STANFORD BUSINESS GRADUATE SCHOOL OF

CASE: E-605
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2016 SEARCH FUND STUDY: SELECTED OBSERVATIONS[1]

Since 1996, the Center for Entrepreneurial Studies (CES) at the Stanford Graduate School of Business (GSB) has conducted a series of studies on the performance of search funds. These studies endeavor to gather data and gain insight into all known search funds.[2] The studies aggregate the characteristics of search funds, present their principals' backgrounds, and evaluate the investment returns generated by first-time search funds to their original investors.[3] The data also tracks changes in the characteristics of search fund entrepreneurs and the performance of their funds over time. This report includes data as of December 31, 2015, updating the previous study with search fund activity during 2014 and 2015. For this study, using conservative assumptions, the aggregate pre-tax internal rate of return of the search fund asset class through year-end 2015 is 36.7 percent, and the aggregate pre-tax return on invested capital is 8.4x.

[1] This study includes data reported as of December 31, 2015. Past versions of this study were named by the date of the most recent data, whereas this version is named for the year published.

[2] "Known search funds" refers to those of which the CES is aware. Despite CES's efforts to identify all search funds, and the broad network of search fund principals, investors, and advisors that share searcher data with the CES, it is possible that search funds have existed or do exist that are not known to the CES.

[3] In previous years, an original investor was defined as an investor who contributed capital to the initial search fund raise, regardless of whether or not they contributed to the acquisition capital. In this year's study, an original investor is defined as one who contributed capital to the initial search fund raise and the initial acquisition capital.

Susan Pohlmeyer (MBA 2015) and Sara Rosenthal (MBA 2004) prepared this study under the direction of Peter Kelly, Lecturer in Strategic Management, with oversight from David Dodson, Lecturer in Strategic Management, and H. Irving Grousbeck, MBA Class of 1980 Consulting Professor of Management.

The CES would like to thank the searchers who elected to participate in this study and to the search fund investor community for their valuable contributions as well. Additional thanks go to the pioneers and authors of previous versions: Doug Wells (1996 study), Josh Hannah (1998 study), Chris Flanagan (2001 study), Mu Y. Li (2003 study), Mike Harkey (2005 study), Sean Harrington (2007 study), Aimee LaFont Leifer and Tjarko Leifer (2009 study), Arar Han and Sara Rosenthal (2011 study), Jason Luther and Sara Rosenthal (2013 study), and Lisa Sweeney (oversight on 2009 and 2011 studies).

For those less familiar with this type of entrepreneurship, the opening sections of this case study describe in detail what a search fund is and how search capital is used.[4] Those already familiar with search funds may proceed to the section on "Survey Results: Fundraising, Search, and Acquisition" on page five.

WHAT IS A SEARCH FUND?

A search fund is a pool of capital raised to support the efforts of an entrepreneur, or a pair of entrepreneurs, in locating and acquiring a privately held company for the purpose of operating and growing it. The lifecycle of a search fund typically includes four stages:

- **Fundraising**: The *initial search capital* is raised to finance the search stage—the identification, evaluation, and negotiation of an acquisition. To raise initial search capital, principals often need to tap a wide network of potential investors, including friends and family, business associates, business school faculty, angel investors, business owners and executives, and institutional search fund investors.

- **Search and acquisition**: There are multiple steps in this stage: generating deal flow, screening potential candidates, assessing seller interest, evaluating and performing due diligence on the target company, negotiating the terms of the acquisition, raising debt and equity capital, and closing the deal. When a target is identified, contributors of search capital are given the right of first refusal on their pro-rata share of new *acquisition capital*. Initial search capital is commonly stepped up by a certain percentage (e.g., 50 percent) in the acquisition round, whether or not the search capital investors decide to participate. In addition to follow-on investment, acquisition capital can come from a combination of other sources: seller's debt, bank loans, and equity financing from new investors. Investor debt, commonly in the form of subordinated debt, may also be part of the capital structure.

- **Operation**: While completing the acquisition, principals will recruit a board of directors for the company, which often includes substantial representation from the initial search fund investors. In the first 6 to 18 months after the acquisition, principals typically make few radical changes, opting instead to learn the business and gain management experience. After becoming adept at operating the business, principals then begin to make changes to improve and further grow the business.

- **Exit**: Most search funds are established with a long-term outlook, often no less than five to seven years. A typical search fund entrepreneur may spend on average six years from the beginning of the search to an exit. Liquidity events for investors and principals can occur in a number of ways, similar to exit opportunities for equity holders in a privately held company.

Since the first known search fund was formed in 1983, aspiring entrepreneurs have been drawn to search funds for two main reasons. First, they offer relatively inexperienced professionals with limited capital resources a direct path to owning and managing a small business. Second, search funds have generated significant financial returns for a small but growing number of principals.

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[4] For a more in-depth explanation of the search fund model, readers may request the Search Fund Primer from the Stanford GSB's Center for Entrepreneurial Studies: http://www.gsb.stanford.edu/faculty-research/centers-initiatives/ces/research/search-funds/primer.

Although the search fund model is growing in popularity, relatively few recent business school graduates raise search funds each year as compared to those who pursue more traditional career paths. The narrow appeal may be explained in part by the non-traditional financial outlook for search fund principals. While many post-MBA compensation packages include a high starting salary and a signing bonus, the principal of a search fund commands a relatively lower income through much of the process, with the upside, if achieved, typically occurring upon exit several years later. The uncertain nature of the location and the industry of the ultimate acquisition are other factors that likely play into an individual's decision to pursue the search fund model.

SEARCH FUND LIFECYCLE

The following is an overview of the four stages in the search fund lifecycle. A detailed analysis of principal demographics and fund performance is found in the "Survey Results: Fundraising, Search, and Acquisition" and "Financial Returns" sections, beginning on page five and page ten, respectively.

Stage One: Fundraising

Principals begin the process of raising initial search capital by writing a formal private placement memorandum. This document can serve as an initial point of contact with potential investors and can signal the principals' commitment and professionalism. The memorandum typically includes the following sections:

- Executive summary and overview of details specific to this search fund
- Targeted industries
- Summary of personal backgrounds of principal(s) and allocation of future responsibilities
- List of specific criteria that will be used in the acquisition search and screening process
- Detailed timeline with expected completion dates for specific activities
- Explanation of financing sought and the structure of the search fund vehicle
- Detailed breakdown of expected use of proceeds
- Outline of potential exit alternatives

Given that most principals lack significant management experience, they commonly look for investors who also can serve as high-quality advisors. The best investors offer expert guidance, assist in generating deal flow, and provide leverage with lawyers, accountants, and bankers. In many cases, the investors are drawn to search funds not only by the potential financial returns of an investment, but also by the psychological rewards of advising and mentoring young entrepreneurs.

In a typical search fund, investors purchase one or several units of initial search capital, at about $30,000 to $40,000 per unit. A community of institutional investors and funds has grown up around the search fund investment vehicle, helping to facilitate principals' fundraising efforts. In recent years, some individual investors have purchased a half unit of initial search capital, effectively increasing the number of investors per fund. As of this most recent study, the median number of investors in a fund was 15.

Contributors to initial search capital receive the right, but not the obligation, to participate in any subsequent round of acquisition capital. As compensation for taking on early-stage risk and the time value of capital, original investors receive a percentage step up on all initial search capital, regardless of whether or not they participate in the acquisition round. For example, assuming an investor were to contribute $30,000 to the initial search capital and the search was structured with a 1.5x step up, the investor's interest would be worth $45,000 of equity in any acquired company.

Stage Two: Search and Acquisition

Creating a stream of potential deals can be difficult for principals, many of whom have little buyout experience. Principals typically focus their search by industry, although many also review deals geographically and opportunistically (e.g., deals sourced from third parties such as brokers, bankers, and professionals who may be outside the principal's primary scopes of interest). Whereas an industry focus may provide faster results, having a geographic focus may help a principal home in more quickly on an acquisition target by narrowing the search area. Applying geographic limits to opportunities, however, may be imprudent given that 27 percent of all funds raised failed to make an acquisition (not including those still searching or that deviated from the traditional model). Thus, potential investors may view geographic or other limits unfavorably.

Industry-based searches generally target two to four industries to start. Searching by industry can help principals build useful knowledge as well as credibility with sellers and intermediaries, and can allow principals to screen potential acquisitions efficiently. Conversely, principals run the risk of spending too much time trying to identify the perfect industry.

By adhering to a strict list of acquisition guidelines, search fund principals have been able to greatly reduce the risks inherent in investing in individuals with little operating experience. To further mitigate operating and investment risk, search fund principals generally target industries that have high growth and high margins. They also tend to favor stable industries, such as those not subject to rapid technology change, and those that are fairly easy to understand. Some might target fragmented industries, as they may offer enhanced opportunities for growth through acquisition, or product or market extension.

Within the preferred industries, companies are targeted based on their sustainable market position, history of positive, stable cash flows, and opportunities for growth and improvement. Search fund principals and their investors tend to prefer healthy, profitable companies with a proven second-tier management team versus turnaround situations. Preferably, the acquired company provides adequate cash flow and be without high debt service, so that the short-term survival of the company does not rely on immediate, significant improvement in company performance.

If the target is a sustainable business with modest growth, its purchase price will often be a multiple equivalent of four to eight times EBITDA.[5] Purchase prices generally range from $5 million to $20 million. The equity portion of the acquisition tends to range between $1 million and $10 million, which typically represents 40 to 75 percent of the total purchase price. However, equity has historically accounted for as little as 10 percent and as much as 100 percent of the total purchase price.

