operating	19.00	19.00	584.43	25.97	52.00%	5.23%	0.02
Event1414	Acquired	12.00	12.00	1084.16	0.19	NM	NM	0.17
Event1415	Operating	18.00	9.00	768.53	8.65	73.69%	NM	0.91
Event1416	Operating	18.00	18.00	45.05	0.00	NA	NA	0.02
Event1417	Acquired	13.00	13.00	146.43	20.22	91.61%	12.00%	0.81
Event1418	Operating	20.00	20.00	523.55	0.56	NM	NM	NM
Event1419	Acquired	9.00	9.00	1193.69	814.32	2.99%	NM	0.00
Event1420	Operating	31.00	31.00	3231.35	46.91	66.38%	35.46%	0.42
Event1421	Operating	15.00	15.00	579.31	3.66	69.25%	NM	0.01
Event1422	Acquired	16.00	16.00	591.60	9.05	67.62%	NM	NM
Event1423	Operating	21.00	19.25	2545.49	1293.37	25.03%	7.04%	NM
Event1424	Acquired	12.00	10.92	286.29	18.96	90.35%	24.32%	0.00
Event1425	Operating	13.00	14.36	197.23	0.36	NM	NM	0.62

Event1426	Operating	11.00	162.46	425.74	6.67	NM	NM	0.10
Event1427	Acquired	21.00	21.00	1712.57	2.94	100.00%	NM	0.31
Event1428	Operating	18.00	270.03	1333.37	0.00	NA	NA	0.12
Event1429	Acquired	16.00	178.25	1431.41	2.65	18.79%	NM	0.05
Event1430	Operating	24.00	24.00	1543.49	187.01	45.32%	7.56%	0.59
Event1431	Acquired	19.00	19.00	1431.43	32.90	84.93%	7.17%	NM
Event1432	Operating	18.00	18.50	404.68	0.00	NA	NA	0.04
Event1433	Acquired	12.00	12.00	1762.97	21.65	9.85%	NM	0.19
Event1434	Operating	24.00	24.00	1760.95	9.64	68.04%	NM	0.00
Event1435	Operating	18.00	54.00	6084.04	187.52	39.90%	12.65%	0.26
Event1436	Acquired	18.00	18.00	473.39	20.52	63.89%	NM	0.38
Event1437	Operating	15.00	14.65	621.06	8.30	80.72%	NM	0.09
Event1438	Acquired	10.00	9.50	114.43	49.77	100.00%	NA	1.46
Event1439	Operating	38.00	136.31	45013.92	563.53	43.99%	9.77%	0.04
Event1440	Acquired	18.00	17.47	1045.22	6.54	48.16%	NM	0.34
Event1441	Operating	21.00	75.74	4509.06	27.18	NM	NM	0.36
Event1442	Operating	25.00	25.00	2709.22	41.35	56.44%	NM	0.28
Event1443	Operating	24.00	240.00	6838.07	8.16	67.03%	NM	0.08
Event1444	Operating	24.00	24.00	3841.44	69.70	11.23%	NM	0.04
Event1445	Operating	16.00	16.00	1293.96	161.81	29.95%	15.14%	0.00
Event1446	Acquired	25.00	16.83	3600.32	371.04	39.28%	21.18%	0.01
Event1447	Acquired	14.00	13.73	921.48	1.85	33.78%	NM	0.00
Event1448	Operating	20.00	20.00	8995.00	32.72	9.69%	NM	4.60
Event1449	Operating	32.00	22.46	854.90	30.09	57.31%	14.11%	0.00
Event1450	Operating	22.00	20.65	593.74	18.17	67.48%	NM	19.67
Event1451	Acquired	16.00	15.94	415.07	12.49	40.91%	NM	1.67
Event1452	Operating	24.00	311.05	3760.93	10.27	100.00%	NM	0.59
Event1453	Operating	12.00	9.45	88.22	0.00	NA	NA	NA
Event1454	Operating	10.00	9.87	156.03	10.56	5.03%	NM	0.00
Event1455	Operating	18.00	45.00	1218.63	17.59	12.21%	NM	NM
Event1456	Operating	24.00	359.98	1996.90	23.99	NM	NM	NM
Event1457	Operating	15.50	10.57	246.11	93.62	70.97%	25.20%	NM
Event1458	Operating	20.00	20.00	1374.70	32.96	46.98%	NM	0.11
Event1459	Operating	35.00	35.00	6404.05	14.27	67.25%	NM	0.04
Event1460	Acquired	15.00	15.00	177.96	54.11	46.54%	25.36%	NM
Event1461	Operating	12.00	117.78	566.01	16.92	42.46%	NM	0.03
Event1462	Operating	17.00	170.00	934.32	7.44	33.23%	NM	0.00
Event1463	Operating	20.00	20.00	2996.57	77.80	29.73%	NM	0.56
Event1464	Operating	20.00	20.00	743.36	22.97	81.31%	NM	NM

Event1465	Operating	18.00	18.00	461.04	4.85	19.16%	NM	0.01
Event1466	Acquired	17.00	17.00	1108.43	6.42	38.53%	NM	0.35
Event1467	Acquired	10.00	10.00	191.66	9.31	60.63%	NM	0.86
Event1468	Operating	6.00	6.00	16.23	0.06	100.00%	NM	NM
Event1469	Operating	13.00	13.00	3551.35	596.85	NM	NM	0.84
Event1470	Acquired	12.00	13.37	17.19	27.19	49.58%	7.11%	0.32
Event1471	Bankrupt	22.00	220.00	3283.36	34.29	51.73%	NM	NM
Event1472	Operating	36.00	540.05	10754.99	0.51	NM	NM	0.39
Event1473	Operating	18.00	108.00	1486.26	0.58	100.00%	NM	0.06
Event1474	Operating	19.00	19.00	1710.00	176.05	67.02%	35.59%	20.86
Event1475	Acquired	22.00	22.00	1267.79	331.38	68.12%	38.57%	5.18
Event1476	Acquired	14.00	12.66	718.85	8.60	80.03%	NM	0.09
Event1477	Acquired	20.00	20.00	414.48	66.21	44.38%	1.47%	NM
Event1478	Acquired	17.00	17.00	4547.89	9.72	6.99%	NM	0.38
Event1479	Acquired	16.00	22.02	2461.74	15.36	44.58%	NM	0.22
Event1480	Operating	26.00	78.00	2112.88	0.18	100.00%	NM	0.39
Event1481	Operating	14.00	14.00	539.52	4.19	81.84%	NM	NM
Event1482	Acquired	16.00	16.00	282.32	26.91	68.83%	8.57%	0.12
Event1483	Operating	10.00	5.46	53.47	17.66	100.00%	NA	0.77
Event1484	Operating	12.00	6.88	1135.20	1770.55	20.02%	19.11%	2.56
Event1485	Acquired	15.00	15.00	462.82	27.19	65.70%	NM	0.46
Event1486	Operating	10.00	10.00	72.92	169.95	24.91%	5.83%	1.09
Event1487	Acquired	20.00	20.00	1278.74	6.81	22.26%	NM	0.21
Event1488	Acquired	10.00	9.69	158.13	15.85	58.48%	1.07%	0.04
Event1489	Acquired	17.00	16.34	5638.90	7807.60	21.05%	5.54%	0.20
Event1490	Operating	13.00	4.20	38.87	3.54	79.92%	68.14%	0.00
Event1491	Acquired	13.00	120.38	2687.47	1.00	NM	NM	0.19
Event1492	Acquired	10.00	10.07	19.68	9.69	100.00%	NA	0.27

Appendix A – table 3: Complete list of IPO firms and their corresponding matches for the BHAR approach

Event ID	IPO firm name	Matching firm name
Event1	AMC Entertainment Holdings, Inc.	Verizon Communications Inc.
Event2	Nimble Storage, Inc.	Usio, Inc.
Event3	Cheniere Energy Partners LP Holdings, LLC	RPC, Inc.
Event4	Fidelity & Guaranty Life	WesBanco, Inc.
Event5	Kindred Biosciences, Inc.	IsoRay, Inc.
Event6	Hilton Worldwide Holdings Inc.	BorgWarner Inc.
Event7	Aramark	BorgWarner Inc.
Event8	Valero Energy Partners LP	Mesa Royalty Trust
Event9	Xencor, Inc.	Five Star Senior Living Inc.
Event10	Ideal Power Inc.	Chicago Rivet & Machine Co.
Event11	Vince Holding Corp.	Caleres, Inc.
Event12	Zulily, LLC	The Gap, Inc.
Event13	Relypsa, Inc.	Lineage Cell Therapeutics, Inc.
Event14	Tandem Diabetes Care, Inc.	NextGen Healthcare, Inc.
Event15	Houghton Mifflin Harcourt Company	Office Depot, Inc.
Event16	Chegg, Inc.	SpartanNash Company
Event17	Extended Stay America, Inc.	Graham Holdings Company
Event18	Caesars Acquisition Company	SpartanNash Company
Event19	NMI Holdings, Inc.	RPT Realty
Event20	Norcraft Companies, Inc.	Office Depot, Inc.
Event21	Mitel Mobility Inc.	Research Solutions, Inc.
Event22	Twitter, Inc.	Verizon Communications Inc.
Event23	LGI Homes, Inc.	SpartanNash Company

Event24	Midcoast Energy Partners, L.P.	Marine Petroleum Trust
Event25	Karyopharm Therapeutics Inc.	Cellular Biomedicine Group, Inc.
Event26	Arc Logistics Partners LP	Cross Timbers Royalty Trust
Event27	Barracuda Networks, Inc.	Eastman Kodak Company
Event28	The Container Store Group, Inc.	Genesco Inc.
Event29	Marcus & Millichap, Inc.	Central Securities Corp.
Event30	Veracyte, Inc.	Incyte Corporation
Event31	SCAI Holdings, LLC	Incyte Corporation
Event32	Aerie Pharmaceuticals, Inc.	American Shared Hospital Services
Event33	Sprague Resources LP	Marine Petroleum Trust
Event34	Endurance International Group Holdings, Inc.	Research Solutions, Inc.
Event35	CommScope Holding Company, Inc.	Autodesk, Inc.
Event36	ADMA Biologics, Inc.	Incyte Corporation
Event37	Veeva Systems Inc.	Incyte Corporation
Event38	OneMain Holdings, Inc.	Alexander & Baldwin, Inc.
Event39	Plains GP Holdings, L.P.	Sabine Royalty Trust
Event40	MacroGenics, Inc.	Neurocrine Biosciences, Inc.
Event41	Stonegate Mortgage Corporation	First Merchants Corporation
Event42	Western Refining Logistics, LP	Profire Energy, Inc.
Event43	Antero Resources Corporation	Profire Energy, Inc.
Event44	LDR Holding Corporation	ZIOPHARM Oncology, Inc.
Event45	Potbelly Corporation	The Cato Corporation
Event46	OCI Partners LP	The Brink's Company
Event47	RE/MAX Holdings, Inc.	Moody's Corporation
Event48	Burlington Stores, Inc.	O'Reilly Automotive, Inc.
Event49	Fate Therapeutics, Inc.	TG Therapeutics, Inc.
Event50	RingCentral, Inc.	Diodes Incorporated
Event51	Premier, Inc.	Pro-Dex, Inc.
Event52	Pattern Energy Group Inc.	Spire Inc.
Event53	Covisint Corporation	AT&T Inc.
Event54	Applied Optoelectronics, Inc.	Research Solutions, Inc.
Event55	IVERIC bio, Inc.	Pro-Dex, Inc.
Event56	Foundation Medicine, Inc.	Pro-Dex, Inc.
Event57	Evoke Pharma, Inc.	Celsion Corporation
Event58	Rocket Fuel Inc.	NCR Corporation
Event59	FireEye, Inc.	Jabil Inc.
Event60	Pioneer Power Solutions, Inc.	Friedman Industries, Incorporated
Event61	ClubCorp Holdings, Inc.	Sturm, Ruger & Company, Inc.
Event62	Acceleron Pharma Inc.	Invacare Corporation
Event63	Benefitfocus, Inc.	Cypress Semiconductor Corporation
Event64	Five Prime Therapeutics, Inc.	Avid Bioservices, Inc.
Event65	Ciner Resources LP	Friedman Industries, Incorporated
Event66	Regado Biosciences, Inc.	EyePoint Pharmaceuticals, Inc.
Event67	Envision Healthcare Holdings, Inc.	Sorrento Therapeutics, Inc.
Event68	Cvent, Inc.	NCR Corporation
Event69	World Point Terminals, LP	PrimeEnergy Resources Corporation
Event70	Stock Building Supply Holdings, Inc.	Fuel Tech, Inc.
Event71	QEP Midstream Partners, LP	PrimeEnergy Resources Corporation
Event72	Precigen, Inc.	Sorrento Therapeutics, Inc.
Event73	Fox Factory Holding Corp.	Seaboard Corporation
Event74	YuMe, Inc.	Spok Holdings, Inc.
Event75	Control4 Corporation	Daktronics, Inc.
Event76	Marrone Bio Innovations, Inc.	Fuel Tech, Inc.
Event77	Athlon Energy Inc.	Profire Energy, Inc.
Event78	Sprouts Farmers Market, Inc.	PulteGroup, Inc.
Event79	Marlin Midstream Partners, LP	VAALCO Energy, Inc.
Event80	Onconova Therapeutics, Inc.	Becton, Dickinson and Company
Event81	Conatus Pharmaceuticals Inc.	TrovaGene, Inc.
Event82	FUJIFILM Cellular Dynamics, Inc.	Becton, Dickinson and Company
Event83	WCI Communities, Inc.	Modine Manufacturing Company
Event84	Agios Pharmaceuticals, Inc.	Becton, Dickinson and Company
Event85	Heat Biologics, Inc.	Becton, Dickinson and Company
Event86	Phillips 66 Partners LP	HighPoint Resources Corporation
Event87	RetailMeNot, Inc.	IAC/InterActiveCorp

Event88	Diamond Resorts International, Inc.	Modine Manufacturing Company
Event89	UCP, Inc.	Century Casinos, Inc.
Event90	OncoMed Pharmaceuticals, Inc.	Becton, Dickinson and Company
Event91	Clearway Energy, Inc.	Cross Timbers Royalty Trust
Event92	Noodles & Company	Inter Parfums, Inc.
Event93	Telaria, Inc.	AstroNova, Inc.
Event94	Silvercrest Asset Management Group Inc.	Value Line, Inc.
Event95	HD Supply Holdings, Inc.	PolyOne Corporation
Event96	CDW Corporation	AstroNova, Inc.
Event97	Aratana Therapeutics, Inc.	TherapeuticsMD, Inc.
Event98	NanoString Technologies, Inc.	Chembio Diagnostics, Inc.
Event99	Gogo Inc.	Verizon Communications Inc.
Event100	PTC Therapeutics, Inc.	TherapeuticsMD, Inc.
Event101	bluebird bio, Inc.	TherapeuticsMD, Inc.
Event102	Coty Inc.	Chanticleer Holdings, Inc.
Event103	Gigamon Inc.	AstroNova, Inc.
Event104	Textura Corporation	AstroNova, Inc.
Event105	Epizyme, Inc.	Harrow Health, Inc.
Event106	ChannelAdvisor Corporation	Insight Enterprises, Inc.
Event107	Global Brass and Copper Holdings, Inc.	Pope Resources, A Delaware Limited Partnership
Event108	Ply Gem Midco, Inc.	Masonite International Corporation
Event109	Portola Pharmaceuticals, Inc.	Harrow Health, Inc.
Event110	Marketo, Inc.	NCR Corporation
Event111	Tableau Software, Inc.	NCR Corporation
Event112	William Lyon Homes	Dorman Products, Inc.
Event113	Ambit Biosciences Corporation	CASI Pharmaceuticals, Inc.
Event114	Tallgrass Energy Partners, LP	Cross Timbers Royalty Trust
Event115	Cyan, Inc.	Cass Information Systems, Inc.
Event116	Receptos, Inc.	Repligen Corporation
Event117	TriState Capital Holdings, Inc.	Gladstone Capital Corporation
Event118	IQVIA Holdings Inc.	The Cooper Companies, Inc.
Event119	PennyMac Financial Services, Inc.	Gladstone Capital Corporation
Event120	Voya Financial, Inc.	Alleghany Corporation
Event121	Blackhawk Network Holdings, Inc.	Park City Group, Inc.
Event122	Diversified Restaurant Holdings, Inc.	USANA Health Sciences, Inc.
Event123	SeaWorld Entertainment, Inc.	NVR, Inc.
Event124	Taminco Corporation	MSA Safety Incorporated
Event125	Rally Software Development Corp.	Comtech Telecommunications Corp.
Event126	Omthera Pharmaceuticals, Inc.	Actinium Pharmaceuticals, Inc.
Event127	EVERTEC, Inc.	Park City Group, Inc.
Event128	Chimerix, Inc.	Tivity Health, Inc.
Event129	Taylor Morrison Home Corporation	LCI Industries
Event130	Independent Bank Group, Inc.	Donegal Group Inc.
Event131	Pinnacle Foods Inc.	TreeHouse Foods, Inc.
Event132	Marin Software Incorporated	Richardson Electronics, Ltd.
Event133	West Corporation	Cypress Semiconductor Corporation
Event134	Model N, Inc.	Daktronics, Inc.
Event135	Enanta Pharmaceuticals, Inc.	Nektar Therapeutics
Event136	Tetraphase Pharmaceuticals, Inc.	Geron Corporation
Event137	Silver Spring Networks, Inc.	Unisys Corporation
Event138	Artisan Partners Asset Management Inc.	Agree Realty Corporation
Event139	Professional Diversity Network, Inc.	Daily Journal Corporation
Event140	Xoom Corporation	Seacoast Banking Corporation of Florida
Event141	ConnectOne Bancorp, Inc.	Seacoast Banking Corporation of Florida
Event142	Health Insurance Innovations, Inc.	Old Second Bancorp, Inc.
Event143	The ExOne Company	Kimball International, Inc.
Event144	Boise Cascade Company	Comstock Mining Inc.
Event145	Zoetis Inc.	Regeneron Pharmaceuticals, Inc.
Event146	Stemline Therapeutics, Inc.	Synthetic Biologics, Inc.
Event147	Bright Horizons Family Solutions Inc.	Cooper-Standard Holdings Inc.
Event148	LipoScience, Inc.	Tonix Pharmaceuticals Holding Corp.
Event149	SunCoke Energy Partners, L.P.	Kelly Services, Inc.
Event150	Norwegian Cruise Line Holdings Ltd.	Newell Brands Inc.

Event151	CVR Refining, LP	Torchlight Energy Resources, Inc.
Event152	USA Compression Partners, LP	NACCO Industries, Inc.
Event153	Tesla Energy Operations, Inc.	Ebix, Inc.
Event154	PBF Energy Inc.	Otter Tail Corporation
Event155	Alon USA Partners, LP	Cross Timbers Royalty Trust
Event156	Ruckus Wireless, Inc.	TTEC Holdings, Inc.
Event157	Atossa Therapeutics, Inc.	DiaMedica Therapeutics Inc.
Event158	Delek Logistics Partners, LP	Cross Timbers Royalty Trust
Event159	RH	Blink Charging Co.
Event160	Danone US, Inc.	Service Corporation International
Event161	MPLX LP	Vertex Energy, Inc.
Event162	CrossAmerica Partners LP	Marine Petroleum Trust
Event163	Workday, Inc.	Viavi Solutions Inc.
Event164	Diamondback Energy, Inc.	Cross Timbers Royalty Trust
Event165	Intercept Pharmaceuticals, Inc.	Ligand Pharmaceuticals Incorporated
Event166	Hamilton Bancorp, Inc.	J.W. Mays, Inc.
Event167	Realogy Holdings Corp.	Moody's Corporation
Event168	Kythera Biopharmaceuticals, Inc.	Orgenesis Inc.
Event169	Shutterstock, Inc.	The Andersons, Inc.
Event170	Sears Hometown and Outlet Stores, Inc.	PetMed Express, Inc.
Event171	Ambarella, Inc.	Intevac, Inc.
Event172	Berry Global Group, Inc.	Applied Industrial Technologies, Inc.
Event173	LifeLock, Inc.	Blink Charging Co.
Event174	Summit Midstream Partners, LP	NACCO Industries, Inc.
Event175	Qualys, Inc.	Applied DNA Sciences, Inc.
Event176	Sunoco LP	Cross Timbers Royalty Trust
Event177	Trulia, Inc.	ATN International, Inc.
Event178	National Bank Holdings Corporation	Saul Centers, Inc.
Event179	Capital Bank Financial Corp.	Saul Centers, Inc.
Event180	Hi-Crush Inc.	Cross Timbers Royalty Trust
Event181	Performant Financial Corporation	Dycom Industries, Inc.
Event182	Bloomin' Brands, Inc.	United-Guardian, Inc.
Event183	Peregrine Semiconductor Corporation	CPS Technologies Corporation
Event184	Globus Medical, Inc.	Tonix Pharmaceuticals Holding Corp.
Event185	Eloqua, Inc.	Cass Information Systems, Inc.
Event186	Del Frisco's Restaurant Group, Inc.	Gentherm Incorporated
Event187	Hyperion Therapeutics, Inc.	Cerus Corporation
Event188	E2open, LLC	Novanta Inc.
Event189	Northern Tier Energy LP	Profire Energy, Inc.
Event190	Natural Grocers by Vitamin Cottage, Inc.	Gentherm Incorporated
Event191	Chuy's Holdings, Inc.	Culp, Inc.
Event192	Palo Alto Networks, Inc.	Arrow Electronics, Inc.
Event193	Kayak Software Corporation	Gentherm Incorporated
Event194	Five Below, Inc.	Cracker Barrel Old Country Store, Inc.
Event195	Durata Therapeutics, Inc.	Puma Biotechnology, Inc.
Event196	FS Bancorp, Inc.	SB Financial Group, Inc.
Event197	ServiceNow, Inc.	Cree, Inc.
Event198	Exa Corporation	Westell Technologies, Inc.
Event199	Tesaro, Inc.	Puma Biotechnology, Inc.
Event200	EQM Midstream Partners, LP	Northwest Natural Holding Company
Event201	Facebook, Inc.	Omnicom Group Inc.
Event202	Audience, Inc.	Plexus Corp.
Event203	WageWorks, Inc.	Advanced Emissions Solutions, Inc.
Event204	Tilly's, Inc.	Tandy Leather Factory, Inc.
Event205	Flint Hills Resources Houston Chemical, LLC	Advanced Emissions Solutions, Inc.
Event206	The Carlyle Group Inc.	Saul Centers, Inc.
Event207	TIAA FSB Holdings, Inc.	National Bankshares, Inc.
Event208	Supernus Pharmaceuticals, Inc.	NeoGenomics, Inc.
Event209	Edgen Group Inc.	Hudson Global, Inc.
Event210	ClearSign Technologies Corporation	DASAN Zhone Solutions, Inc.
Event211	Envivio, Inc.	Digi International Inc.
Event212	Infoblox Inc.	TESSCO Technologies Incorporated
Event213	Proofpoint, Inc.	Cass Information Systems, Inc.
Event214	Splunk Inc.	TTEC Holdings, Inc.

Event215	Tumi Holdings, Inc.	Flexsteel Industries, Inc.
Event216	Digital Cinema Destinations Corp.	Daily Journal Corporation
Event217	MRC Global Inc.	Deluxe Corporation
Event218	Forum Energy Technologies, Inc.	Profire Energy, Inc.
Event219	Oaktree Capital Group, LLC	National Retail Properties, Inc.
Event220	Enphase Energy, Inc.	Methode Electronics, Inc.
Event221	Millennial Media Inc.	Travelzoo
Event222	Merrimack Pharmaceuticals, Inc.	Quidel Corporation
Event223	CafePress Inc.	Lowe's Companies, Inc.
Event224	Rexnord Corporation	Werner Enterprises, Inc.
Event225	Annie's, Inc.	Lowe's Companies, Inc.
Event226	Vocera Communications, Inc.	Curis, Inc.
Event227	Regional Management Corp.	Citizens & Northern Corporation
Event228	ExactTarget, LLC	Travelzoo
Event229	Worldpay, Inc.	Aware, Inc.
Event230	Allison Transmission Holdings, Inc.	American Woodmark Corporation
Event231	MACOM Technology Solutions Holdings, Inc.	Sanmina Corporation
Event232	Demandware, LLC	Sykes Enterprises, Incorporated
Event233	Nationstar Mortgage Holdings Inc.	Healthcare Realty Trust Incorporated
Event234	Yelp Inc.	Travelzoo
Event235	Bazaarvoice, Inc.	Sanmina Corporation
Event236	Proto Labs, Inc.	Park-Ohio Holdings Corp.
Event237	Ceres, Inc.	Navidea Biopharmaceuticals, Inc.
Event238	Brightcove Inc.	KVH Industries, Inc.
Event239	HomeStreet, Inc.	Northrim BanCorp, Inc.
Event240	Synacor, Inc.	PRGX Global, Inc.
Event241	ChemoCentryx, Inc.	Cellectar Biosciences, Inc.
Event242	Roundy's, Inc.	Monaker Group, Inc.
Event243	Caesars Entertainment Corporation	Harley-Davidson, Inc.
Event244	EPAM Systems, Inc.	KVH Industries, Inc.
Event245	Cempra, Inc.	Cellectar Biosciences, Inc.
Event246	Matador Resources Company	Genie Energy Ltd.
Event247	Greenway Medical Technologies, Inc.	Cellectar Biosciences, Inc.
Event248	U.S. Silica Holdings, Inc.	NACCO Industries, Inc.
Event249	Verastem, Inc.	U.S. Physical Therapy, Inc.
Event250	Wellesley Bancorp, Inc.	Magyar Bancorp, Inc.
Event251	Guidewire Software, Inc.	Sanmina Corporation
Event252	Renewable Energy Group, Inc.	Cross Timbers Royalty Trust
Event253	Inergy Midstream, L.P.	Cross Timbers Royalty Trust
Event254	Zynga Inc.	SPAR Group, Inc.
Event255	Laredo Petroleum, Inc.	WPX Energy, Inc.
Event256	Mid-Con Energy Partners, LP	Cross Timbers Royalty Trust
Event257	Jive Software, Inc.	Synopsys, Inc.
Event258	Rose Rock Midstream, L.P.	Cross Timbers Royalty Trust
Event259	Intermolecular, Inc.	Advanced Energy Industries, Inc.
Event260	Manning & Napier, Inc.	Capital City Bank Group, Inc.
Event261	Mattress Firm Holding Corp.	Dine Brands Global, Inc.
Event262	Angie's List, Inc.	The New York Times Company
Event263	Clovis Oncology, Inc.	Curis, Inc.
Event264	InvenSense, Inc.	Issuer Direct Corporation
Event265	Pacific Drilling S.A.	Gulfport Energy Corporation
Event266	LRR Energy, L.P.	Cross Timbers Royalty Trust
Event267	NewLink Genetics Corporation	Plus Therapeutics, Inc.
Event268	Imperva, Inc.	Advanced Energy Industries, Inc.
Event269	CVR Nitrogen, LP	Tutor Perini Corporation
Event270	Groupon, Inc.	Campbell Soup Company
Event271	ZELTIQ Aesthetics, Inc.	Celsion Corporation
Event272	Ubiquiti Inc.	II-VI Incorporated
Event273	ASB Bancorp, Inc.	Orrstown Financial Services, Inc.
Event274	BSB Bancorp, Inc.	Peapack-Gladstone Financial Corporation
Event275	Poage Bankshares, Inc.	Premier Financial Bancorp, Inc.
Event276	Carbonite, Inc.	NVE Corporation
Event277	Teavana Holdings, Inc.	Office Depot, Inc.
Event278	The Chefs' Warehouse, Inc.	Village Super Market, Inc.

Event279	Wesco Aircraft Holdings, Inc.	Ecolab Inc.
Event280	Dunkin' Brands Group, Inc.	Leggett & Platt, Incorporated
Event281	American Midstream Partners, LP	Cross Timbers Royalty Trust
Event282	Francesca's Holdings Corporation	Jack in the Box Inc.
Event283	SunCoke Energy, Inc.	Ecolab Inc.
Event284	Zillow Group, Inc.	IAC/InterActiveCorp
Event285	Skullcandy, Inc.	Standard Motor Products, Inc.
Event286	Oiltanking Partners, L.P.	Profire Energy, Inc.
Event287	IF Bancorp, Inc.	The Community Financial Corporation
Event288	State Investors Bancorp, Inc.	Equus Total Return, Inc.
Event289	Crossroads Capital, Inc.	Maui Land & Pineapple Company, Inc.
Event290	HomeAway, Inc.	Lennar Corporation
Event291	Vanguard Health Systems Inc.	Akorn, Inc.
Event292	Baton Holding, LLC	II-VI Incorporated
Event293	CSI Compressco LP	Cross Timbers Royalty Trust
Event294	Pandora Media, LLC	Daily Journal Corporation
Event295	Fusion-io, Inc.	II-VI Incorporated
Event296	Active Network, LLC	Harmonic Inc.
Event297	Freescale Semiconductor, Ltd.	Viavi Solutions Inc.
Event298	Spirit Airlines, Inc.	US Ecology, Inc.
Event299	LinkedIn Corporation	MSG Networks Inc.
Event300	NGL Energy Partners LP	Cross Timbers Royalty Trust
Event301	Kosmos Energy Ltd.	Profire Energy, Inc.
Event302	Thermon Group Holdings, Inc.	Copart, Inc.
Event303	RPX Corporation	Terex Corporation
Event304	Boingo Wireless, Inc.	MSG Networks Inc.
Event305	SharpSpring, Inc.	Daktronics, Inc.
Event306	Franklin Financial Corporation	Ames National Corporation
Event307	Responsys, Inc.	DSP Group, Inc.
Event308	Andeavor Logistics LP	Profire Energy, Inc.
Event309	Sagent Pharmaceuticals, Inc.	AMAG Pharmaceuticals, Inc.
Event310	Air Lease Corporation	P. H. Glatfelter Company
Event311	Ellie Mae, Inc.	DSP Group, Inc.
Event312	Zipcar, Inc.	Healthcare Services Group, Inc.
Event313	TMS International Corp.	AMREP Corporation
Event314	CVR Partners, LP	Healthcare Services Group, Inc.
Event315	Tranzyme, Inc.	ChromaDex Corporation
Event316	Fraternity Community Bancorp, Inc.	Mackinac Financial Corporation
Event317	GNC Holdings, Inc.	Casey's General Stores, Inc.
Event318	Apollo Global Management, Inc.	Value Line, Inc.
Event319	ServiceSource International, Inc.	Daktronics, Inc.
Event320	Cornerstone OnDemand, Inc.	Brooks Automation, Inc.
Event321	HCA Healthcare, Inc.	Cardinal Health, Inc.
Event322	AcelRx Pharmaceuticals, Inc.	Caladrius Biosciences, Inc.
Event323	Kinder Morgan, Inc.	Profire Energy, Inc.
Event324	Fluidigm Corporation	Immunomedics, Inc.
Event325	Gevo, Inc.	Texas Pacific Land Trust
Event326	Endocyte, Inc.	ChromaDex Corporation
Event327	Atlantic Coast Financial Corporation	Solar Senior Capital Ltd.
Event328	Pacira BioSciences, Inc.	Sorrento Therapeutics, Inc.
Event329	Epocrates, Inc.	Chemed Corporation
Event330	NeoPhotonics Corporation	VirnetX Holding Corp
Event331	BankUnited, Inc.	Mercury General Corporation
Event332	Nielsen Holdings plc	Masco Corporation
Event333	Anchor Bancorp	Citizens Community Bancorp, Inc.
Event334	Leaf Group Ltd.	The Wendy's Company
Event335	Wolverine Bancorp, Inc.	United Bancshares, Inc.
Event336	Oconee Federal Financial Corp.	Auburn National Bancorporation, Inc.
Event337	QR Energy, LP	Cross Timbers Royalty Trust
Event338	Fortegra Financial Corporation	MVB Financial Corp.
Event339	Assembly Biosciences, Inc.	Psychemedics Corporation
Event340	Swift Transportation Company	Kaiser Aluminum Corporation
Event341	RigNet, Inc.	RGC Resources, Inc.
Event342	Walker & Dunlop, Inc.	German American Bancorp, Inc.