Searching for a target acquisition and completing a transaction is a time-consuming process. The

[5] EBITDA: Earnings Before Interest, Taxes, Depreciation, and Amortization.

general economic environment, industry characteristics, sellers' willingness to sell, and regulatory issues are among the factors that can prolong or derail the process. Depending on the complexity of the deal, four to six months, or more, can elapse between a signed letter of intent and the close of deal. If the initial search capital is exhausted before a target can be identified, principals may choose either to close the fund or to raise additional capital to continue the search.

Stages Three and Four: Operation and Exit

After a company is purchased, search fund principals assume the role of top management and may create value through one or more ways: revenue growth, improvements in operating quality and efficiency, appropriate use of leverage, and product or geographic expansion. Revenue growth may result from internal growth initiatives, pricing improvements, or scale attained from acquiring similar businesses. If additional funds are required for acquisitions or other growth initiatives, either current or new investors may participate. Before significant additional acquisitions are pursued, investors usually expect one to two years of successfully operating the existing company.

If principals successfully execute a growth plan, the company can be expected to gain value, even if sold at the same multiple at which it was purchased. Sales multiples can increase if the new CEO builds a professional management team and improves financial reporting, allowing the eventual sale to private equity firms. In addition to revenue growth, improvements in operating efficiency can make a business more profitable. If an acquired company is leveraged, the equity in the business grows as debt is repaid.

In addition to annual salary and other compensation, successful searchers usually earn a material percentage of the upside of the investment. This upside is almost always structured to vest upon achievement of specific hurdles. A common vesting schedule vests one-third when the acquisition closes, one-third over time, and one-third upon hitting defined performance targets.[6]

Principals evaluate exit alternatives throughout the life of the business: companies can be sold in part or in whole; investor equity may be sold to other investors or bought by the company; or dividends may be issued.

SURVEY RESULTS: FUNDRAISING, SEARCH, AND ACQUISITION

The demographic sample in this study includes 258 first-time search funds formed since 1983. Keeping with previous studies, we excluded funds raised by principals who had previously raised a search fund.[7] The focus of this study is to understand the returns from investing with a new entrepreneur in an industry in which she or he has limited prior experience.

For each search fund, we collected information on the demographic characteristics of the principal(s), as well as key metrics relating to fundraising, the acquisition, company operations, and liquidity events. We have made every effort to include all known search funds.

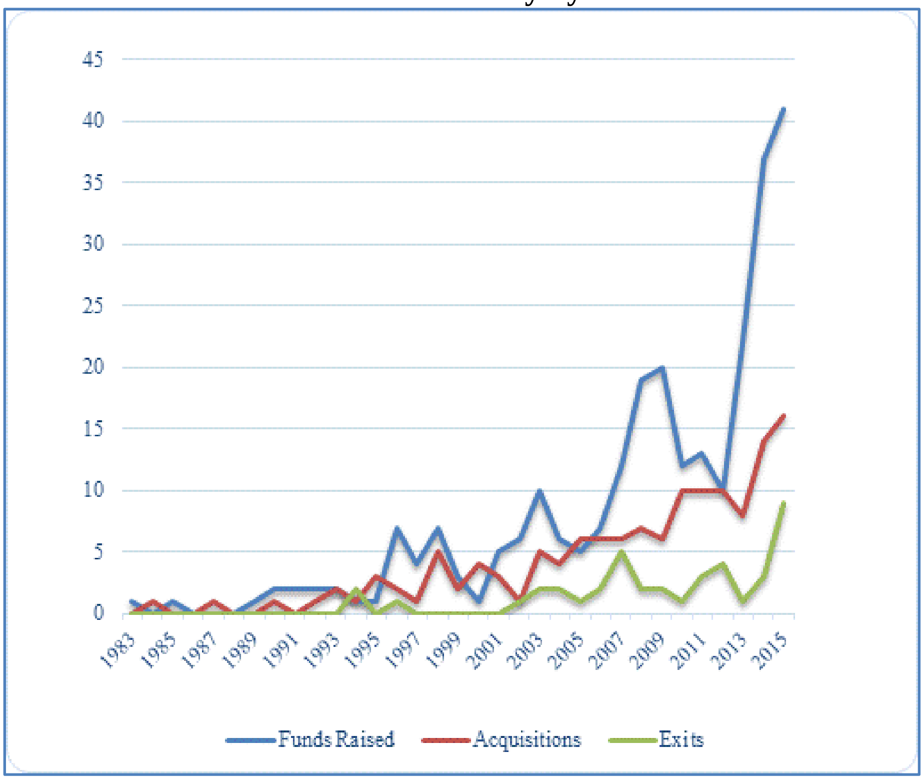
Many more search funds have been raised in recent years than in the past. The first time 10 or

[6] In some search funds, principals' equity is subordinate to investors' preferred shares. As such, principals would only earn equity once investors have been paid back their original capital, possibly with a preferred return.

[7] "Serial" search fund entrepreneurs have a track record that implies different fundraising techniques, management and operational capabilities, and an established network of investors, intermediaries, and sellers.

more funds were raised in one year was 2003. Since 2007, 10 or more funds have been raised each year, with 2014 and 2015 reaching peak levels of fund activity with 38 and 43 new funds, respectively.[8] Similarly, 2014 and 2015 saw a jump in acquisitions with 14 and 16, respectively, up from the previous high of 10 in 2010, 2011, and 2012. Exits have been rarer in any given year, likely a result of the relatively recent emergence of the search fund model and the historical five- to seven-year lag between acquisition and exit. As funds mature, the industry will experience more exits, as demonstrated in 2015 by a record nine exits. **Graph 1** shows fund activity by year.

Graph 1
Search Fund Activity by Year*

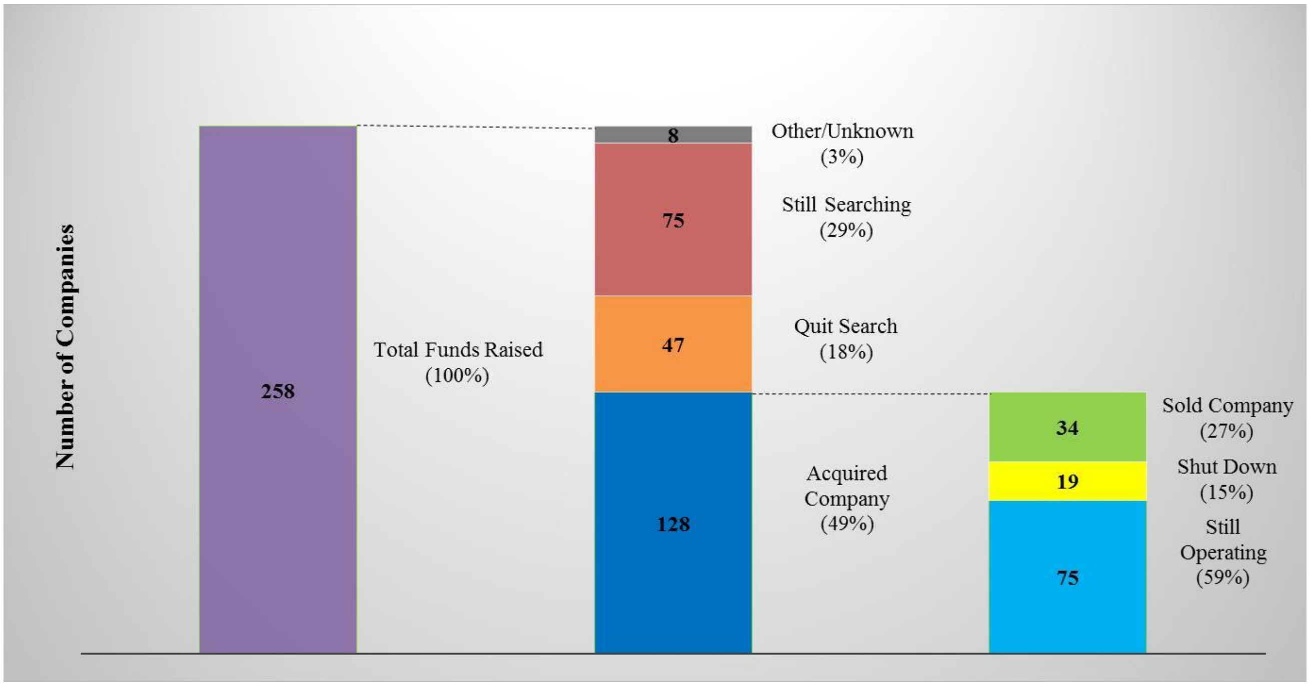


*Note: Data through 2009 includes international search funds.
Source: GSB search fund surveys, data from previous GSB search fund studies.

As of December 2015, 75 principals or partnerships were looking for a company to buy. Since 1983, a total of 47 had concluded without an acquisition and 8 had either deviated from the search fund model or had an unknown status.[9] An additional 128 funds had acquired companies, 75 of which were still in operation. Of the balance no longer operating, 34 exited the business for a gain, and 19 exited with a loss of capital.[10] **Graph 2** shows the distribution of funds by status.

[8] The count of search funds does not include search funds still actively fundraising. Of the new search funds identified in this year's study, an estimated 15 to 20 were still actively fundraising as of December 31, 2015 (fundraising status of some funds was unclear).
[9] The "Other" category has been expanded to include funds for which the status is unknown. As with previous studies, this category includes search funds that later deviated from the model to pursue a materially different end, such as putting the initial capital toward a start-up business or purchasing a portfolio of companies.
[10] "Acquired and shut down" implies that the full amount of invested capital was not returned to investors at exit.

Graph 2
Distribution of All Search Funds by Status



Source: GSB search fund surveys, data from previous GSB search fund studies.

International Search Funds

In 2011, the Stanford GSB partnered with the IESE Business School in Barcelona, Spain, to conduct a separate analysis on the growing cohort of international funds located in Latin America, Europe, Asia and Africa.[11] International searchers remain part of the historical record retained herein, but since 2010, the Stanford GSB's Search Fund Study includes U.S. domestic funds and Canadian funds only.

As of December 2015, IESE identified 45 first-time international search funds. More than three-quarters of these search funds were formed after 2007, with the earliest formed in 1992. Of these 45 search funds, 12 were in the United Kingdom, 9 were in Continental Europe, 11 were in Mexico, 7 were in other Latin American countries, 3 were in Asia, 2 were in the Middle East, and 1 was in Africa.

As of the time of this study, 13 international search funds were searching for an acquisition, 13 had acquired and were operating a company, 6 had deviated from the search fund model, and 13 were classified as "terminal." Of those 13 terminal funds, 7 had acquired and exited a business for a positive return to investors, 2 had acquired and then shut down a company, and 4 had ended

[11] http://www.iese.edu/research/pdfs/ST-0415-E.pdf

their search without making an acquisition. New funds and additional acquisitions in 2016 have been noted but not included in this study for consistency.

Profile of Principals

As of the end of 2015, most search fund entrepreneurs were relatively young, recent business school graduates. Approximately one-third of the principals in the 81 new U.S. and Canadian search funds raised in 2014 and 2015 had graduated from an MBA program within a year of raising their fund, and 73 percent were under 36 years old. The most recent study also reported five new female searchers, a small number but a significant trend. See **Exhibit 1** for more information on the profiles of search fund principals.

Search fund principals come from diverse backgrounds, although individuals with a private equity background represent the largest cohort (29 percent). General/line management, management consulting, investment banking, and "other" represented the four next most common professional backgrounds for searchers. Interestingly, those with a military background have jumped to nine percent of all new searchers. See **Exhibit 2** for more information on search fund principals' professional backgrounds.

Fundraising and Search

The number of funds headed by one principal rather than two has fluctuated from study to study, and single searchers raised 73 percent of funds in the last two years (see later section on page 15 on the implications of partnership structure on financial returns). The median amount of initial search capital raised by the 81 new search funds in this study was $420,000, approximately the same as reported in the 2013 study. The median capital raised per principal (rather than per fund) has risen steadily over the last several years, from $262,500 in the 2009 study to $390,000 in this year's study. The median number of search fund investors per fund stayed consistent at 15, while the median number of months to raise a fund decreased from 4.1 to 3.0. See **Exhibit 3A** for additional comparisons of search fund metrics.

Historically, search funds tended to target services firms over other types, perhaps due to the fact that the best-known and most successful search funds had acquired service-oriented firms, and new principals may have sought to model their efforts on these exemplary cases.

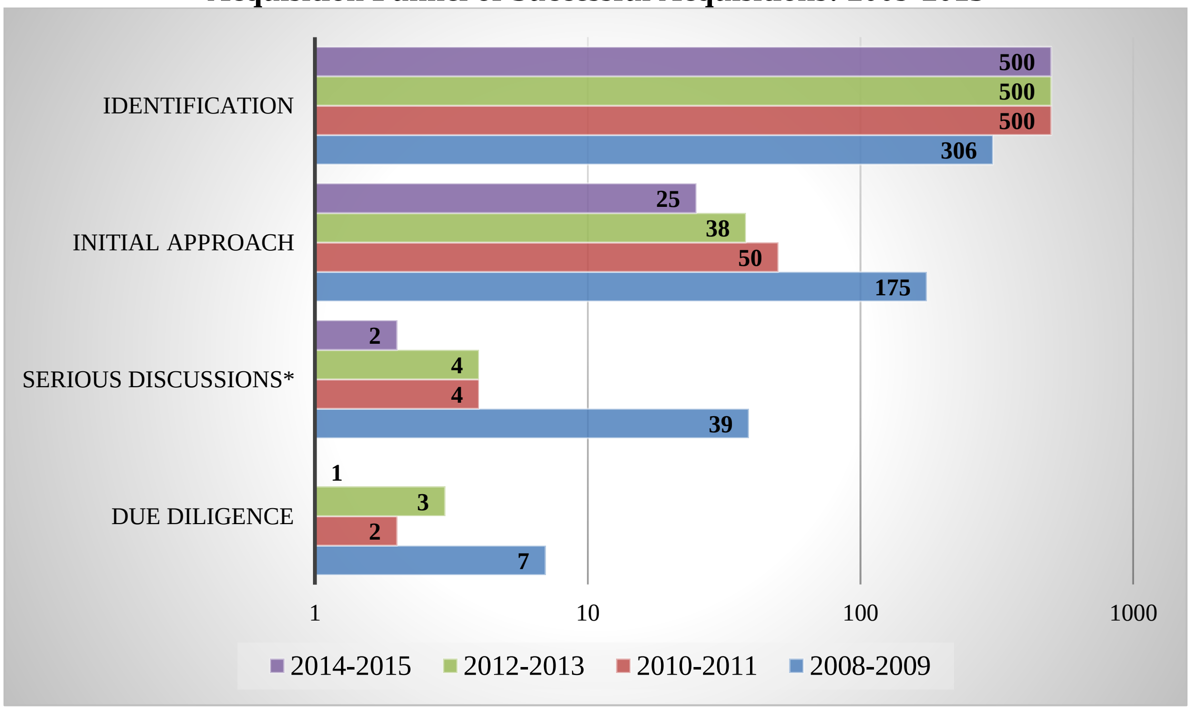
The 2011 survey added three new industry sectors that had attracted notable activity in recent years: Internet/information technology (IT), health care, and education. After services, these industries represented the most targeted industries in both the 2011 and 2013 studies. Given the proliferation and diversification of technology companies over the last decade, this study breaks down the technology category even further to provide a better view of how searchers are targeting this sector. See **Exhibits 3B and 3C** for industry-specific data.

The Acquisition

Acquisition Funnel

Anecdotally, the most desirable search fund target acquisitions are larger, faster-growing companies with better EBITDA margins. Therefore, it is the primary work of principals during the search phase to discover fruitful sources of such targets. Surveys from the past several years, including the 2015 study, suggest that search fund principals who completed an acquisition identified a larger number of business opportunities than their predecessors from the 2009 study, but engaged in fewer initial and serious discussion leading up to a due diligence effort. **Graph 3** shows the acquisition funnel from the past four studies.

Graph 3
Acquisition Funnel of Successful Acquisitions: 2009-2015



* "Serious discussions" were not further defined in the 2009 study and defined as "Number of Companies under Letter of Intent (LOI)" in the 2011, 2013 and 2015 survey, which may account for the delta between 2009 and 2011-2015.

Note: The numbers from each respective year reflect the median number reported by survey respondents who answered this question.

Source: GSB search fund surveys, data from previous search fund studies.

It is unclear why the acquisition funnel has shifted in this manner from 2009, but the anecdotal and survey data seem to indicate a trend towards searchers using business brokers to source deals, which increased the number of companies reviewed but not approached by search fund principals. "Self-sourcing" remains the predominant source of deal flow, which typically involves contacting businesses directly to learn whether they may be an acquisition candidate. Service providers (e.g., tax accountants, attorneys, etc.) and investment banks also serve as a reliable source of deal flow for searchers since their role often makes them privy to opportunities prior to the open market.

Acquisition Metrics

Despite reviewing 500 or even 1,000 potential acquisition prospects, historically 27 percent of all search funds (which does not include those that have deviated from the model) fold without making an acquisition. Of those that successfully completed an acquisition, 25 percent of companies were purchased for \$4 million to \$8 million, 24 percent for \$8 million to \$12 million, and 39 percent for \$12 million or more. At \$71 million, the size of the largest acquisition in the 2011 study continues to be greater than in all other years, with the next closest being a $37.5 million purchase in 2014. Acquisitions consummated since the 2013 study had a median purchase price of $12 million, a number which, not surprisingly, has been gradually increasing over the years.

Since 1984, 98 percent of the companies acquired via a search fund acquisition had positive EBITDA margins at the time of acquisition.[12] The median search fund acquisition has the following characteristics: $7.1 million in revenues, EBITDA margin of 22.9 percent, purchase price to EBITDA multiple of 5.3x, trailing annual EBITDA growth rate of 12 percent, and 45 employees. See **Exhibits 4 and 5** for more search fund acquisition statistics.

Board of Directors

In this most recent study, searchers who acquired a company were asked to provide information about their board composition. Seventy-seven searchers provided professional background, years of experience, and a subjective score of board members' contributions, for 289 total board members in total.[13] Most board members, 58 percent, were search fund investors, followed by operators in related industries and other types of investors, both at 11 percent. Board members had a median of 20 years of experience, and almost three-quarters had served on at least two other boards.