Event343	FleetCor Technologies, Inc.	Teradata Corporation
Event344	GAIN Capital Holdings, Inc.	Banner Corporation
Event345	First Republic Bank	Omega Healthcare Investors, Inc.
Event346	Targa Resources Corp.	Profire Energy, Inc.
Event347	Anacor Pharmaceuticals, Inc.	Lannett Company, Inc.
Event348	Zogenix, Inc.	Sorrento Therapeutics, Inc.
Event349	Aeroflex Holding Corp.	Technical Communications Corporation
Event350	General Motors Company	Lowe's Companies, Inc.
Event351	LPL Financial Holdings Inc.	Omega Healthcare Investors, Inc.
Event352	Booz Allen Hamilton Holding Corporation	Technical Communications Corporation
Event353	Inphi Corporation	Technical Communications Corporation
Event354	Complete Genomics, Inc.	Ligand Pharmaceuticals Incorporated
Event355	The Fresh Market, Inc.	Nordstrom, Inc.
Event356	Primo Water Corporation	Nature's Sunshine Products, Inc.
Event357	SP Bancorp, Inc.	Security National Financial Corporation
Event358	ExamWorks Group, Inc.	BioSpecifics Technologies Corp.
Event359	SeaCube Container Leasing Ltd.	Alamo Group Inc.
Event360	Pacific Biosciences of California, Inc.	Invacare Corporation
Event361	Aegerion Pharmaceuticals, Inc.	Idera Pharmaceuticals, Inc.
Event362	Bravo Brio Restaurant Group, Inc.	SpartanNash Company
Event363	Vera Bradley, Inc.	Weis Markets, Inc.
Event364	Netspend Holdings, Inc.	Omega Healthcare Investors, Inc.
Event365	Tower International, Inc.	Farmer Bros. Co.
Event366	The KeyW Holding Corporation	Gibraltar Industries, Inc.
Event367	Amyris, Inc.	CPI Aerostructures, Inc.
Event368	JAGGAER, Inc.	Novanta Inc.
Event369	Electromed, Inc.	Orgenesis Inc.
Event370	Park Sterling Corporation	Citizens & Northern Corporation
Event371	RealPage, Inc.	Itron, Inc.
Event372	MediaMind Technologies Inc.	Itron, Inc.
Event373	NuPathe, Inc.	Orgenesis Inc.
Event374	IntraLinks Holdings, Inc.	ACI Worldwide, Inc.
Event375	Trius Therapeutics LLC	Antares Pharma, Inc.
Event376	Envestnet, Inc.	Park City Group, Inc.
Event377	Access Midstream Partners, L.P.	Profire Energy, Inc.
Event378	Ameresco, Inc.	The Eastern Company
Event379	Green Dot Corporation	FactSet Research Systems Inc.
Event380	RealD Inc.	Coherent, Inc.
Event381	Qlik Technologies, Inc.	Sanmina Corporation
Event382	Peoples Federal Bancshares, Inc.	Investors Title Company
Event383	Tesla, Inc.	Bridgford Foods Corporation
Event384	Higher One Holdings, Inc.	KEMET Corporation
Event385	BroadSoft, Inc.	CPS Technologies Corporation
Event386	Oasis Petroleum Inc.	Portland General Electric Company
Event387	Cboe Global Markets, Inc.	S&P Global Inc.
Event388	GenMark Diagnostics, Inc.	Apyx Medical Corporation
Event389	ReachLocal, Inc.	Smith Micro Software, Inc.
Event390	R1 RCM Inc.	Owens & Minor, Inc.
Event391	Telenav, Inc.	Smith Micro Software, Inc.
Event392	Express, Inc.	Nordstrom, Inc.
Event393	Roadrunner Transportation Systems, Inc.	Art's-Way Manufacturing Co., Inc.
Event394	Niska Gas Storage Partners LLC	Hallador Energy Company
Event395	Douglas Dynamics, Inc.	Art's-Way Manufacturing Co., Inc.
Event396	Alpha and Omega Semiconductor Limited	CTS Corporation
Event397	PAA Natural Gas Storage, L.P.	Spire Inc.
Event398	Convio, Inc.	Qumu Corporation
Event399	SPS Commerce, Inc.	TESSCO Technologies Incorporated
Event400	Alimera Sciences, Inc.	Abiomed, Inc.
Event401	Codexis, Inc.	Merit Medical Systems, Inc.
Event402	Metals USA Holdings Corp.	Quanex Building Products Corporation
Event403	Primerica, Inc.	OptimumBank Holdings, Inc.
Event404	SS&C Technologies Holdings, Inc.	Jack Henry & Associates, Inc.
Event405	Meru Networks, Inc.	Cass Information Systems, Inc.
Event406	Calix, Inc.	Badger Meter, Inc.

Event407	First Interstate BancSystem, Inc.	Peoples Bancorp Inc.
Event408	MaxLinear, Inc.	Jack Henry & Associates, Inc.
Event409	Financial Engines, Inc.	FNCB Bancorp, Inc.
Event410	AVEO Pharmaceuticals, Inc.	OraSure Technologies, Inc.
Event411	Sensata Technologies Holding plc	Healthcare Services Group, Inc.
Event412	Baltic Trading Limited	Team, Inc.
Event413	Graham Packaging Company Inc.	Balchem Corporation
Event414	QuinStreet, Inc.	Travelzoo
Event415	Generac Holdings Inc.	Mueller Industries, Inc.
Event416	Ironwood Pharmaceuticals, Inc.	Rexahn Pharmaceuticals, Inc.
Event417	OBA Financial Services, Inc.	Heritage Commerce Corp
Event418	Cellu Tissue Holdings, Inc.	Beazer Homes USA, Inc.
Event419	Symetra Financial Corporation	Arthur J. Gallagher & Co.
Event420	Omniamerican Bancorp, Inc.	180 Degree Capital Corp.
Event421	Crimson Exploration Inc.	Marine Petroleum Trust
Event422	Kraton Corporation	Apogee Enterprises, Inc.
Event423	Team Health Holdings, Inc.	Invacare Corporation
Event424	KAR Auction Services, Inc.	Werner Enterprises, Inc.
Event425	Sotera Defense Solutions, Inc.	Solitario Zinc Corp.
Event426	Archipelago Learning, Inc.	Starbucks Corporation
Event427	Fortinet, Inc.	Teradata Corporation
Event428	rue21, Inc.	PriceSmart, Inc.
Event429	Dollar General Corporation	Macy's, Inc.
Event430	Hyatt Hotels Corporation	J. C. Penney Company, Inc.
Event431	Ancestry.com LLC	SPAR Group, Inc.
Event432	Vitamin Shoppe, Inc.	Sequential Brands Group, Inc.
Event433	Addus HomeCare Corporation	Infinity Pharmaceuticals, Inc.
Event434	Dole Food Company, Inc.	Clarus Corporation
Event435	AGA Medical Holdings, Inc.	Nektar Therapeutics
Event436	Penn Millers Holding Corporation	MVB Financial Corp.
Event437	RailAmerica, Inc.	Hexcel Corporation
Event438	Mistras Group, Inc.	Spartan Motors, Inc.
Event439	Omeros Corporation	Lineage Cell Therapeutics, Inc.
Event440	Verisk Analytics, Inc.	United States Steel Corporation
Event441	Echo Global Logistics, Inc.	Team, Inc.
Event442	Talecris Biotherapeutics Holdings Corp.	Myriad Genetics, Inc.
Event443	Select Medical Holdings Corporation	IDEXX Laboratories, Inc.
Event444	Artio Global Investors Inc.	PS Business Parks, Inc.
Event445	Vitacost.com, Inc.	AMCON Distributing Company
Event446	Change Healthcare Holdings, Inc.	Neurocrine Biosciences, Inc.
Event447	Cumberland Pharmaceuticals Inc.	Neurocrine Biosciences, Inc.
Event448	Broadcom Inc.	Aspen Technology, Inc.
Event449	LogMeIn, Inc.	Littelfuse, Inc.
Event450	Medidata Solutions, Inc.	Hanger, Inc.
Event451	OpenTable, Inc.	Hanesbrands Inc.
Event452	DigitalGlobe, Inc.	Graham Corporation
Event453	Rosetta Stone Inc.	NCR Corporation
Event454	Zovio Inc	AMCON Distributing Company
Event455	Mead Johnson Nutrition Company	Bed Bath & Beyond Inc.
Event456	Grand Canyon Education, Inc.	SpartanNash Company
Event457	First Savings Financial Group, Inc.	Southern Missouri Bancorp, Inc.
Event458	Home Bancorp, Inc.	Enterprise Bancorp, Inc.
Event459	Rackspace Hosting, Inc.	Issuer Direct Corporation
Event460	Energy Recovery, Inc.	Solitario Zinc Corp.
Event461	Sino-Global Shipping America, Ltd.	Friedman Industries, Incorporated
Event462	Malvern Bancorp, Inc.	Hingham Institution for Savings
Event463	Western Midstream Operating, LP	Spire Inc.
Event464	Colfax Corporation	Quanex Building Products Corporation
Event465	Pioneer Southwest Energy Partners L.P.	DMC Global Inc.
Event466	American Water Works Company, Inc.	Portland General Electric Company
Event467	Intrepid Potash, Inc.	MICT, Inc.
Event468	Visa Inc.	RF Industries, Ltd.
Event469	BioTelemetry, Inc.	Lannett Company, Inc.
Event470	Heritage-Crystal Clean, Inc	Espey Mfg. & Electronics Corp.

Event471	MAKO Surgical Corp.	Immunomedics, Inc.
Event472	ArcSight, Inc.	Digi International Inc.
Event473	Cape Bancorp, Inc.	Barings Participation Investors
Event474	IPC Healthcare, Inc.	RadNet, Inc.
Event475	RiskMetrics Group, LLC	NL Industries, Inc.
Event476	Meridian Bancorp, Inc.	First Bank
Event477	Williams Pipeline Partners L.P.	PrimeEnergy Resources Corporation
Event478	Danvers Bancorp Inc.	BNY Mellon Municipal Income, Inc.
Event479	Sound Financial Bancorp, Inc.	OptimumBank Holdings, Inc.
Event480	NetSuite Inc.	Vishay Intertechnology, Inc.
Event481	Orion Energy Systems, Inc.	Ducommun Incorporated
Event482	MEMSIC, Inc.	Super Micro Computer, Inc.
Event483	Intellon Corporation	IEC Electronics Corp.
Event484	MedAssets, Inc.	Cerus Corporation
Event485	K12 Inc.	United-Guardian, Inc.
Event486	Cardtronics plc	Novanta Inc.
Event487	Titan Machinery Inc.	Hawkins, Inc.
Event488	Entropic Communications, LLC	Tyler Technologies, Inc.
Event489	Triple-S Management Corporation	Atrion Corporation
Event490	SuccessFactors, Inc.	MTS Systems Corporation
Event491	Internet Brands, Inc.	Cemtrex, Inc.
Event492	Rubicon Technology, Inc.	Intevac, Inc.
Event493	El Paso Pipeline Partners, L.P.	BP Prudhoe Bay Royalty Trust
Event494	3Par Inc.	Park City Group, Inc.
Event495	MSCI Inc.	Realty Income Corporation
Event496	Virtual Radiologic Corporation	Neogen Corporation
Event497	Sculptor Capital Management, Inc.	Chemung Financial Corporation
Event498	OSG America L.P.	Marine Petroleum Trust
Event499	American Public Education, Inc.	Koss Corporation
Event500	PostRock MidContinent Production, LLC	BP Prudhoe Bay Royalty Trust
Event501	The Ensign Group, Inc.	Cerus Corporation
Event502	Lumber Liquidators Holdings, Inc.	Koss Corporation
Event503	Northfield Bancorp, Inc.	RPT Realty
Event504	FLIR Detection, Inc.	Photronics, Inc.
Event505	Merz Aesthetics, Inc.	Merit Medical Systems, Inc.
Event506	Nanosphere, Inc.	Merit Medical Systems, Inc.
Event507	Deltek, Inc.	Sykes Enterprises, Incorporated
Event508	SoundBite Communications, Inc.	Innodata Inc.
Event509	Inteliquent, Inc.	IDT Corporation
Event510	Genoptix, Inc.	Cerus Corporation
Event511	NovaBay Pharmaceuticals, Inc.	Antares Pharma, Inc.
Event512	FGX International Holdings Limited	CorVel Corporation
Event513	Ulta Beauty, Inc.	Rent-A-Center, Inc.
Event514	Pzena Investment Management, Inc	Northwest Bancshares, Inc.
Event515	CVR Energy, Inc.	BP Prudhoe Bay Royalty Trust
Event516	Virgin Mobile USA, Inc.	Lee Enterprises, Incorporated
Event517	Compellent Technologies, Inc.	Sykes Enterprises, Incorporated
Event518	First Financial Northwest, Inc.	Southside Bancshares, Inc.
Event519	Targanta Therapeutics Corporation	ImmunoGen, Inc.
Event520	Main Street Capital Corporation	UMH Properties, Inc.
Event521	MAP Pharmaceuticals, Inc.	Novavax, Inc.
Event522	Laporte Bancorp, Inc.	Evans Bancorp, Inc.
Event523	Constant Contact, Inc.	Cognex Corporation
Event524	Beacon Federal Bancorp, Inc.	Norwood Financial Corp.
Event525	Duff & Phelps Corporation	Curtiss-Wright Corporation
Event526	athenahealth, Inc.	Regeneron Pharmaceuticals, Inc.
Event527	Encore Energy Partners LP	Unitil Corporation
Event528	VMware, Inc.	Paychex, Inc.
Event529	FSB Bancorp, Inc.	Income Opportunity Realty Investors, Inc.
Event530	DemandTec, Inc.	Kopin Corporation
Event531	Masimo Corporation	Integra LifeSciences Holdings Corporation
Event532	HireRight, LLC	Riot Blockchain, Inc.
Event533	Concho Resources Inc.	Cross Timbers Royalty Trust
Event534	Virtusa Corporation	Western Digital Corporation

Event535	Sucampo Pharmaceuticals, Inc.	Atrion Corporation
Event536	BridgeTower Media, LLC	USA Truck, Inc.
Event537	Imarx Therapeutics, Inc.	PolarityTE, Inc.
Event538	BladeLogic, Inc.	Sykes Enterprises, Incorporated
Event539	Monotype Imaging Holdings Inc.	CTS Corporation
Event540	Orbitz Worldwide, Inc.	National Beverage Corp.
Event541	Airvana, Inc.	Cohu, Inc.
Event542	Limco-Piedmont, Inc.	Transcat, Inc.
Event543	Netezza Corporation	Comtech Telecommunications Corp.
Event544	Blueknight Energy Partners, L.P.	Marine Petroleum Trust
Event545	Encore Bancshares, Inc.	Ames National Corporation
Event546	DHI Group, Inc.	Daily Journal Corporation
Event547	ShoreTel, Inc.	DSP Group, Inc.
Event548	Bridgeline Digital, Inc.	LightPath Technologies, Inc.
Event549	PROS Holdings, Inc.	Digi International Inc.
Event550	Polypore International, LP	Insteel Industries, Inc.
Event551	comScore, Inc.	Saga Communications, Inc.
Event552	Spectra Energy Partners, LP	Dorchester Minerals, L.P.
Event553	Data Domain, Inc.	Progress Software Corporation
Event554	AuthenTec, Inc.	Kopin Corporation
Event555	Tiptree Inc.	TowneBank
Event556	The Blackstone Group Inc.	WesBanco, Inc.
Event557	BioFuels Energy Corp.	Marine Petroleum Trust
Event558	BWAY Parent Company, Inc.	Stepan Company
Event559	FBR & Co.	WesBanco, Inc.
Event560	Limelight Networks, Inc.	Clearfield, Inc.
Event561	Infinera Corporation	Clearfield, Inc.
Event562	Starent Networks LLC	Steel Connect, Inc.
Event563	Amicus Therapeutics, Inc.	OraSure Technologies, Inc.
Event564	Clean Energy Fuels Corp.	Cross Timbers Royalty Trust
Event565	Sirtris Pharmaceuticals, Inc.	Merit Medical Systems, Inc.
Event566	RSC Holdings, Inc.	Curtiss-Wright Corporation
Event567	Enel X North America, Inc.	Methode Electronics, Inc.
Event568	TriMas Corporation	Energy Focus, Inc.
Event569	CAI International, Inc.	Energy Focus, Inc.
Event570	TechTarget, Inc.	Daily Journal Corporation
Event571	Skilled Healthcare Group, Inc.	Taro Pharmaceutical Industries Ltd.
Event572	Insulet Corporation	Neurocrine Biosciences, Inc.
Event573	Continental Resources, Inc.	Cross Timbers Royalty Trust
Event574	JMP Group LLC	Barings Participation Investors
Event575	Solera Holdings, Inc.	Steel Connect, Inc.
Event576	Biodel Inc.	Chemed Corporation
Event577	AECOM	Minerals Technologies Inc.
Event578	TomoTherapy Incorporated	NextGen Healthcare, Inc.
Event579	Cavium, Inc.	Quantum Corporation
Event580	Gilead Pharmasset LLC	ThermoGenesis Holdings, Inc.
Event581	Cinemark Holdings, Inc.	Daily Journal Corporation
Event582	TFS Financial Corporation	Magyar Bancorp, Inc.
Event583	MetroPCS Communications, Inc.	Daily Journal Corporation
Event584	Comverge, Inc.	Wireless Telecom Group, Inc.
Event585	CMS Bancorp, Inc.	Broadway Financial Corporation
Event586	Veraz Networks, Inc.	Digital Turbine, Inc.
Event587	GSI Technology, Inc.	Cemtrex, Inc.
Event588	SenoRx, Inc.	Inovio Pharmaceuticals, Inc.
Event589	HPE Aruba	Daktronics, Inc.
Event590	Saratoga Investment Corp.	Transcontinental Realty Investors, Inc.
Event591	Glu Mobile Inc.	Shenandoah Telecommunications Company
Event592	Cheniere Energy Partners, L.P.	Denbury Resources Inc.
Event593	FCStone Group, Inc.	Plumas Bancorp
Event594	ESSA Bancorp, Inc.	Transcontinental Realty Investors, Inc.
Event595	BigBand Networks, Inc.	Semtech Corporation
Event596	Sourcefire, Inc.	TransAct Technologies Incorporated
Event597	Salary.com, Inc.	CalAmp Corp.
Event598	Barings BDC, Inc.	American Realty Investors, Inc.

Event599	Opnext, Inc.	Quantum Corporation
Event600	Optimer Pharmaceuticals, Inc.	VIVUS, Inc.
Event601	Targa Resources Partners LP	Permian Basin Royalty Trust
Event602	Fortress Investment Group LLC	Realty Income Corporation
Event603	U.S. Auto Parts Network, Inc.	Good Times Restaurants Inc.
Event604	Accuray Incorporated	Tivity Health, Inc.
Event605	National CineMedia, Inc.	Dolphin Entertainment, Inc.
Event606	Mellanox Technologies, Ltd.	DSP Group, Inc.
Event607	Switch & Data Facilities Company, Inc.	Inuvo, Inc.
Event608	Synta Pharmaceuticals Corp.	DaVita Inc.
Event609	Employers Holdings, Inc.	Camden National Corporation
Event610	HFF, Inc.	Trinity Place Holdings Inc.
Event611	Duncan Energy Partners LP	Texas Pacific Land Trust
Event612	Animal Health Holdings, Inc.	Catasys, Inc.
Event613	Sonoma Pharmaceuticals, Inc.	Anixa Biosciences, Inc.
Event614	AeroVironment, Inc.	Haynes International, Inc.
Event615	Alliance Bancorp Inc of Pennsylvania	InnSuites Hospitality Trust
Event616	Evraz Claymont Steel Holdings, Inc.	Twin Disc, Incorporated
Event617	Double-Take Software, Inc.	MoSys, Inc.
Event618	Altra Industrial Motion Corp.	The Greenbrier Companies, Inc.
Event619	Carrols Restaurant Group, Inc.	Haverty Furniture Companies, Inc.
Event620	Isilon Systems, Inc.	Autodesk, Inc.
Event621	US BioEnergy Corp.	ALLETE, Inc.
Event622	First Eagle Private Credit, LLC	Stratus Properties Inc.
Event623	Obagi Cosmeceuticals LLC	CryoLife, Inc.
Event624	Medecision, Inc.	Arrowhead Pharmaceuticals, Inc.
Event625	Guidance Software, Inc.	Smith Micro Software, Inc.
Event626	IPG Photonics Corporation	Plexus Corp.
Event627	Atlas Energy Resources, LLC	Cross Timbers Royalty Trust
Event628	Reed's, Inc.	Good Times Restaurants Inc.
Event629	Portman Ridge Finance Corporation	Gladstone Capital Corporation
Event630	Heelys, Inc.	NVR, Inc.
Event631	Allegiant Travel Company	Haynes International, Inc.
Event632	Willdan Group, Inc.	Perma-Fix Environmental Services, Inc.
Event633	Spirit AeroSystems Holdings, Inc.	Haynes International, Inc.
Event634	CMEG NYMEX Holdings Inc.	Saul Centers, Inc.
Event635	First Solar, Inc.	Autodesk, Inc.
Event636	Venoco, Inc.	Cross Timbers Royalty Trust
Event637	Hansen Medical, Inc.	ThermoGenesis Holdings, Inc.
Event638	Hertz Global Holdings, Inc.	Haynes International, Inc.
Event639	Sanchez Midstream Partners LP	Cross Timbers Royalty Trust
Event640	KBR, Inc.	AstroNova, Inc.
Event641	Emergent BioSolutions Inc.	ResMed Inc.
Event642	Yield10 Bioscience, Inc.	Taro Pharmaceutical Industries Ltd.
Event643	Solta Medical, Inc.	American Shared Hospital Services
Event644	Capella Education Company	NVR, Inc.
Event645	Physicians Formula Holdings Inc.	Shiloh Industries, Inc.
Event646	KBW LLC	Omega Healthcare Investors, Inc.
Event647	Catalyst Pharmaceuticals, Inc.	Plus Therapeutics, Inc.
Event648	Southern National Bancorp of Virginia, Inc.	Transcontinental Realty Investors, Inc.
Event649	Innophos Holdings, Inc.	Haynes International, Inc.
Event650	ORBCOMM Inc.	Gray Television, Inc.
Event651	Globalstar, Inc.	Harte Hanks, Inc.
Event652	Optium Corporation	CTS Corporation
Event653	Achillion Pharmaceuticals, Inc.	Neogen Corporation
Event654	Cadence Pharmaceuticals Inc.	La Jolla Pharmaceutical Company
Event655	Eagle Rock Energy Partners, L.P.	California Water Service Group
Event656	LeMaitre Vascular, Inc.	BioSpecifics Technologies Corp.
Event657	ExlService Holdings, Inc.	LiveRamp Holdings, Inc.
Event658	Susser Holdings Corporation	Flanigan's Enterprises, Inc.
Event659	Aptevo Research and Development LLC	Cantel Medical Corp.
Event660	First Mercury Financial Corporation	Barings Corporate Investors
Event661	Stanley, Inc.	TESSCO Technologies Incorporated
Event662	Archrock Partners, L.P.	Cross Timbers Royalty Trust

Event663	Acme Packet, Inc.	LiveRamp Holdings, Inc.
Event664	eHealth, Inc.	Donegal Group Inc.
Event665	Leidos Holdings, Inc.	Autodesk, Inc.
Event666	Bare Escentuals, Inc.	Ingredion Incorporated
Event667	Shutterfly, Inc.	Winmark Corporation
Event668	ICF International, Inc.	L.B. Foster Company
Event669	DivX, LLC	Western Digital Corporation
Event670	Limestone Bancorp, Inc.	Shore Bancshares, Inc.
Event671	Commvault Systems, Inc.	II-VI Incorporated
Event672	Trividia Health, Inc.	Infinity Pharmaceuticals, Inc.
Event673	Riverbed Technology, Inc.	Insight Enterprises, Inc.
Event674	Hiland Holdings GP, LP	VAALCO Energy, Inc.
Event675	Gold Resource Corporation	United States Antimony Corporation
Event676	InnerWorkings, Inc.	Haynes International, Inc.
Event677	Evercore Inc.	Kentucky First Federal Bancorp
Event678	Aircastle Limited	Kirby Corporation
Event679	Osiris Therapeutics, Inc.	Allied Healthcare Products, Inc.
Event680	Buckeye GP Holdings L.P.	Cross Timbers Royalty Trust
Event681	Chart Industries, Inc.	Haynes International, Inc.
Event682	Home Bancshares, Inc.	Bryn Mawr Bank Corporation
Event683	Cleveland BioLabs, Inc.	CEL-SCI Corporation
Event684	Targa Energy LP	VAALCO Energy, Inc.
Event685	Summit State Bank	Parke Bancorp, Inc.
Event686	NuStar GP Holdings, LLC	Suburban Propane Partners, L.P.
Event687	Cowen Group, Inc.	Chemung Financial Corporation
Event688	Replidyne, Inc.	Catasys, Inc.
Event689	Adobe Analytics	GSE Systems, Inc.
Event690	PGT Innovations, Inc.	Haynes International, Inc.
Event691	J.Crew Group, Inc.	Cooper Tire & Rubber Company
Event692	Techwell LLC	Napco Security Technologies, Inc.
Event693	Eastern Insurance Holdings, Inc.	Orrstown Financial Services, Inc.
Event694	Synchronoss Technologies, Inc.	Cass Information Systems, Inc.
Event695	Volcano Corporation	Avid Bioservices, Inc.
Event696	Houston Wire & Cable Company	Haynes International, Inc.
Event697	Golfsmith International Holdings Inc.	Calavo Growers, Inc.
Event698	LoopNet, Inc.	Loral Space & Communications Inc.
Event699	Luna Innovations Incorporated	GSE Systems, Inc.
Event700	Alphatec Holdings, Inc.	DaVita Inc.
Event701	Town Sports International Holdings, Inc.	Chico's FAS, Inc.
Event702	Mueller Water Products, Inc.	Brady Corporation
Event703	Mastercard Incorporated	GSE Systems, Inc.
Event704	Vonage Holdings Corp.	Meredith Corporation
Event705	Allied World Underwriters, Inc.	Citizens Community Bancorp, Inc.
Event706	Restore Medical Incorporated	CASI Pharmaceuticals, Inc.
Event707	BioMimetic Therapeutics Inc.	Endologix, Inc.
Event708	Novacea, Inc.	Lannett Company, Inc.
Event709	Alliance Holdings GP, L.P.	Oceaneering International, Inc.
Event710	Delek US Holdings, Inc.	ALLETE, Inc.
Event711	Delta Tucker Holdings, Inc.	Haynes International, Inc.
Event712	CPI International Holding Corp.	KVH Industries, Inc.
Event713	Omrix Biopharmaceuticals, Inc.	Atrion Corporation
Event714	Complete Production Services, Inc.	Hallador Energy Company
Event715	Vanda Pharmaceuticals Inc.	NanoViricides, Inc.
Event716	Targacept, Inc.	ImmunoGen, Inc.
Event717	Sealy Corporation	Tupperware Brands Corporation
Event718	Goodman Global, Inc.	LSI Industries Inc.
Event719	Castle Brands Inc.	Oil-Dri Corporation of America
Event720	VISICU, Inc.	Regeneron Pharmaceuticals, Inc.
Event721	Lake Shore Bancorp, Inc.	Fidelity D & D Bancorp, Inc.
Event722	Global Traffic Network Inc.	NTN Buzztime, Inc.
Event723	Clayton Holdings LLC	VSE Corporation
Event724	Nextest Systems Corporation	GSE Systems, Inc.
Event725	TransDigm Group Incorporated	Dycom Industries, Inc.
Event726	Eagle Test Systems, Inc.	3D Systems Corporation

Event727	Liquidity Services, Inc.	American Outdoor Brands Corporation
Event728	Morgans Hotel Group Co.	JAKKS Pacific, Inc.
Event729	Magellan Midstream Holdings, L.P.	PNM Resources, Inc.
Event730	Acorda Therapeutics, Inc.	Hanger, Inc.
Event731	AmCOMP Incorporated	Griffin Industrial Realty, Inc.
Event732	Morton's Restaurant Group, Inc.	Golden Entertainment, Inc.
Event733	NTELOS Holdings Corp.	Daily Journal Corporation
Event734	NightHawk Radiology Holdings, Inc.	Orthofix Medical Inc.
Event735	Crocs, Inc.	American Outdoor Brands Corporation
Event736	Energy Transfer LP	Noble Energy, Inc.
Event737	SMART Modular Technologies	GSE Systems, Inc.
Event738	HealthSpring Inc.	Haemonetics Corporation
Event739	Digital Music Group, Inc.	Reading International, Inc.
Event740	Thomas Weisel Partners Group, Inc.	Banner Corporation
Event741	Valneva USA, Inc.	Curis, Inc.
Event742	Valera Pharmaceuticals	VIVUS, Inc.
Event743	FortuNet, Inc	Church & Dwight Co., Inc.
Event744	Koppers Holdings Inc.	Titan International, Inc.
Event745	SGX Pharmaceuticals, Inc.	Anixa Biosciences, Inc.
Event746	H&E Equipment Services, Inc.	Federal Signal Corporation
Event747	Regency Energy Partners LP	Cross Timbers Royalty Trust
Event748	Chipotle Mexican Grill, Inc.	Church & Dwight Co., Inc.
Event749	Calumet Specialty Products Partners, L.P.	Cross Timbers Royalty Trust
Event750	Traffic.com, Inc.	Cogent Communications Holdings, Inc.
Event751	American Railcar Industries, Inc.	Haynes International, Inc.
Event752	Western Refining, Inc.	IDACORP, Inc.
Event753	Westaim Holdings Limited	HMS Holdings Corp.
Event754	Envision Healthcare Corporation	ImmuCell Corporation
Event755	Pernix Sleep, Inc.	STAAR Surgical Company
Event756	Dealertrack Technologies, Inc.	MTS Systems Corporation
Event757	Cynosure, Inc.	ImmuCell Corporation
Event758	International Coal Group, Inc.	BP Prudhoe Bay Royalty Trust
Event759	Vocus Inc.	American Software, Inc.
Event760	DCP Midstream, LP	Cross Timbers Royalty Trust
Event761	Union Drilling, Inc.	Cross Timbers Royalty Trust
Event762	Brookdale Senior Living Inc.	IntriCon Corporation
Event763	Dover Saddlery, Inc.	Tandy Leather Factory, Inc.
Event764	Under Armour, Inc.	Ross Stores, Inc.
Event765	Amerisafe, Inc.	Century Bancorp, Inc.
Event766	SunPower Corporation	Intevac, Inc.
Event767	Intercontinental Exchange, Inc.	Mercury General Corporation
Event768	Clear Channel Outdoor Holdings, Inc.	NTN Buzztime, Inc.
Event769	iRobot Corporation	The Hain Celestial Group, Inc.
Event770	Zalicus Inc.	Curis, Inc.
Event771	Boardwalk Pipeline Partners, LP	Cross Timbers Royalty Trust
Event772	Fusion CB Holdings, Inc.	Shenandoah Telecommunications Company
Event773	Web.com Group, Inc.	Mitek Systems, Inc.
Event774	STRATA Skin Sciences, Inc.	Nektar Therapeutics
Event775	NxStage Medical, Inc.	Abiomed, Inc.
Event776	Legacy Bancorp Inc.	Nicholas Financial, Inc.
Event777	NCI, Inc.	Frequency Electronics, Inc.
Event778	CBOT Holdings Inc.	Alexander's, Inc.
Event779	PokerTek, Inc.	Flexsteel Industries, Inc.
Event780	TAL International Group, Inc.	NN, Inc.
Event781	Investors Bancorp, Inc.	United Community Banks, Inc.
Event782	Waterstone Financial, Inc.	West Bancorporation, Inc.
Event783	BBVA USA Bancshares, Inc.	Penns Woods Bancorp, Inc.
Event784	Avalon Pharmaceuticals, Inc.	Arrowhead Pharmaceuticals, Inc.
Event785	Caribou Coffee Company, Inc.	The Andersons, Inc.
Event786	Genomic Health, Inc.	Ionis Pharmaceuticals, Inc.
Event787	WebMD Health Corp.	Scholastic Corporation
Event788	Global Partners LP	Cross Timbers Royalty Trust
Event789	Ottawa Bancorp, Inc.	Bank of the James Financial Group, Inc.
Event790	Taleo Corp.	Frequency Electronics, Inc.