Overall, searchers reported relatively high effectiveness for their board members, with a median score of 8. Variation in board member performance, subjectively rated by searchers, was seen once the scores were broken down by professional background. Perhaps not surprisingly, operators in related industries received the highest marks with an overall score of 8.3, while the seller of the acquired company received the lowest with 5.4 (though the n value for sellers was low at 21 so the data should be viewed as preliminary). While all groups, aside from "Other," had greater than 20 years of professional experience, on average, sellers were the least likely to have served on other boards, which may have contributed in part to their lower scores.

When looking at search fund returns relative to the makeup of their boards, the data was not conclusive, as patterns were weak. However, the data seem to suggest that a diversity of backgrounds is correlated with higher returns as is, unsurprisingly, the presence of at least one operator from a related industry. Of the search funds that provided board data, only one fund in the top quartile consisted entirely of search fund investors. Additionally, 38 percent of funds returning greater than 5x had at least one operator from a related industry on their board, while this was true for only 22 percent of funds returning less than 1x. Of course there are many types of "financial" and "operating" experience represented, including venture investors, hedge fund managers, search fund experts, sales executives of $1 billion companies, CFOs of midsized companies and CEOs of previous search fund companies (perhaps the most sought after). See **Exhibit 6** for board member data.

FINANCIAL RETURNS

This study calculated financial returns from the perspective of investors *of initial search capital,* that is, it measured returns based on infusions from and distributions to the *original search fund*

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[12] Since 1984, 136 companies were acquired via a search fund acquisition. The CES has information on 128 of these companies.

[13] Searchers were asked to rate their board members' performance in terms of "effectiveness" on a scale of 1 to 10, with 10 being the highest.

investors who invested in *both the search and acquisition phases of the deal*. Unlike the methodology in previous studies, the performance calculation for this year's study excluded any follow-on financing events where possible.[14] Two measures of return were used: return on investment (ROI)[15] and internal rate of return (IRR).[16] Both ROI and IRR were calculated on a cash flow basis, including both equity and investor debt that was invested as initial search capital and as acquisition capital. Unsuccessful searches were included, along with both operating and exited companies, in prior years' calculations.

As in prior years' studies, the timing of the cash flows for each search fund was adjusted to a common start date.[17] All returns were calculated on a pre-tax basis using data provided by the principals of the funds or by their search fund investors. We assumed that the searchers' share of equity had fully vested,[18] that all external debt was repaid, and that funds were distributed in proportion to the investors' share of equity and subordinated debt.

Of the 175 funds eligible for inclusion in this year's study (i.e., they raised a search fund and either acquired a company or shut down the fund), 142 were included in the calculations of returns.[19] This number includes 47 unsuccessful searches and 95 search funds that completed acquisitions. The calculation of enterprise value was straightforward for the 53 terminal funds included; the capital table as of the terminal event (e.g., closure, exit, sale, recapitalization, etc.) was applied. For the remaining 42 funds that were operating companies at the time of the study, the enterprise value as of December 31, 2015, was based on principals' estimates of market value.

While we made great effort to provide accurate returns, precise information for all contributions to and distributions from each fund was at times difficult to obtain, especially for funds with long operating histories and complex capital structures. Readers should keep this in mind when considering the ROI and IRR figures presented in this study.

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[14] While follow-on financings are an important part of numerous search fund deals, the decision to exclude follow-on financings in the performance calculations reflects an effort to simplify the data collection process for searchers—with the goal of increasing data integrity and accuracy.

[15] Return on investment (ROI) represents the multiple of initial capital invested that is returned to investors (also known as MOIC)—i.e., if the group of initial investors invested $5 million and received back $10 million, this would be described as a 2.0x ROI. A return of $1 million would be a 0.2x ROI and so forth. A complete loss of capital is an ROI of 0.0x.

[16] Internal rate of return (IRR) represents the annual compounding rate derived from the adjusted dates and actual amounts of search and acquisition capital invested and returned by an investment. For investments returning nothing, or only a fraction of the investors' original investment, IRR is not a meaningful metric.

[17] The IRR for search funds as an asset class was calculated by shifting the dates of all cash flows such that all funds appear to have raised initial search capital on the same "day one." Subsequent infusions from, and distributions to, search fund investors occurred at the same intervals reported by each fund. Thus, the asset class IRR is a hypothetical return an investor would have realized if all funds had started at the same time and the investor had participated in each fund in proportion to the amount of capital raised by each fund.

[18] This assumption gives investors a more conservative IRR since funds typically include both time-based vesting and performance hurdle rates that must be exceeded before the searchers vest at least a portion of their equity. Also, most investments in the search phase include downside protection for investors in the form of preferred returns or liquidity preference.

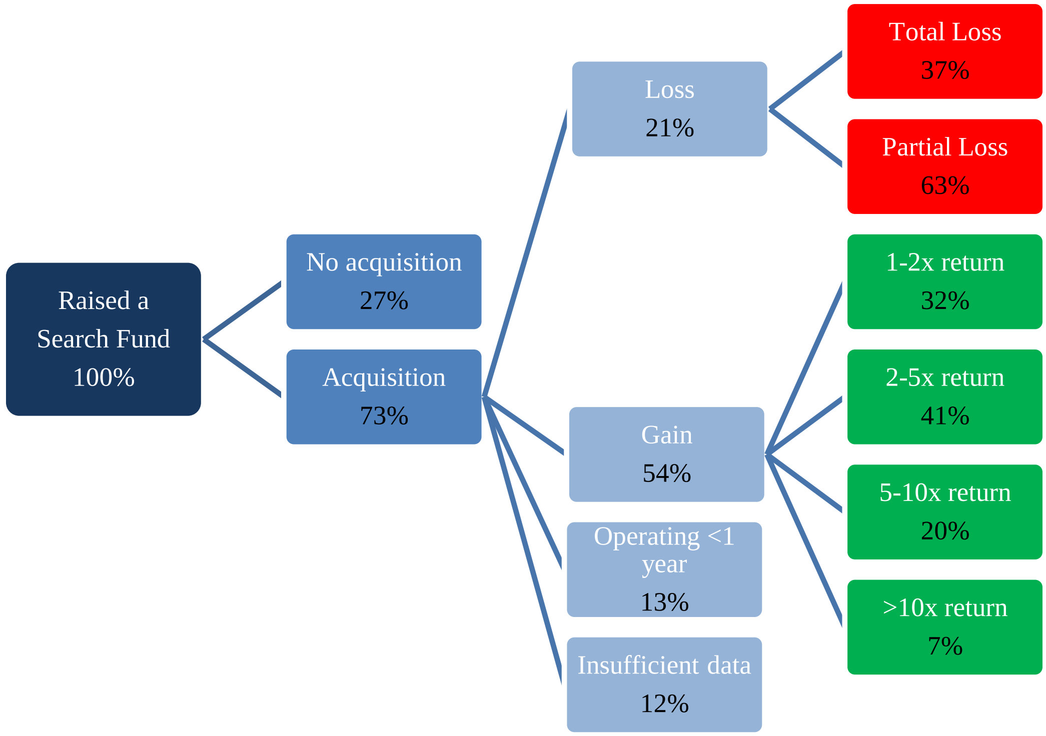
[19] Sixteen funds were removed from the sample because the principals had operated the acquisition for less than one year, and 17 were removed due to insufficient data, unresponsiveness, deviation from the search fund model, or personnel change resulting in the principals' exits. The impact of removing these older funds is slightly, but not significantly, beneficial to the overall calculations of returns.

Summary of Performance

As an asset class, search funds have achieved an ROI of 8.4x and an IRR of 36.7 percent. When excluding unsuccessful searches in order to further examine the much larger acquisition investment, the overall asset class MOIC increases to 8.5x and the effect on overall IRR is negligible. The median fund returned 1.0x of initial search fund investors' capital, whereas the top-performing fund returned well over 200x. Excluding search funds that closed without an acquisition, the median return on all search funds that have completed an acquisition is 2.3x ROI. The overall asset class ROI, which declined from 10.0x in 2013 to 8.3x in 2015, is partly due to recent company valuations of less than 10x, and partly due to the change in calculation methodology for the 2015 study as described at the start of this section. Since the 2001 study, the aggregate IRR of all search funds (which included both unsuccessful searches and those that completed an acquisition) has tended to fluctuate between 32 and 38 percent, with the exception of the 2007 study, where IRR rose to 52 percent. (See **Exhibits 7 and 8** for more ROI and IRR information, respectively.)

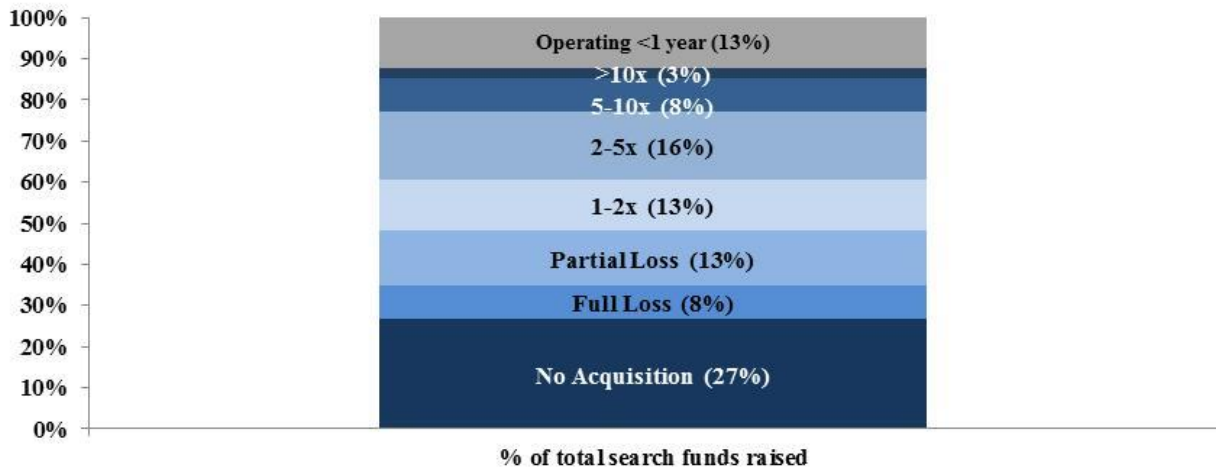
The performance of individual search funds has varied widely over the years. Distribution by ROI ranges from greater than 10x for highly successful companies to total loss of capital. Distribution by IRR ranges from greater than 100 percent to negative; in cases of a total loss of capital, IRR cannot be calculated. (**Graphs 4a** and **4b** reflect the percentage of search funds in each phase of the search fund life cycle, as well as return characteristics for terminal funds. For a distribution of funds by ROI, see **Exhibit 9**; for a histogram by IRR, see **Exhibit 10**.)

Graph 4a
Percentage of Search Funds in each Phase of the Search Fund Life Cycle[20]



Source: GSB search fund surveys, data from previous GSB search fund studies.

Graph 4b
Percentage of Search Funds in each Phase of the Search Fund Life Cycle[21]

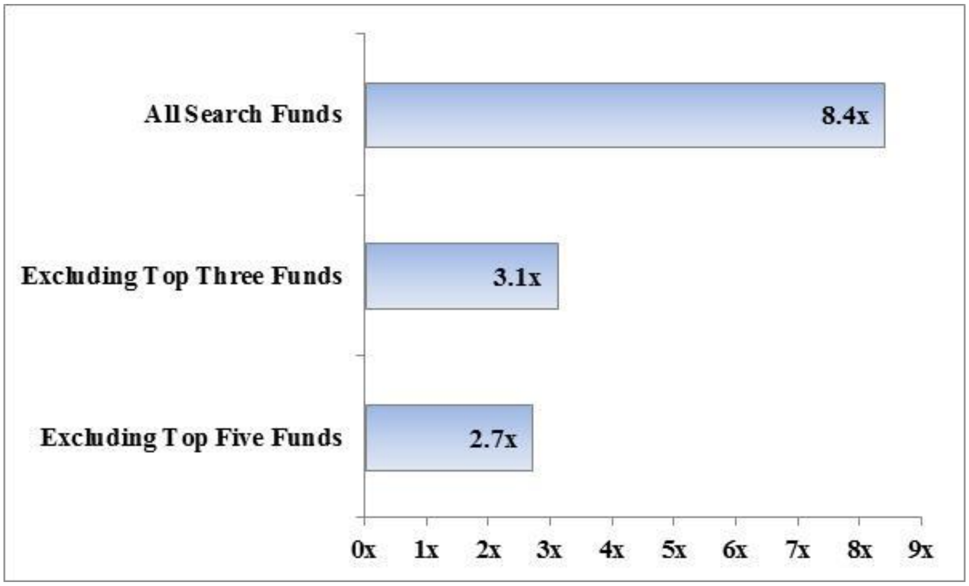


Source: GSB search fund surveys, data from previous GSB search fund studies.

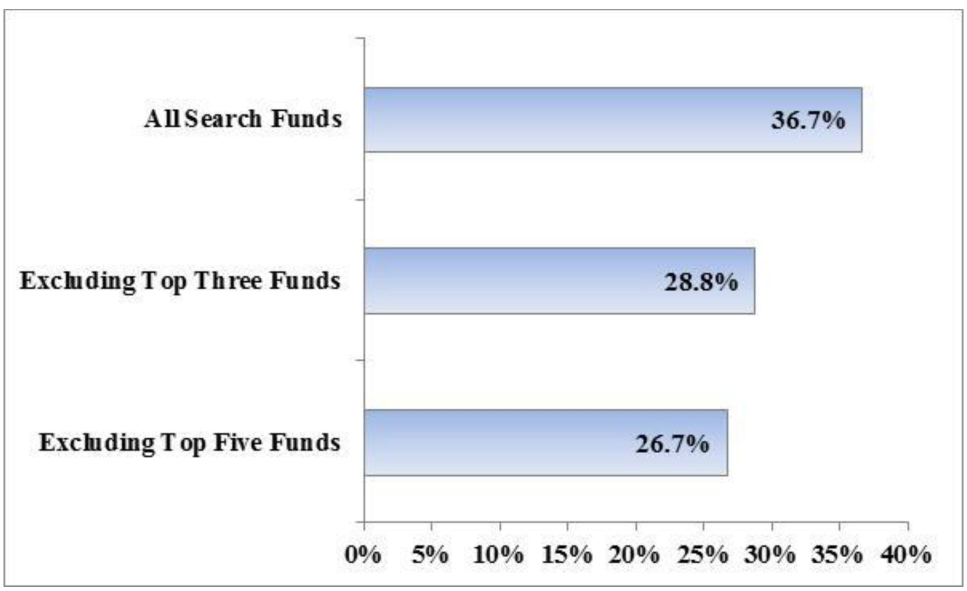
[20] Percentages may not add to 100 percent due to rounding.
[21] Percentages may not add to 100 percent due to rounding. Data do not include search funds still actively searching for a deal.

A small number of highly successful search funds positively affect the aggregate returns, much as principal returns for all risk capital portfolios come from top performers. (For adjusted returns when the top three and top five performers are removed, see **Graphs 5A and 5B.**)

Graph 5A: Search Fund Asset Class ROI



Graph 5B: Search Fund Asset Class IRR[22]



Source: GSB search fund surveys, data from previous GSB search fund studies.

[22] The top three and top five funds for both Graph 5A and Graph 5B were excluded on the basis of their ROI ranking as one approach to demonstrating the relative impact on financial returns when the same three to five companies were removed from the calculations.

Isolating the returns for search funds that are still operating a business, the aggregate MOIC stands at 1.9x, while the IRR is 23.0 percent. For terminal search funds (i.e., those for which the searcher acquired and then sold or exited the business), returns are 16.7x invested capital, with a 43.5 percent IRR. Removing the top three funds, returns for terminal search funds stand at 4.7x and a 34.1 percent IRR.

Solo vs. Partnership

While solo searches accounted for 72 percent of the search funds formed in the 2014-2015 period, the data from this year's study continues to indicate that partnerships have a statistically higher likelihood of acquiring a company, and of achieving a greater than 5x outcome, although the statistics do not imply causation. This evaluation included all funds that had made acquisitions (both currently operating and terminal) at least one year prior to December 31, 2015. Funds that were searching for an acquisition or had concluded as an unsuccessful search as of December 31, 2015 were not considered.

While there was a nearly even split between funds operated by a single searcher versus a partnership,[23] average financial returns between the two categories appear to be different (We acknowledge that the decision of whether to form a solo search or a partnership is a personal one that depends on many factors, and that statistical returns do not necessarily indicate that partnerships are always the best choice for searchers forming a new fund). Among solo searchers, 41 percent who had acquired companies achieved returns greater than 2x, while 60 percent of partnerships achieved 2x returns. Additionally, 32 percent of solo searchers incurred a partial or total loss of capital, as compared to 21 percent of partnerships. (See **Exhibit 11** for a graphical representation of the data.) The median ROIs for solo search funds and partnerships, excluding unsuccessful searches, were 2.3x and 1.4x, respectively, while the average ROIs were 4.2x and 2.8x, respectively.[24] It is unclear whether these results are due to superior decision-making about acquisitions, better management of the acquired companies, market timing, or some combination of factors.

Financial Returns to Searchers

Fifty-two searchers, including 37 who are currently operating their companies and 15 who have achieved successful exits, provided information on their personal returns associated with the search fund for this year's study. The average equity valuation for a searcher in an operating company is \$3.6 million, or \$1.3 million per year of operating. For searchers who exited their businesses, the average is \$9.1 million, which equates to an average of \$1.5 million per year[25] (**Graph 6** illustrates the distribution of returns to the 52 searchers who provided data. This distribution may not be representative of the full cohort of searchers who have acquired and/or successfully exited their businesses).

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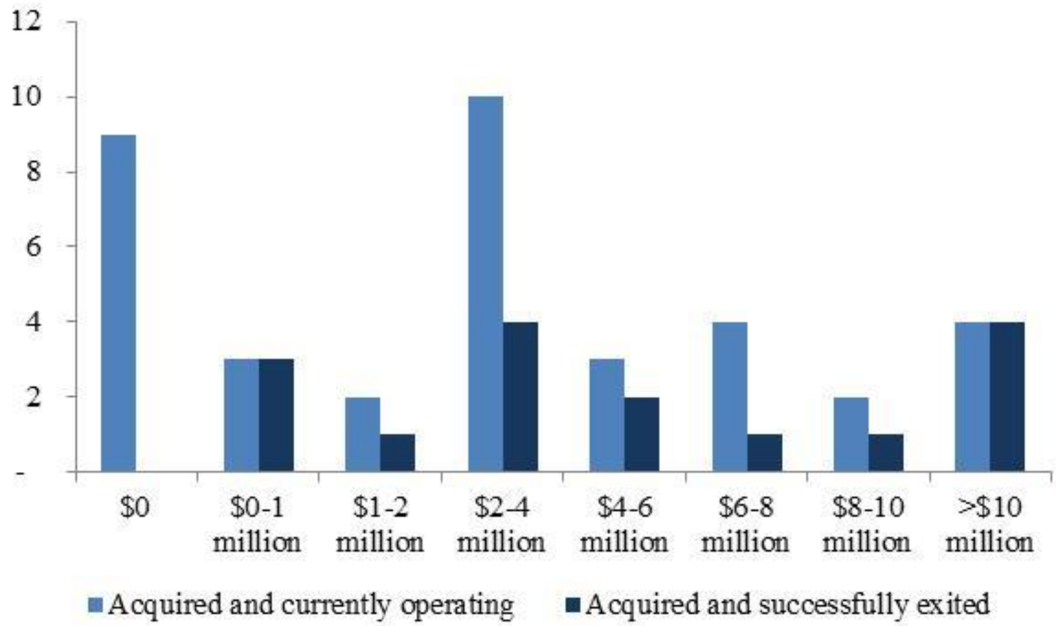
[23] This calculation only includes those searchers who had acquired a company prior to December 31, 2015.