Event791	Sunesis Pharmaceuticals, Inc.	Five Star Senior Living Inc.
Event792	North Pointe Holdings Corporation	Farmers & Merchants Bancorp, Inc.
Event793	Everi Holdings Inc.	J & J Snack Foods Corp.
Event794	Ikanos Communications, Inc.	Universal Display Corporation
Event795	Enterprise ETE LLC	World Fuel Services Corporation
Event796	Bronco Drilling Co. Inc.	Cross Timbers Royalty Trust
Event797	Rockwood Holdings, Inc.	Cabot Corporation
Event798	CF Industries Holdings, Inc.	Tetra Tech, Inc.
Event799	Heartland Payment Systems, Inc.	Progress Software Corporation
Event800	RBC Bearings Incorporated	Universal Stainless & Alloy Products, Inc.
Event801	Coley Pharmaceutical Group, Inc.	Merit Medical Systems, Inc.
Event802	K&F Industries Holdings, Inc.	Exponent, Inc.
Event803	James River Group, Inc.	South State Corporation
Event804	Ruth's Hospitality Group, Inc.	Darling Ingredients Inc.
Event805	AtriCure, Inc.	Endologix, Inc.
Event806	Dresser-Rand Group Inc.	World Fuel Services Corporation
Event807	Eschelon Telecom Inc.	Cogent Communications Holdings, Inc.
Event808	Republic Companies Group, Inc	Farmers & Merchants Bancorp, Inc.
Event809	MWI Veterinary Supply, Inc.	Neurocrine Biosciences, Inc.
Event810	Advanced Analogic Technologies Incorporated	GSE Systems, Inc.
Event811	Unica Corporation	GSE Systems, Inc.
Event812	Golf Galaxy, LLC	Forward Industries, Inc.
Event813	Alon USA Energy, Inc.	Cross Timbers Royalty Trust
Event814	Superior Well Services, Inc.	Cross Timbers Royalty Trust
Event815	Maidenform Brands LLC	Booking Holdings Inc.
Event816	Pike Corporation	Franklin Electric Co., Inc.
Event817	ITC Holdings Corp.	Cross Timbers Royalty Trust
Event818	Hittite Microwave Corporation	GSE Systems, Inc.
Event819	Consolidated Communications Holdings, Inc.	ATN International, Inc.
Event820	Diamond Foods, LLC	The Boston Beer Company, Inc.
Event821	Adams Respiratory Therapeutics, Inc.	West Pharmaceutical Services, Inc.
Event822	CryoCor, Inc.	Lannett Company, Inc.
Event823	United Financial Bancorp, Inc.	CenterState Bank Corporation
Event824	Western Alliance Bancorporation	Omega Healthcare Investors, Inc.
Event825	Colonial Financial Services, Inc.	Kearny Financial Corp.
Event826	Heritage Financial Group, Inc.	American River Bankshares
Event827	VOLCOM, Inc.	Superior Industries International, Inc.
Event828	CIFC LLC	Source Capital, Inc.
Event829	HemoSense, Inc.	Novavax, Inc.
Event830	Neustar, Inc.	MoneyGram International, Inc.
Event831	Kenexa Corp.	Qumu Corporation
Event832	KKR Financial Holdings LLC	Realty Income Corporation
Event833	BankFinancial Corporation	Peoples Bancorp Inc.
Event834	Allion Healthcare, Inc.	DENTSPLY SIRONA Inc.
Event835	Lincoln Educational Services Corporation	Lifeway Foods, Inc.
Event836	Builders FirstSource, Inc.	AAR Corp.
Event837	ev3 Inc.	Taro Pharmaceutical Industries Ltd.
Event838	Micrus Endovascular LLC	BIOLASE, Inc.
Event839	Murphy-Brown of Missouri, LLC	Lifeway Foods, Inc.
Event840	Silicon Graphics International Corp.	Advanced Energy Industries, Inc.
Event841	Hercules Capital, Inc.	Farmers & Merchants Bancorp, Inc.
Event842	LHC Group, Inc.	DENTSPLY SIRONA Inc.
Event843	Xenoport, Inc.	ThermoGenesis Holdings, Inc.
Event844	North Penn Bancorp Inc.	CKX Lands, Inc.
Event845	SSA Global Technologies, Inc.	GSE Systems, Inc.
Event846	TransMontaigne Partners LLC	Cross Timbers Royalty Trust
Event847	Citi Trends, Inc.	AutoNation, Inc.
Event848	Xerium Technologies, Inc.	Espey Mfg. & Electronics Corp.
Event849	Warner Music Group Corp.	John Wiley & Sons, Inc.
Event850	Bois d'Arc Energy Inc.	NACCO Industries, Inc.
Event851	Zumiez Inc.	AutoNation, Inc.
Event852	Coffee Holding Co., Inc.	AutoNation, Inc.
Event853	Morningstar, Inc.	Bank of the James Financial Group, Inc.
Event854	VeriFone Systems, Inc.	Littelfuse, Inc.

Event855	National Atlantic Holdings Corporation	Fidelity D & D Bancorp, Inc.
Event856	Earle M. Jorgensen Company	Balchem Corporation
Event857	DexCom, Inc.	Regeneron Pharmaceuticals, Inc.
Event858	FreightCar America, Inc.	National Presto Industries, Inc.
Event859	Brooklyn Federal Bancorp Inc.	Citizens Community Bancorp, Inc.
Event860	Benjamin Franklin Bancorp Inc.	Fidelity D & D Bancorp, Inc.
Event861	OC Financial Inc.	Rand Capital Corporation
Event862	ValueClick Media, Inc.	Shenandoah Telecommunications Company
Event863	Intelsat Holding Corporation	Travelzoo
Event864	Axos Financial, Inc.	Citizens Holding Company
Event865	International Securities Exchange Holdings, Inc.	Arthur J. Gallagher & Co.
Event866	Dolby Laboratories, Inc.	FLIR Systems, Inc.
Event867	WEX Inc.	FLIR Systems, Inc.
Event868	Manitex International, Inc.	Comstock Mining Inc.
Event869	Prestige Consumer Healthcare Inc.	Antares Pharma, Inc.
Event870	Huntsman Corporation	W.W. Grainger, Inc.
Event871	Universal Logistics Holdings, Inc.	Perma-Pipe International Holdings, Inc.
Event872	Hiland Partners Holdings, LLC	PrimeEnergy Resources Corporation
Event873	Emageon, Inc.	Geron Corporation
Event874	Syniverse Holdings, Inc.	Plantronics, Inc.
Event875	FTD Group, Inc.	Culp, Inc.
Event876	Icagen, Inc.	Antares Pharma, Inc.
Event877	Valor Communications Group Inc.	Insignia Systems, Inc.
Event878	ARC Document Solutions, Inc.	American Woodmark Corporation
Event879	Threshold Pharmaceuticals, Inc.	Catasys, Inc.
Event880	National Interstate Corporation	BCB Bancorp, Inc.
Event881	W&T Offshore, Inc.	BP Prudhoe Bay Royalty Trust
Event882	DFC Global Corp.	MVC Capital, Inc.
Event883	optionsXpress Holdings, Inc.	BCB Bancorp, Inc.
Event884	Celanese Corporation	Hexcel Corporation
Event885	SeaBright Holdings, Inc.	Farmers & Merchants Bancorp, Inc.
Event886	ViaCell, Inc.	ICU Medical, Inc.
Event887	ICS Group Holdings Inc.	Gray Television, Inc.
Event888	Herbalife Nutrition Ltd.	Seaboard Corporation
Event889	Advance America, Cash Advance Centers Inc.	Arthur J. Gallagher & Co.
Event890	KMG America Corporation	BNY Mellon Municipal Income, Inc.
Event891	Interline Brands Inc.	Vicor Corporation
Event892	Macquarie Infrastructure Corporation	Cubic Corporation
Event893	Conor Medsystems, LLC	National HealthCare Corporation
Event894	Las Vegas Sands Corp.	RiceBran Technologies
Event895	Comstock Holding Companies, Inc.	The Andersons, Inc.
Event896	Great Wolf Resorts, Inc.	The Andersons, Inc.
Event897	Cascade Microtech Inc.	Socket Mobile, Inc.
Event898	Knoll, Inc.	PolyOne Corporation
Event899	BlueLinx Holdings Inc.	Cornerstone Building Brands, Inc.
Event900	Cytyc Prenatal Products Corp.	Abiomed, Inc.
Event901	Market Leader, Inc.	Socket Mobile, Inc.
Event902	Foundation Coal Holdings Inc.	ALLETE, Inc.
Event903	Symmetry Medical, Inc.	Orthofix Medical Inc.
Event904	CABG Medical Inc.	IRIDEX Corporation
Event905	UAP Holding Corp.	Eagle Materials Inc.
Event906	PortalPlayer LLC	Veeco Instruments Inc.
Event907	Monolithic Power Systems, Inc.	Sykes Enterprises, Incorporated
Event908	Specialty Underwriters' Alliance, Inc.	UMH Properties, Inc.
Event909	Windstream Iowa Communications, LLC	Insignia Systems, Inc.
Event910	Nalco Holding Company	Donaldson Company, Inc.
Event911	Ormat Technologies, Inc.	Cross Timbers Royalty Trust
Event912	Copano Energy, L.L.C.	BP Prudhoe Bay Royalty Trust
Event913	zipRealty Inc.	Seacoast Banking Corporation of Florida
Event914	MarketAxess Holdings Inc.	Hope Bancorp, Inc.
Event915	Build-A-Bear Workshop, Inc.	Coca-Cola Consolidated, Inc.
Event916	Foxhollow Technologies, Inc.	Alexion Pharmaceuticals, Inc.
Event917	Calamos Asset Management Inc.	Universal Insurance Holdings, Inc.

Event918	DreamWorks Animation, LLC	Verizon Communications Inc.
Event919	VNUS Medical Technologies, Inc.	ImmunoGen, Inc.
Event920	Celebrate Express Inc.	Flexsteel Industries, Inc.
Event921	CoTherix, Inc.	Palatin Technologies, Inc.
Event922	Huron Consulting Group Inc.	American Superconductor Corporation
Event923	Gold Kist, Inc.	The Hain Celestial Group, Inc.
Event924	IntraLase Corp.	MEI Pharma, Inc.
Event925	RTW Retailwinds, Inc.	Adtalem Global Education Inc.
Event926	Thomas Properties Group Inc.	One Liberty Properties, Inc.
Event927	Innoviva, Inc.	VIVUS, Inc.
Event928	Texas Roadhouse, Inc.	Koss Corporation
Event929	Aegis USA, Inc.	ASGN Incorporated
Event930	Ness Technologies Inc.	CTS Corporation
Event931	EA Mobile LLC	The Marcus Corporation
Event932	Visual Sciences, Inc.	American Software, Inc.
Event933	Valley Bancorp	Fidelity D & D Bancorp, Inc.
Event934	3M Cogent, Inc.	GSE Systems, Inc.
Event935	Beacon Roofing Supply, Inc.	The Greenbrier Companies, Inc.
Event936	Educate, Inc.	Ark Restaurants Corp.
Event937	Nephros, Inc.	Emerson Radio Corp.
Event938	StoneMor Inc.	Ark Restaurants Corp.
Event939	Naugatuck Valley Financial Corporation	The InterGroup Corporation
Event940	PFSweb Retail Connect, Inc.	Ark Restaurants Corp.
Event941	Alphabet Inc.	Travelzoo
Event942	Cohen & Steers, Inc.	FNCB Bancorp, Inc.
Event943	Archipelago Holdings, Inc.	The Bancorp, Inc.
Event944	Stereotaxis, Inc.	Curis, Inc.
Event945	Westlake Chemical Corporation	Exponent, Inc.
Event946	Placer Sierra Bancshares	The Bancorp, Inc.
Event947	HERE Holding Corporation	Western Digital Corporation
Event948	Rightnow Technologies, Inc.	Pegasystems Inc.
Event949	New River Pharmaceuticals Inc.	BioCryst Pharmaceuticals, Inc.
Event950	Commercial Vehicle Group, Inc.	Exponent, Inc.
Event951	EnerSys	Cubic Corporation
Event952	Volterra Semiconductor Corporation	TransAct Technologies Incorporated
Event953	MannKind Corporation	Haemonetics Corporation
Event954	Auxilium Pharmaceuticals, LLC	Anika Therapeutics, Inc.
Event955	Lumera Corporation	KVH Industries, Inc.
Event956	NeuroMetrix, Inc.	Abeona Therapeutics Inc.
Event957	Caterpillar Global Mining LLC	Cubic Corporation
Event958	Capgemini Financial Services International Inc.	Quantum Corporation
Event959	Dex Media Holdings, Inc.	Insignia Systems, Inc.
Event960	Blackbaud, Inc.	Quantum Corporation
Event961	Idenix Pharmaceuticals, Inc.	TrovaGene, Inc.
Event962	McCormick & Schmick's Seafood Restaurants, Inc.	Weyco Group, Inc.
Event963	Xenogen Corporation	Haemonetics Corporation
Event964	NXP USA, Inc.	Autodesk, Inc.
Event965	Greenfield Online, Inc.	Saga Communications, Inc.
Event966	Phase Forward Inc.	NextGen Healthcare, Inc.
Event967	Domino's Pizza, Inc.	JAKKS Pacific, Inc.
Event968	NetLogic I LLC	Pegasystems Inc.
Event969	Holly Energy Partners, L.P.	Cross Timbers Royalty Trust
Event970	Life Time, Inc.	Iconix Brand Group, Inc.
Event971	WellCare Health Plans, Inc.	Incyte Corporation
Event972	First Ipswich Bancorp	OptimumBank Holdings, Inc.
Event973	Multi-Fineline Electronix, Inc.	Image Sensing Systems, Inc.
Event974	Cabela's Incorporated	Iconix Brand Group, Inc.
Event975	Philips Solid-State Lighting Solutions, Inc.	NVE Corporation
Event976	WCA Waste Corporation	Ennis, Inc.
Event977	salesforce.com, inc.	Semtech Corporation
Event978	Senomyx, Inc.	Titan International, Inc.
Event979	Momenta Pharmaceuticals, Inc.	Dynatronics Corporation
Event980	21st Century Oncology Holdings, Inc.	American Shared Hospital Services

Event981	Blackboard Inc.	Genasys Inc.
Event982	ADESA, Inc.	Cummins Inc.
Event983	InfoSonics Corporation	Image Sensing Systems, Inc.
Event984	Metabasis Therapeutics, Inc.	American Shared Hospital Services
Event985	Digirad Corporation	Palatin Technologies, Inc.
Event986	CBRE Group, Inc.	FNCB Bancorp, Inc.
Event987	Inhibitex, Inc.	FONAR Corporation
Event988	Alnylam Pharmaceuticals, Inc.	Utah Medical Products, Inc.
Event989	SP Plus Corporation	Balchem Corporation
Event990	AngioDynamics, Inc.	Encompass Health Corporation
Event991	ACADIA Pharmaceuticals Inc.	Utah Medical Products, Inc.
Event992	Genworth Financial, Inc.	Arthur J. Gallagher & Co.
Event993	Blue Nile, Inc.	Live Ventures Incorporated
Event994	Animas LLC	Hanger, Inc.
Event995	NuVasive, Inc.	Encompass Health Corporation
Event996	Arkhan Corporation	Cross Timbers Royalty Trust
Event997	InfraSource Services, Inc.	Minerals Technologies Inc.
Event998	Greenhill & Co., Inc.	PacWest Bancorp
Event999	Cytokinetics, Incorporated	Five Star Senior Living Inc.
Event1000	Intersections Inc.	Kadant Inc.
Event1001	Barrier Therapeutics, Inc.	Lannett Company, Inc.
Event1002	CSR Technology Holdings Inc.	Veeco Instruments Inc.
Event1003	ProCentury Corporation	Hingham Institution for Savings
Event1004	Corcept Therapeutics Incorporated	Mesa Laboratories, Inc.
Event1005	Memory Pharmaceuticals Corp.	Retractable Technologies, Inc.
Event1006	Santarus, Inc.	NextGen Healthcare, Inc.
Event1007	Cutera, Inc.	IRIDEX Corporation
Event1008	Marchex, Inc.	Verizon Communications Inc.
Event1009	Anadys Pharmaceuticals Inc.	Meridian Bioscience, Inc.
Event1010	Ultra Clean Holdings, Inc.	CSP Inc.
Event1011	TNS Inc.	Westell Technologies, Inc.
Event1012	Xcyte Therapies Inc.	Utah Medical Products, Inc.
Event1013	Ipsen Biopharmaceuticals, Inc.	Palatin Technologies, Inc.
Event1014	NewAlliance Bancshares, Inc.	Welltower Inc.
Event1015	1st Century Bancshares, Inc.	Bank of South Carolina Corporation
Event1016	Acelity L.P. Inc.	Bio-Techne Corporation
Event1017	Cherokee International Corporation	Zix Corporation
Event1018	Dynavax Technologies Corporation	ThermoGenesis Holdings, Inc.
Event1019	Bristol West Holdings, Inc.	RLI Corp.
Event1020	Qualcomm Atheros, Inc.	Plexus Corp.
Event1021	Alphasmart Inc.	Genasys Inc.
Event1022	Symbion, Inc.	IRIDEX Corporation
Event1023	Asset Acceptance Capital Corp.	Union Bankshares, Inc.
Event1024	Assurant, Inc.	The Hanover Insurance Group, Inc.
Event1025	Evotec	Geron Corporation
Event1026	TODCO	Cross Timbers Royalty Trust
Event1027	ZF TRW Automotive Holdings Corp.	NVR, Inc.
Event1028	GTx, Inc.	Inovio Pharmaceuticals, Inc.
Event1029	Oldtech, Inc.	Invacare Corporation
Event1030	L.B. Foster Rail Technologies, Inc.	Art's-Way Manufacturing Co., Inc.
Event1031	Clifton Bancorp Inc.	Columbia Banking System, Inc.
Event1032	Enlink Midstream, Inc.	Cross Timbers Royalty Trust
Event1033	Kirby Offshore Marine, LLC	Cross Timbers Royalty Trust
Event1034	Cheviot Financial Corp.	Citizens Holding Company
Event1035	Kintera, Inc.	Innodata Inc.
Event1036	Knology, Inc.	Harte Hanks, Inc.
Event1037	Tempur Sealy International, Inc.	Culp, Inc.
Event1038	Provide Commerce, Inc.	Rent-A-Center, Inc.
Event1039	Universal Technical Institute, Inc.	Jack in the Box Inc.
Event1040	Orbitz, Inc.	Rent-A-Center, Inc.
Event1041	Mercer Insurance Group, Inc.	Peoples Bancorp of North Carolina, Inc.
Event1042	Compass Minerals International, Inc.	Royal Gold, Inc.
Event1043	Central Freight Lines, Inc.	Cubic Corporation
Event1044	NPtest Holding Corp.	Quantum Corporation