[24] Average calculations exclude one search fund partnership that acquired a business returning over 200x to its investors.

[25] It is worth noting that in most cases the management carry is taxed at capital gains rate of 23.8 percent, versus ordinary income, which is taxed at the federal level of 39.6 percent. This has the effect of increasing the after tax return of the carry by 27 percent.

Graph 6: Distribution of Returns to Searchers Operating or Successfully Exited from Acquired Company



Acquisition Characteristics

The 2015 study also examines how company and industry characteristics correlate with ROI for a subset of funds grouped by returns. Specifically, those search funds that had acquired companies and were in operation for at least one year as of December 31, 2015, were surveyed on the firm's operating leverage, recurring revenues, industry growth rate, and complexity of the business at the time of acquisition. While some of this data proved inconclusive or required deeper exploration, at least two variables—operating leverage and recurring revenue—illustrated an interesting story when graphed according to the funds' ROI.

Operating Leverage

The survey asked each respondent to identify their firm's operating leverage[26] at the time of acquisition as either "High" (>60%), "Medium" (35-60%), or "Low" (<35%), with the "Low" and "High" responses graphed in **Exhibit 12**. As shown, those companies that sustained either total or partial losses were far more likely to have had low operating leverage, although operating leverage did not seem to influence a fund's ability to achieve higher returns. There were no companies in the sample reporting low operating leverage that achieved over a 5x return.

Recurring Revenue

The survey also asked each respondent to characterize the company's recurring revenue at the time of acquisition as "high" (65% or more of revenue is recurring), "medium" (35%-64% is recurring) and "low" (less than 35% is recurring). Recurring revenue was defined as regular monthly or

[26] Operating leverage is defined as the marginal contribution, or the additional EBITDA, generated for every additional dollar of revenue.

quarterly payments, or annual payments for services received every month or quarter, from customers who stay for at least 18 months.[27] The data demonstrates a strong correlation between performance and recurring revenue, with upwards of 70 percent of the funds that produced a 2x to 10x ROI having reported high recurring revenues. Only 10 percent of funds that incurred a partial or total loss acquired companies reported to have high recurring revenue (See **Exhibit 13**).

CONCLUSION

In terms of the number of search funds raised, 2015 was a record year. Much of this was due to greater visibility and awareness, both among prospective searchers and investors, of the search fund model. It is likely that the next several years will continue to see an increase in activity—acquisitions, failed searches, company closures, and successful exits—as the funds that were raised over the past few years continue to mature and the model continues to be adopted more broadly in the entrepreneurial community. These events and other changes within the search fund universe will be reported through future editions of this study.

[27] This definition of recurring revenue differs slightly from in previous studies, which defined recurring revenue as "High" (>60% of the revenue is contractual for periods of longer than 12 months), "Medium" (>30% of the revenue is contractual for periods longer than 12 months OR more than 60% of the revenue is "repeat" purchases, albeit not contractual), or "Low" (neither medium nor high).

Exhibit 1
Profiles of Search Fund Principals[28]

Age of Start of Search Fund

	Pre-2001	2002-2003	2004-2005	2006-2007	2008-2009	2010-2011	2012-2013	2014-2015
Minimum	26	28	28	27	26	25	24	24
Median	30	31	32	32	30	30	30	32
Maximum	35	60	47	50	51	51	46	54
No MBA	N/A	12%	30%	33%	35%	39%	49%	25%
<1 year post-MBA	N/A	65%	53%	47%	40%	31%	36%	49%
1-3 years post-MBA	N/A	12%	10%	10%	16%	14%	1%	20%
4-7 years post-MBA	N/A	12%	7%	10%	9%	17%	4%	7%

Number of Post-MBA Years before Search Fund

Minimum	N/A	0	0	0	0	0	-1	-1
Median	N/A	2	1	1	4	2	0	1
Maximum	N/A	10	18	16	20	17	10	26
No MBA	N/A	N/A	0%	13%	16%	14%	20%	18%
<1 year post-MBA	N/A	N/A	47%	33%	18%	42%	49%	35%
1-3 years post-MBA	N/A	N/A	17%	27%	20%	17%	20%	24%
4-7 years post-MBA	N/A	N/A	23%	20%	22%	17%	7%	12%

Gender

	Pre-2001	2002-2003	2004-2005	2006-2007	2008-2009	2010-2011	2012-2013	2014-2015
Male	96%	100%	100%	100%	100%	94%	100%	95%
Female	4%	0%	0%	0%	0%	6%	0%	5%

Source: GSB search fund surveys, data from previous GSB search fund studies.

[28] Totals may not sum to 100% due to rounding

Exhibit 2
Search Fund Principals' Professional Backgrounds

	Pre-2001	2002-2003	2004-2005	2006-2007	2008-2009	2010-2011	2012-2013	2014-2015
Management Consulting	26%	23%	10%	26%	7%	14%	16%	11%
Investment Banking/Finance	23%	10%	16%	27%	20%	11%	22%	11%
Sales	12%	1%	3%	7%	4%	6%	4%	6%
Venture Capital	8%	3%	5%	1%	0%	0%	2%	0%
Line/General Management	5%	27%	7%	15%	11%	19%	2%	12%
Marketing	5%	2%	4%	0%	4%	0%	0%	0%
Law	4%	0%	2%	0%	0%	0%	7%	3%
Operations	4%	7%	16%	1%	7%	8%	7%	5%
Entrepreneur	2%	13%	8%	7%	13%	6%	4%	3%
Accounting	2%	0%	3%	0%	0%	0%	0%	2%
Engineering	2%	0%	5%	2%	0%	6%	2%	1%
Military	2%	1%	8%	1%	0%	0%	2%	9%
Insurance	2%	1%	0%	2%	0%	0%	0%	0%
Private Equity	1%	5%	11%	4%	27%	28%	31%	27%
Other	0%	7%	2%	8%	7%	3%	0%	11%

Source: GSB search fund surveys, data from GSB previous search fund studies.

Exhibit 3A
Comparison of Search Fund Metrics

Number of Principals

	Pre-2001	2002-2003	2004-2005	2006-2007	2008-2009	2010-2011	2012-2013	2014-2015
Single	68%	41%	42%	75%	36%	62%	59%	72%
Partners	32%	59%	58%	25%	64%	38%	41%	28%

Amount of Initial Capital Raised

Minimum	$40,000	$125,000	$150,000	$200,000	$200,000	$140,000	$125,000	$175,000
Median	$290,000	$350,000	$395,000	$385,000	$450,000	$446,250	$426,000	$420,000
Maximum	$1,000,000	N/A	$750,000	$550,000	$750,000	$850,000	$650,000	$722,000

Amount of Initial Capital Raised Per Principal

Minimum	N/A	N/A	$106,250	$175,000	$143,750	$140,000	$125,000	$175,000
Median	N/A	N/A	$276,250	$350,000	$262,500	$302,500	$355,000	$385,000
Maximum	N/A	N/A	$750,000	$540,000	$450,000	$575,000	$560,000	$640,000

Number of Search Fund Investors

Minimum	2	1	3	10	5	8	2	5
Median	12	13	12	14	15	18.5	16	15.5
Maximum	25	20	24	23	28	26	30	25