Event1045	ArcelorMittal USA LLC	Equifax Inc.
Event1046	Nelnet, Inc.	First Financial Corporation
Event1047	American Equity Investment Life Holding Company	Banner Corporation
Event1048	SYNNEX Corporation	Quantum Corporation
Event1049	Open Solutions, LLC	PRGX Global, Inc.
Event1050	Conn's, Inc.	JAKKS Pacific, Inc.
Event1051	Nexstar Media Group, Inc.	Saga Communications, Inc.
Event1052	Oxford Square Capital Corp.	Transcontinental Realty Investors, Inc.
Event1053	Buffalo Wild Wings, Inc.	Willamette Valley Vineyards, Inc.
Event1054	Callidus Software Inc.	Quantum Corporation
Event1055	Whiting Petroleum Corporation	World Fuel Services Corporation
Event1056	Xperi Corporation	ACI Worldwide, Inc.
Event1057	Marlin Business Services Corp.	Consolidated-Tomoka Land Co.
Event1058	Cinedigm Corp.	Daily Journal Corporation
Event1059	Quality Distribution Inc.	NewMarket Corporation
Event1060	Coast Financial Holdings Inc.	Pathfinder Bancorp, Inc.
Event1061	Pharmion LLC	Hanger, Inc.
Event1062	NitroMed, Inc.	Quidel Corporation
Event1063	Cognition Financial Corporation	Highwoods Properties, Inc.
Event1064	UPS Ground Freight, Inc.	Air Transport Services Group, Inc.
Event1065	Gilead Colorado, Inc.	CorVel Corporation
Event1066	CancerVax Corp.	Myriad Genetics, Inc.
Event1067	Carter's, Inc.	Newell Brands Inc.
Event1068	Digitalnet Holdings Inc.	Superconductor Technologies Inc.
Event1069	LKQ Corporation	Movado Group, Inc.
Event1070	AMIS Holdings, Inc.	Jack Henry & Associates, Inc.
Event1071	Journal Communications, Inc.	Insignia Systems, Inc.
Event1072	Sigmatel Inc.	Photronics, Inc.
Event1073	NFP Corp.	National Retail Properties, Inc.
Event1074	The Providence Service Corporation	Neogen Corporation
Event1075	Texas Capital Bancshares, Inc.	Consumer Portfolio Services, Inc.
Event1076	DIRECT GENERAL INSURANCE AGENCY OF TENNESSEE, INC	Consumer Portfolio Services, Inc.
Event1077	Cove Apparel, Inc.	RCI Hospitality Holdings, Inc.
Event1078	CapitalSource Inc.	Consumer Portfolio Services, Inc.
Event1079	NETGEAR, Inc.	ANSYS, Inc.
Event1080	iPass Inc.	Quantum Corporation
Event1081	Integrated Alarm Services Group Inc.	P.A.M. Transportation Services, Inc.
Event1082	InterVideo, Inc.	Quantum Corporation
Event1083	DTS, Inc.	Qumu Corporation
Event1084	Molina Healthcare, Inc.	Micron Solutions, Inc.
Event1085	Community First Bancorp Inc.	National Holdings Corporation
Event1086	CN Bancorp, Inc.	Universal Insurance Holdings, Inc.
Event1087	FormFactor, Inc.	Stratasys Ltd.
Event1088	iPayment Inc.	Trio-Tech International
Event1089	Accredited Home Lenders Holding Co.	Consolidated-Tomoka Land Co.
Event1090	Infinity Property and Casualty Corporation	Central Securities Corp.
Event1091	Provident Financial Services, Inc.	First Citizens BancShares, Inc.
Event1092	Commercial Capital Bancorp, Inc.	Fidelity D & D Bancorp, Inc.
Event1093	VistaCare, LLC	Alexion Pharmaceuticals, Inc.
Event1094	EnLink Midstream Partners, LP	Cross Timbers Royalty Trust
Event1095	CME Group Inc.	Nasdaq, Inc.
Event1096	Safety Insurance Group, Inc.	Cambridge Bancorp
Event1097	IMPAC Medical Systems, Inc.	Repro Med Systems, Inc.
Event1098	Serco Services Inc.	Sykes Enterprises, Incorporated
Event1099	PRA Group, Inc.	Citizens, Inc.
Event1100	WellChoice Inc.	DENTSPLY SIRONA Inc.
Event1101	Martin Midstream Partners L.P.	REX American Resources Corporation
Event1102	Wynn Resorts, Limited	Crown Crafts, Inc.
Event1103	Atlantic Liberty Financial Corp.	Nicholas Financial, Inc.
Event1104	USI Holdings Corporation	Boston Private Financial Holdings, Inc.
Event1105	DICK'S Sporting Goods, Inc.	Tenneco Inc.
Event1106	Taylor Capital Group Inc.	The First Bancorp, Inc.

Event1107	Drive Shack Inc.	Tenneco Inc.
Event1108	Enbridge Energy Management, L.L.C.	American States Water Company
Event1109	Natural Resource Partners L.P.	Spire Inc.
Event1110	Synergy Financial Group Inc.	Peoples Bancorp of North Carolina, Inc.
Event1111	LeapFrog Enterprises Inc.	Marine Products Corporation
Event1112	Pacific Energy Partners LP	World Fuel Services Corporation
Event1113	Red Robin Gourmet Burgers, Inc.	Marine Products Corporation
Event1114	Kirkland's, Inc.	Pyxus International, Inc.
Event1115	Minden Bancorp, Inc.	Income Opportunity Realty Investors, Inc.
Event1116	Galectin Therapeutics, Inc.	Idera Pharmaceuticals, Inc.
Event1117	BAE Systems Science and Technology, Inc.	TrueBlue, Inc.
Event1118	Montana Mills Bread Co., Inc.	Darling Ingredients Inc.
Event1119	Inveresk Research Group Inc.	Myriad Genetics, Inc.
Event1120	Aon Hewitt LLC	Equifax Inc.
Event1121	Big 5 Sporting Goods Corporation	Universal Electronics Inc.
Event1122	Siemens Molecular Imaging, Inc.	Neurocrine Biosciences, Inc.
Event1123	Printcafe Software, Inc.	American Software, Inc.
Event1124	XPO Intermodal, Inc.	Mesabi Trust
Event1125	Veridian Corporation	Aegion Corporation
Event1126	Plumtree Software, Inc.	Communications Systems, Inc.
Event1127	Overstock.com, Inc.	Koss Corporation
Event1128	SRA Companies, Inc.	FLIR Systems, Inc.
Event1129	Eon Labs, Inc.	Micron Solutions, Inc.
Event1130	Netflix, Inc.	Sirius XM Holdings Inc.
Event1131	Altiris Inc.	Superconductor Technologies Inc.
Event1132	Computer Programs and Systems, Inc.	Micron Solutions, Inc.
Event1133	MarkWest Energy Partners, L.P.	Cross Timbers Royalty Trust
Event1134	Verint Systems Inc.	FLIR Systems, Inc.
Event1135	Regal Entertainment Group	United States Cellular Corporation
Event1136	LIN Media LLC	Electronic Arts Inc.
Event1137	Premcor Inc.	Chesapeake Utilities Corporation
Event1138	ExpressJet Holdings Inc.	Tredegar Corporation
Event1139	Ribapharm Inc.	BIOLASE, Inc.
Event1140	JetBlue Airways Corporation	PICO Holdings, Inc.
Event1141	RSV Bancorp Inc.	Broadway Financial Corporation
Event1142	MedSource Technologies, Inc.	CorVel Corporation
Event1143	The Travelers Companies, Inc.	CNA Financial Corporation
Event1144	Asbury Automotive Group, Inc.	Seaboard Corporation
Event1145	Anteon International Corporation	Itron, Inc.
Event1146	Heritage Bancshares, Inc.	Diamond Hill Investment Group, Inc.
Event1147	Integrated Defense Technologies Inc.	P.A.M. Transportation Services, Inc.
Event1148	PETCO Animal Supplies, Inc.	Veru Inc.
Event1149	PayPal Holdings, Inc.	Cirrus Logic, Inc.
Event1150	GameStop Corp.	Jack in the Box Inc.
Event1151	ManTech International Corporation	Itron, Inc.
Event1152	Sunoco Logistics Partners L.P.	Marine Petroleum Trust
Event1153	ZymoGenetics, Inc.	Cantel Medical Corp.
Event1154	Heritage Companies, Inc.	DXP Enterprises, Inc.
Event1155	Synaptics Incorporated	ScanSource, Inc.
Event1156	Clover Leaf Financial Corp.	CKX Lands, Inc.
Event1157	Western New England Bancorp, Inc.	WVS Financial Corp.
Event1158	PHSB Financial Corp.	Community West Bancshares
Event1159	Bruker AXS, Inc.	GSE Systems, Inc.
Event1160	BAE Systems Land & Armaments LP	Sensient Technologies Corporation
Event1161	Centene Corporation	SunLink Health Systems, Inc.
Event1162	Nassda Corporation	GSE Systems, Inc.
Event1163	Prudential Financial, Inc.	Income Opportunity Realty Investors, Inc.
Event1164	NetScreen Technologies Inc.	Zebra Technologies Corporation
Event1165	Aramark Corporation	Jacobs Engineering Group Inc.
Event1166	Infor	LiveRamp Holdings, Inc.
Event1167	VCA Inc.	CorVel Corporation
Event1168	Magma Design Automation LLC	MoSys, Inc.
Event1169	Henry Bros. Electronics, Inc.	Woodward, Inc.
Event1170	WW International, Inc.	Dollar Tree, Inc.

Event1171	DJO Opco Holdings, Inc.	La Jolla Pharmaceutical Company
Event1172	The Advisory Board Company	ESCO Technologies Inc.
Event1173	AMN Healthcare Services, Inc.	Tenax Therapeutics, Inc.
Event1174	AMERIGROUP Corporation	Champions Oncology, Inc.
Event1175	LogicVision, Inc.	3D Systems Corporation
Event1176	Odyssey HealthCare, Inc.	Geron Corporation
Event1177	Anthem, Inc.	Mylan N.V.
Event1178	Penn Virginia Resource Partners LP	Cross Timbers Royalty Trust
Event1179	Cross Country Healthcare, Inc.	CorVel Corporation
Event1180	Principal Financial Group, Inc.	MBIA Inc.
Event1181	Charter Financial Corporation	CoreCivic, Inc.
Event1182	Abbott Diabetes Care, Inc.	Nektar Therapeutics
Event1183	PFS Bancorp Inc.	Nicholas Financial, Inc.
Event1184	Mykrolis Corp.	DSP Group, Inc.
Event1185	Omnicell, Inc.	Curis, Inc.
Event1186	Bunge Limited	Rent-A-Center, Inc.
Event1187	Alliance Healthcare Services, Inc.	Enzo Biochem, Inc.
Event1188	Southern Connecticut Bancorp Inc.	Bank of the James Financial Group, Inc.
Event1189	PDF Solutions, Inc.	Cohu, Inc.
Event1190	Inergy, L.P.	Marine Petroleum Trust
Event1191	MedCath Corp.	Taro Pharmaceutical Industries Ltd.
Event1192	Natus Medical Incorporated	Milestone Scientific Inc.
Event1193	inVentiv Health Clinical, Inc.	Apyx Medical Corporation
Event1194	Galyan's Trading Company, LLC	Pyxus International, Inc.
Event1195	Multilink Technology Corp.	Cohu, Inc.
Event1196	The Nassau Companies of New York	American Financial Group, Inc.
Event1197	Odyssey Group Holdings, Inc.	Equity Commonwealth
Event1198	FMC Technologies, Inc.	Westwater Resources, Inc.
Event1199	Mondelez International, Inc.	Whirlpool Corporation
Event1200	United Surgical Partners International Inc.	IDEXX Laboratories, Inc.
Event1201	Alliance Data Systems Corporation	Cohu, Inc.
Event1202	Unilab Corporation	Bio-Rad Laboratories, Inc.
Event1203	The Smith & Wollensky Restaurant Group, Inc.	Shiloh Industries, Inc.
Event1204	Instinet Group, LLC	The First of Long Island Corporation
Event1205	Tellium, Inc.	Amtech Systems, Inc.
Event1206	Kinder Morgan Management, LLC	Unit Corporation
Event1207	Chesterfield Financial Corp.	Union Bankshares, Inc.
Event1208	Simplex Solutions, Inc.	CVD Equipment Corporation
Event1209	RRI Energy, Inc.	Public Service Enterprise Group Incorporated
Event1210	Select Medical Corporation	Anixa Biosciences, Inc.
Event1211	Dynamic Ventures, Inc.	DiversiFax, Inc.,
Event1212	Agere Systems LLC	KLA Corporation
Event1213	Verisity Ltd.	Cemtrex, Inc.
Event1214	Bucs Financial Corp.	Hallmark Financial Services, Inc.
Event1215	Encore Acquisition Company	RGC Resources, Inc.
Event1216	Opsware Inc.	ScanSource, Inc.
Event1217	Seattle Genetics, Inc.	CorVel Corporation
Event1218	Popeyes Louisiana Kitchen, Inc.	WD-40 Company
Event1219	Arena Resources, Inc.	ENGlobal Corporation
Event1220	Third Wave Technologies, Inc.	Alexion Pharmaceuticals, Inc.
Event1221	Oil States International, Inc.	Otter Tail Corporation
Event1222	Magellan Midstream Partners, L.P.	Range Resources Corporation
Event1223	Exact Sciences Corporation	Chemed Corporation
Event1224	Align Technology, Inc.	XOMA Corporation
Event1225	Peet's Coffee & Tea, Inc.	Motorcar Parts of America, Inc.
Event1226	Lawrence Financial Holdings Inc.	Nicholas Financial, Inc.
Event1227	Resources Connection, Inc.	Mesabi Trust
Event1228	GenVec, Inc.	PerkinElmer, Inc.
Event1229	American Physicians Capital, Inc.	Hope Bancorp, Inc.
Event1230	Quest Diagnostics Nichols Institute of Valencia	PerkinElmer, Inc.
Event1231	Harvard Bioscience, Inc.	PerkinElmer, Inc.
Event1232	First Federal Bancshares Inc.	Colony Bankcorp, Inc.
Event1233	Rigel Pharmaceuticals, Inc.	BioSpecifics Technologies Corp.