Number of Months Fundraising

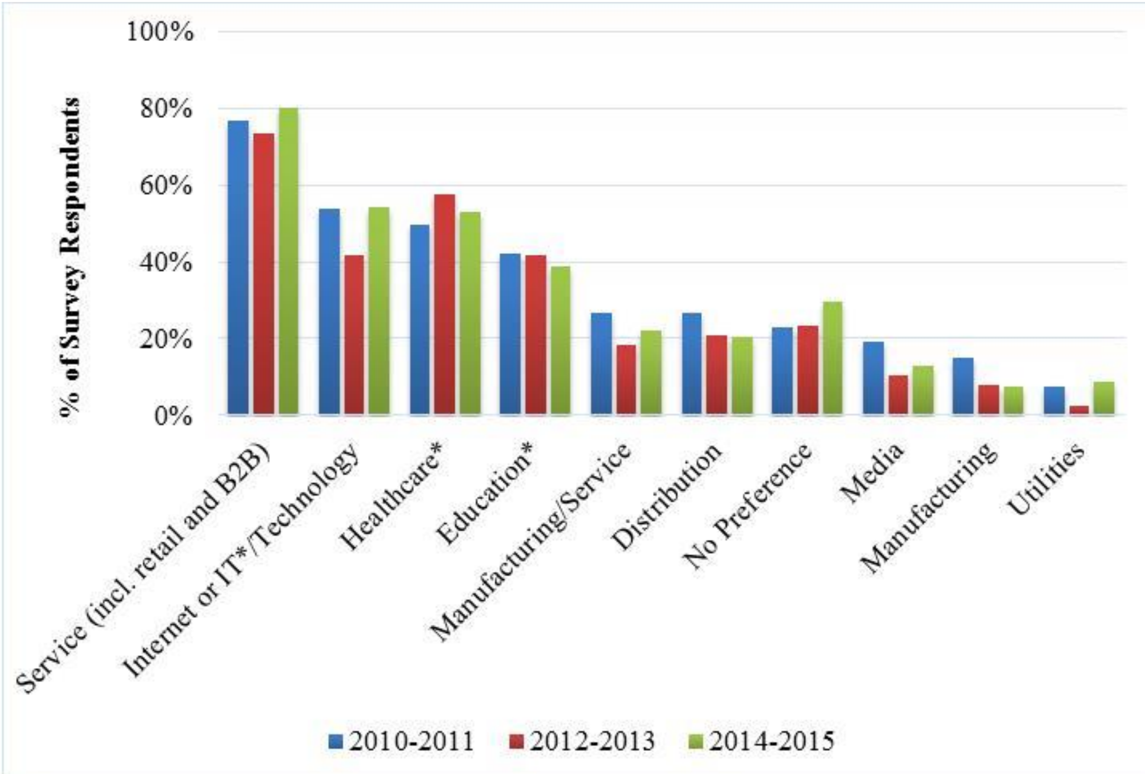
Minimum	N/A	1.0	2.0	0.8	0.0	1.5	0.8	0.0
Median	N/A	4.5	5.0	3.0	4.0	3.8	4.1	3.0
Maximum	N/A	9.0	12.0	10.0	20.0	28.4	8.6	8.0

Targeted Industries

Service (incl. retail and B2B)	62%	33%	35%	69%	74%	New chart for 2010-2015 follows
Manufacturing	19%	30%	25%	14%	0%	
Manufacturing/ Service	12%	0%	5%	0%	5%	
Distribution	8%	5%	3%	0%	0%	
Media	0%	13%	0%	0%	0%	
Utilities	0%	6%	0%	0%	0%	
No Preference	0%	13%	32%	17%	21%	

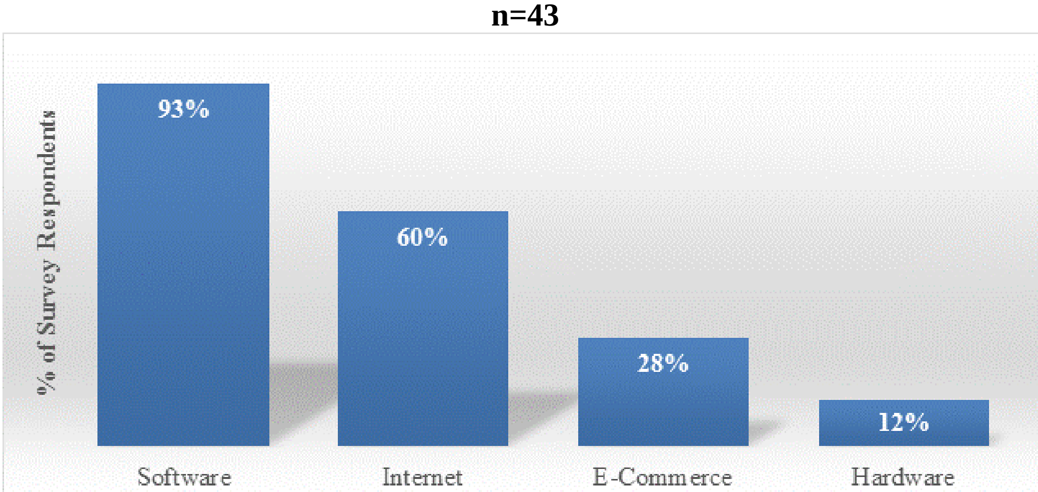
Source: GSB search fund surveys, data from GSB previous search fund studies.

Exhibit 3B
Targeted Industries by Frequency, 2010-2015*



* Starting in 2011, principals had the option to select all industries they targeted, rather than choosing only one. The above data represent the frequency of each response across all search funds newly surveyed for these years. Additionally, the "Internet or IT" category was redefined as "Technology" in the 2015 study and broken into sub-categories as shown in Exhibit 3C.

Exhibit 3C
Technology Subcategories Considered by Searchers Targeting this Category, 2014-15
n=43



Source: GSB search fund surveys, data from previous GSB search fund studies.

Exhibit 4
Median Statistics for Recent Search Fund Acquisitions

	All Acquisitions	2006-2007	2008-2009	2010-2011	2012-2013	2014-2015
Length of Search (months)	19	19	14	18	19	17
Purchase Price	$9.5 M	$9.4 M	$6.5 M	$7.9 M	$11.6 M	$12.0 M
Company Sales at Purchase	$7.2 M	$9.1 M	$5.3 M	$6.0 M	$6.2 M	$7.0 M
Company EBITDA at Purchase	$1.8 M	$2.0 M	$1.3 M	$1.5 M	$2.0 M	$2.5 M
EBITDA Margin	22.6%	18.2%	20.5%	23.5%	29.9%	23.4%
EBITDA growth rate at purchase	12.0%	16.5%	9.3%	11.9%	18.0%	5.0%
Purchase Price / EBITDA	5.1x	5.2x	4.9x	5.2x	5.6x	5.8x
Purchase Price / Sales	1.1x	0.9x	1.5x	1.3x	1.6x	1.5x
Company Employees at Purchase	45	60	38	38	21	46

Source: GSB search fund surveys, data from previous GSB search fund studies.

Exhibit 5
Selected Statistics for All Search Fund Acquisitions

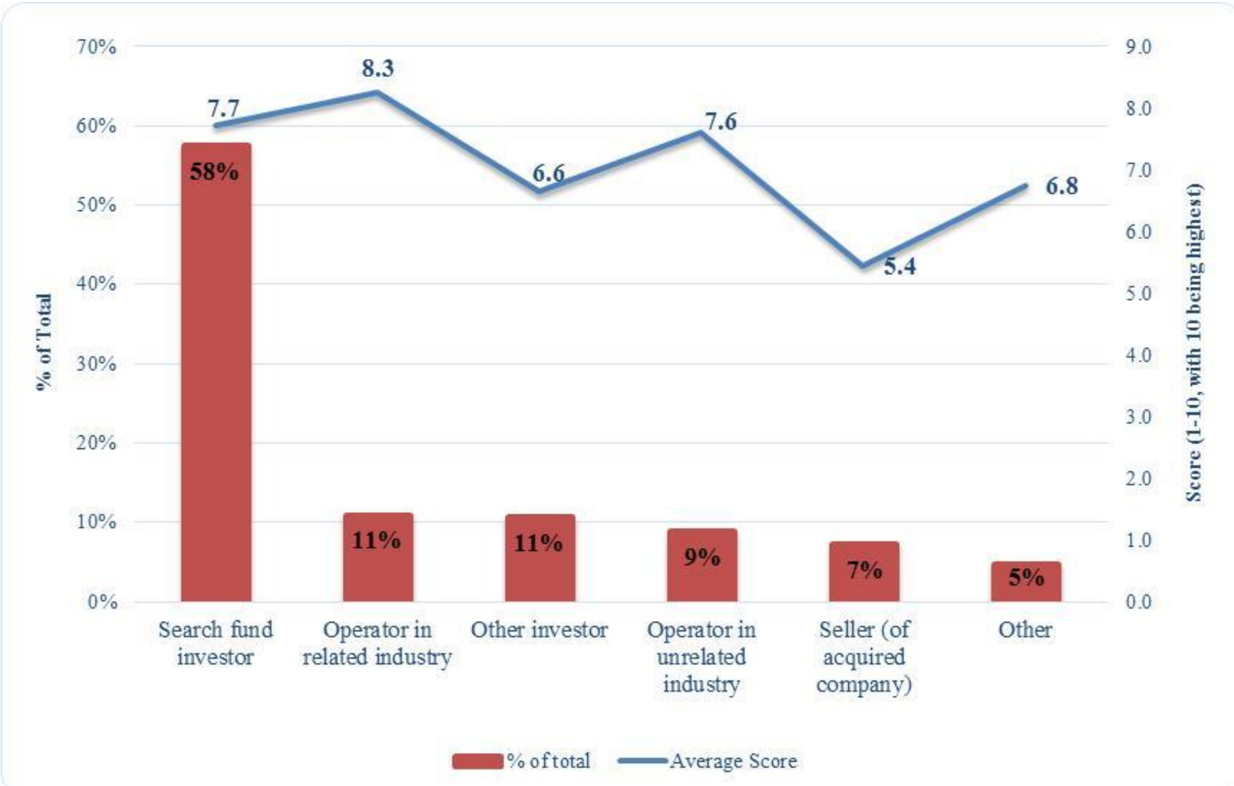
Total Number of Months From Start of Search to Deal Close	All Acquisitions
Minimum	3
Median	19
Maximum	87
<11 months	11%
11-20 months	44%
21-30 months	26%
31+ months	18%

Purchase Price Statistics	All Acquisitions
Minimum	$0.6 M
Median	$9.5 M
Maximum	$71.0 M
<$4 M	12%
$4 M to $8 M	25%
$8 M to $12 M	24%
>$12 M	39%

Additional Statistics for All Search Fund Acquisitions	Minimum	Median	Maximum
Company Revenues at Purchase	$0.4 M	$7.1 M	$103.0 M
Company EBITDA at Purchase	-$1.6 M	$1.8 M	$12.0 M
Company EBITDA Margin at Purchase	-18.5%	22.9%	83.3%
Purchase Price / Revenue	0.2x	1.3x	6.7x
Purchase Price / EBITDA	NM	5.3x	114.0x
EBITDA Growth Rate at Purchase	-56.0%	12.0%	300.0%
Company Employees at Purchase	4	45	740

Source: GSB search fund surveys, data from previous GSB search fund studies.