Event1234	Alliance Fiber Optic Products Inc.	The LGL Group, Inc.
Event1235	Array BioPharma Inc.	BioSpecifics Technologies Corp.
Event1236	Inseego Corp.	Tyler Technologies, Inc.
Event1237	James Monroe Bancorp Inc.	Unity Bancorp, Inc.
Event1238	NRG Power Generation LLC	The York Water Company
Event1239	Finger Lakes Bancorp, Inc	Colony Bankcorp, Inc.
Event1240	Adolor Corporation	Bio-Rad Laboratories, Inc.
Event1241	Aerogen, Inc.	OraSure Technologies, Inc.
Event1242	LeCroy Protocol Solutions Group	The LGL Group, Inc.
Event1243	Source Photonics, Inc.	The LGL Group, Inc.
Event1244	Transmeta Corporation	Jabil Inc.
Event1245	Optical Communication Products, Inc.	The LGL Group, Inc.
Event1246	UTi Worldwide Inc.	Matthews International Corporation
Event1247	Bank Mutual Corporation	First US Bancshares, Inc.
Event1248	MediChem Life Sciences, Inc.	Apyx Medical Corporation
Event1249	Ixia	CTS Corporation
Event1250	Endwave Corporation	Novanta Inc.
Event1251	Monsanto Company	United States Antimony Corporation
Event1252	Waypoint Financial Corp.	FNCB Bancorp, Inc.
Event1253	Synplicity, Inc.	Westell Technologies, Inc.
Event1254	WTW Delaware Holdings LLC	Rollins, Inc.
Event1255	First Shares Bancorp Inc.	United Bancshares, Inc.
Event1256	Kosan Biosciences Incorporated	Bio-Rad Laboratories, Inc.
Event1257	Tapestry, Inc.	Stein Mart, Inc.
Event1258	Oplink Communications, Inc.	Genasys Inc.
Event1259	InforMax, Inc.	Zix Corporation
Event1260	Integer Holdings Corporation	Alexion Pharmaceuticals, Inc.
Event1261	Docent Inc.	Emmis Communications Corporation
Event1262	STEC, Inc.	The LGL Group, Inc.
Event1263	@Road, Inc.	Socket Mobile, Inc.
Event1264	Elastic Networks Inc.	Rogers Corporation
Event1265	Livingston International Technology Services Corporation	LightPath Technologies, Inc.
Event1266	Vermillion, Inc.	Henry Schein, Inc.
Event1267	Genomica Corp.	Rogers Corporation
Event1268	Hydril Company LP	Avista Corporation
Event1269	AvantGo, Inc.	Photronics, Inc.
Event1270	DURECT Corporation	Patterson Companies, Inc.
Event1271	EDEN Bioscience Corp.	Mesabi Trust
Event1272	CBCT Bancshares Inc	Kingstone Companies, Inc.
Event1273	Inrange Technologies Corporation	Amtech Systems, Inc.
Event1274	TTM Technologies, Inc.	Amtech Systems, Inc.
Event1275	Zengine Inc.	The LGL Group, Inc.
Event1276	Chiles Offshore Inc.	Cadiz Inc.
Event1277	MediaLive International, Inc.	SPAR Group, Inc.
Event1278	ISTA Pharmaceuticals, Inc.	OPKO Health, Inc.
Event1279	TriQuint WJ, Inc.	Jack Henry & Associates, Inc.
Event1280	Pinnacle Financial Partners, Inc.	Security National Financial Corporation
Event1281	Commercefirst Bancorp Inc.	HMG/Courtland Properties, Inc.
Event1282	Integrated Telecom Express Inc.	Novanta Inc.
Event1283	PECO II, Inc.	Mesabi Trust
Event1284	Baran Telecom, Inc.	Mesabi Trust
Event1285	PeoplePC Inc.	Scholastic Corporation
Event1286	SynQuest Inc.	Qumu Corporation
Event1287	Dyax Corp.	The Cooper Companies, Inc.
Event1288	Micron Consumer Products Group, Inc.	Progress Software Corporation
Event1289	Telik Inc.	SunLink Health Systems, Inc.
Event1290	American Medical Systems Holdings Inc.	Abiomed, Inc.
Event1291	Vina Technologies, Inc.	Cohu, Inc.
Event1292	RTI Surgical Holdings, Inc.	Tivity Health, Inc.
Event1293	McDATA Corporation	Cadence Design Systems, Inc.
Event1294	Certara Strategic Consulting	VIVUS, Inc.
Event1295	H Power Corp.	The Scotts Miracle-Gro Company
Event1296	Esperion Therapeutics, Inc.	Kewaunee Scientific Corporation

Event1297	STATS ChipPAC, Inc.	Rogers Corporation
Event1298	Microsemi Corp. - Power Products Group	CyberOptics Corporation
Event1299	The Medicines Company	Cerus Corporation
Event1300	Pemstar Inc.	Bel Fuse Inc.
Event1301	TeleCommunication Systems Inc.	NetSol Technologies, Inc.
Event1302	Lantronix, Inc.	OneSpan Inc.
Event1303	Microtune, Inc.	Cognex Corporation
Event1304	EXE Technologies, Inc.	CyberOptics Corporation
Event1305	Rosetta Inpharmatics LLC	Tivity Health, Inc.
Event1306	3-Dimensional Pharmaceuticals, Inc.	The Cooper Companies, Inc.
Event1307	Innovative Solutions and Support, Inc.	Mesabi Trust
Event1308	Bruker Corporation	Patterson Companies, Inc.
Event1309	California Pizza Kitchen, Inc.	PVH Corp.
Event1310	Danisco US Inc.	Sensient Technologies Corporation
Event1311	Entravision Communications Corporation	SPAR Group, Inc.
Event1312	Signalsoft Corporation	Rogers Corporation
Event1313	Vicuron Pharmaceuticals, Inc.	Integra LifeSciences Holdings Corporation
Event1314	Resonate, Inc.	Westell Technologies, Inc.
Event1315	Inspire Pharmaceuticals, Inc.	The Cooper Companies, Inc.
Event1316	Pinnacor Inc.	Cohu, Inc.
Event1317	Cogenics, Inc.	The Cooper Companies, Inc.
Event1318	OPNET Technologies, Inc.	The LGL Group, Inc.
Event1319	Virage Logic Corporation	II-VI Incorporated
Event1320	SpeechWorks International, Inc.	Quantum Corporation
Event1321	Convergent Group Corporation	Genasys Inc.
Event1322	Keryx Biopharmaceuticals, Inc.	Utah Medical Products, Inc.
Event1323	Arena Pharmaceuticals, Inc.	Owens & Minor, Inc.
Event1324	ValiCert, Inc.	II-VI Incorporated
Event1325	Broadwing Corporation	Daily Journal Corporation
Event1326	Illumina, Inc.	Cerner Corporation
Event1327	Cisco WebEx LLC	John Wiley & Sons, Inc.
Event1328	Lexent, Inc.	Scholastic Corporation
Event1329	Applied Molecular Evolution, Inc.	Utah Medical Products, Inc.
Event1330	Mainspring, Inc.	Materion Corporation
Event1331	Blue Martini Software Inc.	Cree, Inc.
Event1332	Raindance Communications Inc.	Scholastic Corporation
Event1333	Talarian Corporation	LightPath Technologies, Inc.
Event1334	Variagenics, Inc.	Owens & Minor, Inc.
Event1335	Corio, Inc.	Advanced Energy Industries, Inc.
Event1336	Vascular Solutions, Inc.	Utah Medical Products, Inc.
Event1337	Support.com, Inc.	DSP Group, Inc.
Event1338	OmniVision Technologies, Inc.	Aspen Technology, Inc.
Event1339	UNICOM Engineering, Inc.	Novanta Inc.
Event1340	Cassava Sciences, Inc.	Utah Medical Products, Inc.
Event1341	Axcelis Technologies, Inc.	Advanced Energy Industries, Inc.
Event1342	Entegris, Inc.	Advanced Energy Industries, Inc.
Event1343	StorageNetworks, Inc.	Intuit Inc.
Event1344	Accord Networks Ltd.	ANSYS, Inc.
Event1345	Capstone Turbine Corporation	Newmont Corporation
Event1346	CareScience, Inc.	Nuance Communications, Inc.
Event1347	Autonomy Virage, Inc.	Research Frontiers Incorporated
Event1348	Berkshire Hills Bancorp, Inc.	Transcontinental Realty Investors, Inc.
Event1349	Stratos International, Inc.	CTS Corporation
Event1350	Huron Technologies Inc.	Superconductor Technologies Inc.
Event1351	Charles River Laboratories International, Inc.	Ligand Pharmaceuticals Incorporated
Event1352	Qualstar Corporation	Pegasystems Inc.
Event1353	Accelerated Networks, Inc.	LiveRamp Holdings, Inc.
Event1354	Manufacturers' Services Limited	Rogers Corporation
Event1355	Cepheid	XOMA Corporation
Event1356	Handspring Inc.	Lattice Semiconductor Corporation
Event1357	Pacific Mercantile Bancorp	Unico American Corporation
Event1358	August Technology Corporation	Rogers Corporation
Event1359	OSCA, Inc.	Panhandle Oil and Gas Inc.
Event1360	Intuitive Surgical, Inc.	Champions Oncology, Inc.

Event1361	Community Health Systems, Inc.	Patterson Companies, Inc.
Event1362	UbiquiTel Inc.	Daily Journal Corporation
Event1363	Exult Inc.	Jacobs Engineering Group Inc.
Event1364	CrossWorlds Software	Socket Mobile, Inc.
Event1365	ONI Systems Corp.	Advanced Micro Devices, Inc.
Event1366	Shionogi Pharma, Inc.	PerkinElmer, Inc.
Event1367	NRG Energy, Inc.	Westwater Resources, Inc.
Event1368	Universal Compression Holdings, Inc.	Marine Petroleum Trust
Event1369	Ribbon Communications Inc.	Avnet, Inc.
Event1370	Sirenza Microdevices Inc.	ACI Worldwide, Inc.
Event1371	Centillium Communications, Inc.	ScanSource, Inc.
Event1372	Integrated Circuit Systems, Inc.	Aspen Technology, Inc.
Event1373	Q Interactive, LLC	Shenandoah Telecommunications Company
Event1374	Pixelworks, Inc.	Stratasys Ltd.
Event1375	US Unwired Inc.	Daily Journal Corporation
Event1376	Nogatech, Inc	3D Systems Corporation
Event1377	New Focus, Inc.	ScanSource, Inc.
Event1378	Bancorp 34, Inc.	Hallmark Financial Services, Inc.
Event1379	Westborough Financial Services, Inc.	Atlantic American Corporation
Event1380	Sequoia Software Corp.	CalAmp Corp.
Event1381	DemandStar.com, Inc.	Reading International, Inc.
Event1382	Genomic Solutions Inc.	PerkinElmer, Inc.
Event1383	Cellmark Forensics, Inc.	Owens & Minor, Inc.
Event1384	Crown Media Holdings, Inc.	Scholastic Corporation
Event1385	Monogram Biosciences, Inc.	Akorn, Inc.
Event1386	Sonic Innovations, Inc.	BioCryst Pharmaceuticals, Inc.
Event1387	ON Semiconductor Corporation	NortonLifeLock Inc.
Event1388	SeeBeyond Technology Corp.	Plexus Corp.
Event1389	Praecis Pharmaceuticals Inc.	Celsion Corporation
Event1390	Packard BioScience Company	Geron Corporation
Event1391	Embarcadero Technologies, Inc.	Agilysys, Inc.
Event1392	Camber Government Solutions Inc.	TESSCO Technologies Incorporated
Event1393	Nuance Communications Inc.	Autodesk, Inc.
Event1394	Corillian Corporation	Agilysys, Inc.
Event1395	Port Financial Corp.	Ameris Bancorp
Event1396	Exelixis, Inc.	Myriad Genetics, Inc.
Event1397	HealthStream, Inc.	ICU Medical, Inc.
Event1398	Lexicon Pharmaceuticals, Inc.	Regeneron Pharmaceuticals, Inc.
Event1399	LivePerson, Inc.	Socket Mobile, Inc.
Event1400	Numerical Technologies, Inc.	Westell Technologies, Inc.
Event1401	Sangamo Therapeutics, Inc.	Hanger, Inc.
Event1402	Tanox Inc.	Varian Medical Systems, Inc.
Event1403	Saba Software, Inc.	Coherent, Inc.
Event1404	i3 Mobile Inc.	Scholastic Corporation
Event1405	ORATEC Interventions, Inc.	Myriad Genetics, Inc.
Event1406	Cabot Microelectronics Corporation	Autodesk, Inc.
Event1407	Ulticom, Inc.	Cohu, Inc.
Event1408	Eagle Bancorp Montana, Inc.	Plumas Bancorp
Event1409	Krispy Kreme Doughnuts, Inc.	Libbey Inc.
Event1410	MetLife, Inc.	Markel Corporation
Event1411	Luminex Corporation	Cerus Corporation
Event1412	ArrowPoint Communications	NortonLifeLock Inc.
Event1413	Conversant LLC	Daily Journal Corporation
Event1414	DirecTV Broadband, Inc.	Zix Corporation
Event1415	Websense, Inc.	Insight Enterprises, Inc.
Event1416	Allos Therapeutics, Inc.	Neogen Corporation
Event1417	Moldflow Corporation	Digi International Inc.
Event1418	InterMune, Inc.	Laboratory Corporation of America Holdings
Event1419	eMachines, Inc.	Cirrus Logic, Inc.
Event1420	Silicon Laboratories Inc.	Lattice Semiconductor Corporation
Event1421	Eprise Corporation	Superconductor Technologies Inc.
Event1422	Blaze Advisor	Research Frontiers Incorporated
Event1423	Viasystems Group, Inc.	Harmonic Inc.
Event1424	inSilicon Corporation	ALJ Regional Holdings, Inc.

Event1425	PartsBase, Inc.	MDC Partners Inc.
Event1426	IGN Entertainment, Inc.	Daily Journal Corporation
Event1427	Aclara Biosciences Inc.	Anixter International Inc.
Event1428	TippingPoint Technologies, Inc.	Veeco Instruments Inc.
Event1429	Loudeye Corp.	Daily Journal Corporation
Event1430	Digitas, Inc.	Daily Journal Corporation
Event1431	OTG Software, Inc.	Advanced Energy Industries, Inc.
Event1432	OraPharma, Inc.	Neurocrine Biosciences, Inc.
Event1433	HomeGrocer.com, Inc.	Veru Inc.
Event1434	Register.com, Inc.	TTEC Holdings, Inc.
Event1435	UTStarcom Holdings Corp.	Autodesk, Inc.
Event1436	Prime Response, Inc.	CyberOptics Corporation
Event1437	CBS Switchboard, Inc.	Littelfuse, Inc.
Event1438	Connecticut Bancshares Inc.	Boston Private Financial Holdings, Inc.
Event1439	Palm, Inc.	Applied Materials, Inc.
Event1440	net.Genesis Corp.	Aspen Technology, Inc.
Event1441	Onvia, Inc.	Cadence Design Systems, Inc.
Event1442	Dassault Systèmes Enovia Corp.	Arrow Electronics, Inc.
Event1443	Niku, LLC	Microchip Technology Incorporated
Event1444	aQuantive, Inc.	Electronic Arts Inc.
Event1445	Hotels.com	VOXX International Corporation
Event1446	Intersil Corporation	Vishay Intertechnology, Inc.
Event1447	Digitalthink Inc.	Guess?, Inc.
Event1448	Nextel Partners, Inc.	Electronic Arts Inc.
Event1449	Inforte Corp.	Novanta Inc.
Event1450	Apropos Technology, Inc.	OneSpan Inc.
Event1451	Eloquent, Inc.	Intuit Inc.
Event1452	BASF Enzymes LLC	Xcel Energy Inc.
Event1453	LendingTree, LLC	Penns Woods Bancorp, Inc.
Event1454	Varsity Group, Inc.	Shiloh Industries, Inc.
Event1455	Chordiant Software, Inc.	Cirrus Logic, Inc.
Event1456	Cyxtera Data Centers, Inc.	Intuit Inc.
Event1457	Beasley Broadcast Group, Inc.	MDC Partners Inc.
Event1458	Lante Corp.	Jack Henry & Associates, Inc.
Event1459	Software AG USA, Inc.	Sanmina Corporation
Event1460	Fargo Electronics, Inc.	ClearOne, Inc.
Event1461	Lightspan, Inc.	Electronic Arts Inc.
Event1462	Cypress Communications, Inc.	Meredith Corporation
Event1463	Organic, Inc.	Electronic Arts Inc.
Event1464	Verint Americas Inc.	Novanta Inc.
Event1465	Healthvision, Inc.	XOMA Corporation
Event1466	Vicinity Corporation	Plantronics, Inc.
Event1467	Landacorp, Inc.	Orthofix Medical Inc.
Event1468	Access Plans USA, Inc.	Southern Missouri Bancorp, Inc.
Event1469	Rakuten Commerce LLC	Leggett & Platt, Incorporated
Event1470	eOn Communications Corporation	Intuit Inc.
Event1471	FirePond, Inc.	Fiserv, Inc.
Event1472	Oclaro, Inc.	Adobe Inc.
Event1473	Agenus Inc.	Champions Oncology, Inc.
Event1474	Mediacom Communications Corporation	Electronic Arts Inc.
Event1475	Dobson Communications Corporation	Meredith Corporation
Event1476	Centra Software Inc.	Insight Enterprises, Inc.
Event1477	Therma-Wave Inc.	Avid Technology, Inc.
Event1478	Telaxis Communications Corporation	Harmonic Inc.
Event1479	Quantum Effect Devices, Inc.	Optical Cable Corporation
Event1480	Sequenom Inc.	Gilead Sciences, Inc.
Event1481	SSI Investments II Limited	Forward Air Corporation
Event1482	Caminus Corporation	ScanSource, Inc.
Event1483	MutualFirst Financial, Inc.	Auburn National Bancorporation, Inc.
Event1484	Packaging Corporation of America	Astec Industries, Inc.
Event1485	Aspect Medical Systems, Inc.	Abiomed, Inc.
Event1486	NATCO Group Inc.	Cross Timbers Royalty Trust
Event1487	Extensity, Inc.	InterDigital, Inc.
Event1488	T/R Systems Inc.	Digi International Inc.

Event1489	John Hancock Financial Services, Inc.	CNA Financial Corporation
Event1490	Targa Pipeline Partners LP	Marine Petroleum Trust
Event1491	Neoforma, Inc.	The E.W. Scripps Company
Event1492	Security Financial Bancorp, Inc.	Carver Bancorp, Inc.

Appendix B – Descriptive Statistics

Appendix B - table 1: Annual composition per industry

IPOs per year	Total	CG	F&RE	I&M	CS	IT	HC	E&U
2000	268	8	24	15	28	124	60	9
2001	69	7	13	5	0	15	20	9
2002	64	12	12	8	3	10	11	8
2003	57	9	16	6	4	15	6	1
2004	148	19	24	20	8	26	43	8
2005	134	17	31	15	9	19	28	15
2006	138	19	18	22	8	23	30	18
2007	135	6	23	12	9	43	28	14
2008	24	1	7	6	0	3	3	4
2009	35	10	2	8	1	4	9	1
2010	84	9	17	12	1	22	16	7
2011	84	10	15	11	6	16	12	14
2012	100	17	12	9	6	26	15	15
2013	152	28	15	13	7	27	44	18
Total	**1492**	**172**	**229**	**162**	**90**	**373**	**325**	**141**

Appendix B - table 2: Annual composition per exit strategy

IPOs per year	No Exit	Partial Exit	Complete Exit
2000	8	11	47
2001	0	4	0
2002	0	4	4
2003	4	15	0
2004	8	36	3
2005	10	17	8
2006	25	39	5
2007	39	50	5
2008	5	6	1
2009	17	9	1
2010	32	34	3
2011	20	32	2
2012	22	50	5
2013	20	88	6
Total	**210**	**395**	**90**

Appendix B - table 3: Annual composition per industry (NSB)

IPOs per year	CG	F&RE	I&M	CS	IT	HC	E&U
2000	6	24	10	22	93	41	6
2001	6	13	5	0	14	19	8
2002	11	11	7	3	7	9	8
2003	6	15	5	2	6	3	1
2004	13	21	10	3	14	33	7
2005	11	27	8	8	9	22	14
2006	11	15	10	4	9	4	16
2007	1	18	2	0	3	5	12
2008	0	5	2	0	1	0	4
2009	3	2	2	0	0	0	1
2010	3	6	3	0	0	2	1
2011	1	13	3	0	2	3	8
2012	5	5	0	1	2	3	7

2013	6	7	5	3	3	3	11
Total	**83**	**182**	**72**	**46**	**163**	**147**	**104**

Appendix B - table 4: Annual composition per industry (SB)

IPOs per year	CG	F&RE	I&M	CS	IT	HC	E&U
2000	2	0	5	6	31	19	3
2001	1	0	0	0	1	1	1
2002	1	1	1	0	3	2	0
2003	3	1	1	2	9	3	0
2004	6	3	10	5	12	10	1
2005	6	4	7	1	10	6	1
2006	8	3	12	4	14	26	2
2007	5	5	10	9	40	23	2
2008	1	2	4	0	2	3	0
2009	7	0	6	1	4	9	0
2010	6	11	9	1	22	14	6
2011	9	2	8	6	14	9	6
2012	12	7	9	5	24	12	8
2013	22	8	8	4	24	41	7
Total	**89**	**47**	**90**	**44**	**210**	**178**	**37**

Appendix B - table 5: Annual composition per industry (PE)

IPOs per year	CG	F&RE	I&M	CS	IT	HC	E&U
2000	0	0	0	5	5	2	2
2001	1	0	0	0	1	1	1
2002	1	1	1	0	2	1	0
2003	1	0	1	1	3	0	0
2004	5	2	8	1	4	0	1
2005	5	3	5	0	4	3	1
2006	6	0	9	1	5	6	2
2007	2	4	7	4	8	3	1
2008	0	2	2	0	0	1	0
2009	6	0	5	0	1	6	0
2010	4	7	7	0	7	2	5
2011	5	2	4	0	3	1	2
2012	7	6	8	0	4	1	7
2013	18	5	6	1	4	2	6
Total	**61**	**32**	**63**	**13**	**51**	**29**	**28**

Appendix B - table 6: Annual composition per industry (VC)

IPOs per year	CG	F&RE	I&M	CS	IT	HC	E&U
2000	1	0	0	0	7	5	1
2001	0	0	0	0	0	0	0
2002	0	0	0	0	1	0	0
2003	1	1	0	0	4	2	0
2004	1	0	0	3	3	0	0
2005	0	0	0	1	1	0	0
2006	0	1	2	1	3	10	0
2007	0	0	2	2	16	8	0
2008	0	0	1	0	0	0	0
2009	0	0	0	0	1	2	0

2010	0	0	0	0	2	6	0
2011	0	0	0	0	4	2	1
2012	2	0	1	3	14	6	1
2013	4	0	2	1	14	20	0
Total	**9**	**2**	**8**	**11**	**70**	**61**	**3**

Appendix B - table 7: Annual composition per industry (CO)

IPOs per year	CG	F&RE	I&M	CS	IT	HC	E&U
2000	1	0	5	1	19	12	0
2001	0	0	0	0	0	0	0
2002	0	0	0	0	0	1	0
2003	1	0	0	1	2	1	0
2004	0	1	2	1	5	10	0
2005	1	1	2	0	5	3	0
2006	2	2	1	2	6	10	0
2007	3	1	1	3	16	12	1
2008	1	0	1	0	2	2	0
2009	1	0	1	1	2	1	0
2010	2	4	2	1	13	6	1
2011	4	0	4	6	7	6	3
2012	3	1	0	2	6	5	0
2013	0	3	0	2	6	19	1
Total	**19**	**13**	**19**	**20**	**89**	**88**	**6**

Appendix B - table 8: Avg. market cap per industry and sponsor type

Avg. market cap	NSB	SB	PE	VC	CO
CG	2091.97	1789.22	1814.36	1361.66	1911.05
F&RE	757.29	1214.66	1407.88	506.57	847.98
I&M	767.49	1076.09	1251.36	313.67	815.97
CS	1910.12	4438.15	1192.54	3308.53	7169.10
IT	1841.48	949.38	1060.71	947.75	886.87
HC	500.30	607.60	1502.68	435.88	431.66
E&U	958.01	1956.64	2357.64	578.53	774.41

Appendix C – Results

Appendix C – Table 1: Overall Fama-French abnormal returns [FFAR]

This table represents the 3-year regression-based results for the CTP approach of the whole sample. Notably, α represents the daily abnormal return achievable through the investment strategy of investing in the event portfolio. AR_{365} signifies the annualized abnormal return of the event portfolio. The statistical significance presented through the Student's t-test is exhibited through the use of asterisks where one asterisk (*) signifies significance on the 90%-confidence interval, two asterisks (**) stand for significance on the 95%-confidence range, and three asterisks (***) are presented for significance on the 99%-confidence interval. Both value-weighted and equally-weighted portfolios are presented. In this case, we used the portfolio return of every day using WLS estimation.

Regressions: $R_{pt} - R_{ft} = \alpha + \beta(R_{mt} - R_{ft}) + sSMB_t + hHML_t + \epsilon_t$,

	Value-weighted (All portfolios)		*Equally-weighted (All portfolios)*	
	Coefficient	***t*-stat**	**Coefficient**	***t*-stat**
α	0.0007	6.83***	-0.0001	-1.04
β	0.8467	108.76***	0.7804	144.83***
s	0.4847	28.91***	0.6811	57.97***
h	-0.2408	-16.04***	-0.1854	-17.41***
$\overline{R_2}$	0.76		0.86	
T	4277		4277	
N	1492		1492	
AR_{365}	0.2772		-0.0255	

Appendix C – Table 2: Sponsor-backed and non-sponsor backed FFARs

The table shows the 3-year CTP regression results for sponsor-backed and non-sponsor backed event portfolios. The results are based on equally-weighted portfolios. The regression is only based on days where the sample size consists of more than ten event returns. The same asterisks model is used for the designation of statistical significance. The regression was processed using the weighted least squares method.

Regressions: $R_{pt} - R_{ft} = \alpha + \beta(R_{mt} - R_{ft}) + sSMB_t + hHML_t + \epsilon_t$,

	Sponsor-backed		*Non-sponsor backed*	
	Coefficient	***t*-stat**	**Coefficient**	***t*-stat**
α	0.0000	-0.19	-0.0001	-0.96
β	0.8418	136.20***	0.7202	113.92***
s	0.6092	31.76***	0.4376	23.44***
h	-0.2257	-19.29***	-0.1942	-15.98***
$\overline{R_2}$	0.86		0.79	
T	4218		4196	

N	695	797
AR_{365}	0.0049	-0.0274

Appendix C – Table 4: Sponsor-backed FFARs per sponsor type and exit strategy

The table shows the 3-year CTP regression results for the different sub-sponsor types and the various exit strategies. The results are based on equally-weighted portfolios. The regression is only based on days where the sample size consists of more than ten event returns. The same asterisks model is used for the designation of statistical significance. The regression was processed using the weighted least squares method.

Regression: $R_{pt} - R_{ft} = \alpha + \beta(R_{mt} - R_{ft}) + sSMB_t + hHML_t + \epsilon_t$

Sponsor type

	$\boldsymbol{\alpha}$	$\boldsymbol{AR_{365}}$	$\boldsymbol{\beta}$	$\boldsymbol{s}$	$\boldsymbol{h}$	$\boldsymbol{\overline{R_2}}$	**T**	**N**
PE	0.0001 (2.03**)	0.0257	0.8237 (172.79***)	0.3687 (28.38***)	-0.1193 (-9.02***)	0.93	4044	277
VC	-0.0001 (-1.20)	-0.0552	0.8527 (79.40***)	0.8296 (27.34***)	-0.3312 (-16.90***)	0.71	3742	164
CO	-0.0001 (-1.06)	-0.0389	0.8521 (104.56***)	0.7355 (24.59***)	-0.2503 (-16.37***)	0.79	3988	254

Exit type

	$\boldsymbol{\alpha}$	$\boldsymbol{AR_{365}}$	$\boldsymbol{\beta}$	$\boldsymbol{s}$	$\boldsymbol{h}$	$\boldsymbol{\overline{R_2}}$	**T**	**N**
NEx	-0.0001 (-2.05**)	-0.0655	0.7951 (111.84***)	0.7125 (50.13***)	-0.1108 (-8.51***)	0.87	2983	209
PEx	-0.0008 (16.25***)	-0.4991	0.9530 (140.15***)	0.7924 (67.53***)	-0.7099 (-40.44***)	0.91	4000	395
CEx	-0.0005 (-2.49**)	-0.1608	0.9084 (63.75***)	0.9013 (29.44***)	-0.2928 (-10.93***)	0.68	2380	91

Appendix D – Interpretation

Sponsor-backed vs. non-sponsor backed IPOs across industries

"Do sponsor-backed firms outperform non-sponsored companies across all industries?"

In this part we address the discussion of our findings in regards to the different industry splits across the BHAR and CTP approaches. We compare our findings in the appendix, because we do not see any value-added in showing the results, as they show completely different patterns at times. They are not possible to fully explain in other terms than the different nature of the approaches. We start the comparison of the SB results.

Table B1: Comparison of annualized abnormal returns for SB per industry

The table shows the comparison of annualized abnormal returns between the two approaches of BHAR and CTP per industry. For BHARs, we show the 3-year and 5-year time window. The same asterisks model is used for the designation of statistical significance for the respective methods.

	3-year $ABHAR_{365}$	**5-year $ABHAR_{365}$**	**CTP AR_{365}**
CG	-11.18%**	-6.42%	12.25%***
F&RE	-1.67%	-2.40%	5.30%
I&M	-1.44%	-2.88%	9.23%***
CS	-7.53%	-3.61%	-10.75%
IT	1.65%	1.66%	-3.36%
HC	-4.19%	-3.77%	-0.80%
E&U	6.23%	2.81%	7.46%

In general, the results seem to show stronger performance deduced from the CTP approach. Nonetheless, we do not see a certain pattern for one or the other approach. We introduce first the discussion with the significant results across the approaches, which is the CG sector. Here it comes to light that the two approaches show relatively large abnormal annualized returns. However, these results ave entirely different signs. Firstly, these differences yield form the use of a benchmark in the BHAR approach, but furthermore, we do not see any other driver that would induce these differences. It seems that E&U (CS) shows in all three approaches positive (negative) non-significant values. All other sectors show substantial differences. One should keep in mind that the sectors CG, I&M and E&U are practically PE-backed sectors, when looking at the overall numbers of IPOs in the different sectors.

In terms of operating profitability, it does not seem that it is correlated with the overall stock performance of a sector. E&U showed lower EBITDA margins than the benchmark, but ultimately outperforms the benchmark in the BHAR approach, while HC and F&RE show also lower profitability but underperform the benchmark.

On the other hand, CS is more profitable in comparison to the benchmark, but underperforms as well. This shows that there are no clear patterns, whether profitability has a consistent effect on the results.

In general, as stated before, the leverage of newly issued firms (SB or NSB) are higher than the leverage of the benchmark, with one exceptionin F&RE. When comparing the annualized abnormal returns with the leverage table, we find that especially highly levered industries have the tendency to have better performance. CTP has without exception positive annualized abnormal returns for CG, I&M and E&U, which are the industries with the 3 highest leverage levels. However, the BHAR values do not confirm this finding. Therefore, it is difficult to argue for a consistent effect of leverage on the abnormal return in regard to the SB industry splits.

Regarding the significant industry performance in I&M and CG, one can argue that this is an extension of the positive information signaling retrieved from the PE-backing. As stated, these to industries are almost entirely dominated by PE firms in terms of sponsorship. However, this argument is strongly weakened by the negative abnormal returns in CG in the 3-year annualized BHARs.

Table B2: Comparison of annualized abnormal returns for NSB per industry

The table shows the comparison of annualized abnormal returns between the two approaches of BHAR and CTP per industry. For BHARs, we show the 3-year and 5-year time window. The same asterisks model is used for the designation of statistical significance for the respective methods.

	3-year $ABHAR_{365}$	**5-year $ABHAR_{365}$**	**CTP AR_{365}**
CG	-11.24%	-2.46%	-0.79%
F&RE	1.25%	-0.78%	8.53%***
I&M	-4.00%	-11.89%	6.96%
CS	-15.00%***	-16.99%***	-40.23%***
IT	-0.19%	-3.38%	-12.67%*
HC	-13.63%**	-7.29%	0.65%
E&U	8.12%**	2.66%	13.25%**

Table B2 shows a different picture than table B1, when comparing the different industries. The two significant industries in this case are CS and E&U.

Interestingly, in terms of operating profitability, it shows that EBITDA margins do not have necessarily a positive correlation with the overall stock performance and rather implies a negative correlation. E&U has a 25% lower profitability than the benchmark in the BHAR case. Nonetheless, all the approaches show even

significant positive returns. On the other hand, CS has a much higher operating profitability than the benchmark and despite this it underperforms significantly. The same contradicting patterns can be observed in other sectors and are also mentioned in the SB section.

The other factor we look at is leverage yet again. As seen in the SB per industry discussion, we continue the arguments stated that it is not possible to argue that leverage has a consistently measurable impact on the abnormal returns per industry. Especially in the CTP approach we find high positive and negative abnormal returns in sectors with a low leverage level, as well as positive abnormal returns in sectors with high leverage levels. Therefore, the unstructured picture of the influence of leverage remains.

The topic remains vague in our point of view, how information signaling plays a role across industries, as we find some significant effects, but we cannot attribute it to any drivers with certainty. One weak argument is that investors might see signals of IPO in different sectors with different strengths. Generally, IPOs in CS are seen very negatively by investors, as they greatly and significantly underperform in all approaches despite higher EBITDA margins. This discrepancy shows that investors do not trust “new players” in the CS industry. Reasons could be that new companies do not survive the competition for long, because of strong competition and the lack in crucial size to survive.