Exhibit 6
Searchers' Perceptions of Board Members' Performance
n = 289 board members



Source: 2015 GSB search fund survey.

Exhibit 7
Return on Investment (ROI) to Original Search Fund Investors, Including Search and Acquisition Rounds[29]

Study Year	**2009**	**2011**	**2013**	**2015**
Individual ROI				
Minimum	0.0 x	0.0 x	0.0 x	0.0x
25th Percentile	0.0 x	0.0 x	0.0 x	0.0x
Median	0.5 x	0.8 x	1.0 x	1.0x
75th Percentile	1.9 x	2.1 x	3.1 x	3.2x
Maximum	>200 x	>200 x	>200 x	>200x
Distribution of Individual ROI:				
0.0 x (total loss)	30%	29%	25%	30%
< 1.0 x (partial loss)	29%	27%	26%	14%
Exactly 1 x (return of capital)	3%	2%	2%	2%
1.0 x - 1.5 x	10%	10%	15%	13%
1.5 x - 2.0 x	3%	6%	3%	4%
2.0 x - 5.0 x	13%	14%	17%	20%
5.0 x - 10.0 x	5%	6%	8%	13%
>10.0 x	7%	6%	5%	4%
Aggregate Blended ROI:	13.5 x	11.1 x	10.0 x	8.4 x

Source: GSB search fund surveys, data from previous GSB search fund studies.

[29] Return on Investment data was first collected in the 2009 study, with ROI calculated on a cash flow basis, including both debt and equity that was invested as initial search capital and as part of the acquisition. In all calculations of returns, we assumed that all debt was repaid, that the searchers' share of equity had fully vested and that funds were distributed in proportion to the investors' share of equity and subordinated debt. All returns were calculated on a pre-tax basis. Figures in this exhibit include searches that shut down without acquiring a company.

Exhibit 8
Search Fund Internal Rate of Return (IRR)[30] to Original Investors

Study Year	2001	2003	2005	2007	2009	2011	2013	2015
Individual IRRs:								
Minimum	NM	NM	NM	NM	NM	NM	NM	NM
25th Percentile		NM	NM	NM	NM	NM	NM	NM
Median	18%	NM	NM	NM	NM	NM	NM	5%
75th Percentile		22%	25%	25%	11%	26%	26%	35%
Maximum	98%	85%	215%	189%	189%	189%	189%	189%
Distribution of individual IRRs:								
Not meaningful (NM)*			53%	49%	60%	57%	52%	42%
0% to 25%			22%	25%	19%	17%	22%	26%
26% to 50%			14%	18%	14%	18%	16%	22%
51% to 75%			4%	2%	3%	4%	7%	8%
76% to 100%			2%	2%	2%	1%	1%	0%
>100%			4%	5%	2%	2%	2%	2%
Aggregate blended IRR	**38%**	**32%**	**37%**	**52%**	**37%**	**34%**	**35%**	**36%**

* Not meaningful (NM) is reported in situations of partial or complete loss of capital over a period of years where the IRR metric is not useful.

Note: Internal Rate of Return (IRR) figures are reported in aggregate for all search funds that had acquired a company (including those that were operating, had exited, or were shut down) or had concluded without making an acquisition. Funds that had acquired a company less than one year prior to the end of the respective study period were not included, nor were funds still searching for an acquisition.

Source: GSB search fund surveys, data from previous GSB search fund studies.

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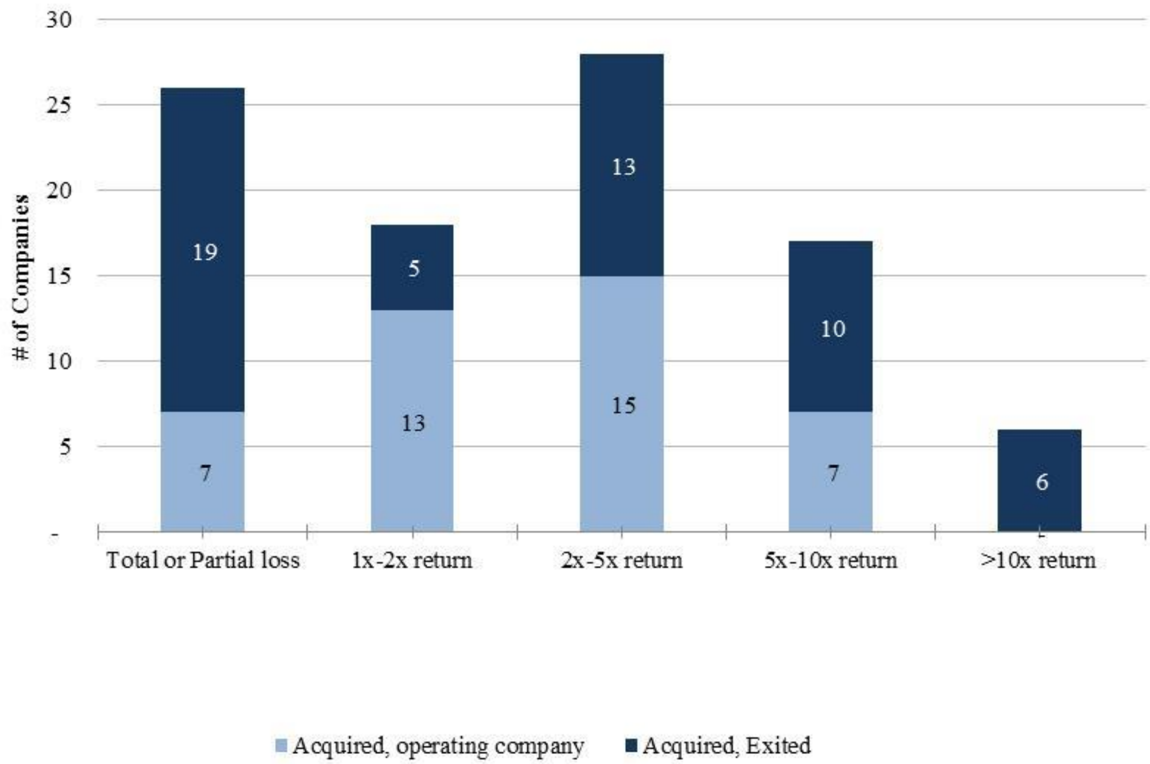
[30] IRRs were calculated on a cash flow basis, including both debt and equity that was invested as initial search capital and as part of the acquisition. As in prior years' studies, the timing of the cash flows for each search fund was adjusted to a common start date. In all calculations of returns, we assumed that all debt was repaid, that the searchers' share of equity had fully vested and that funds were distributed in proportion to the investors' share of equity and subordinated debt. All returns were calculated on a pre-tax basis. Figures in this exhibit include search funds that shut down without acquiring a company.

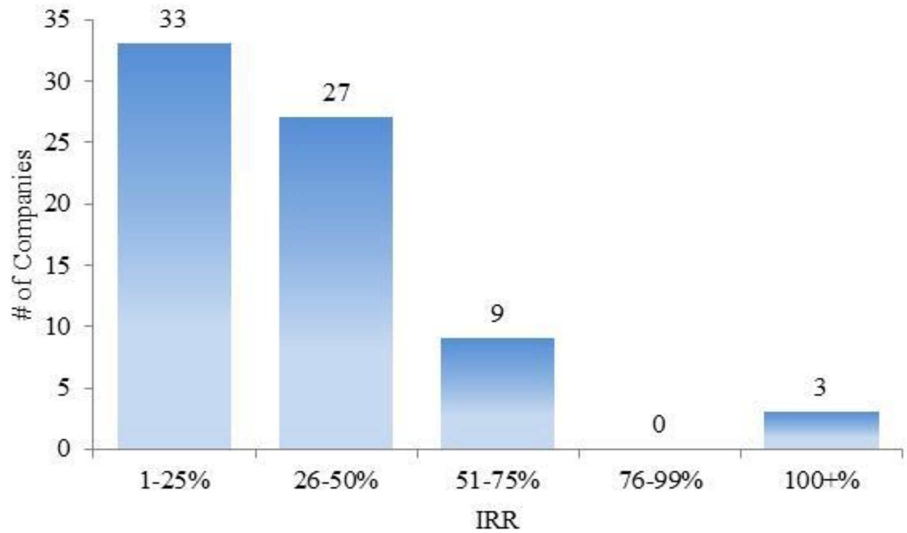
Exhibit 9
Distribution of Search Funds That Have Acquired a Company, by ROI (n=95)[31]



Source: GSB search fund surveys, data from previous GSB search fund studies.

[31] Of the 128 companies acquired as of December 31, 2015 for which we have data or collected data historically, 18 funds had been operating for less than one year and 15 funds had reported insufficient data. Thus, ROI data could be calculated for 95 funds.

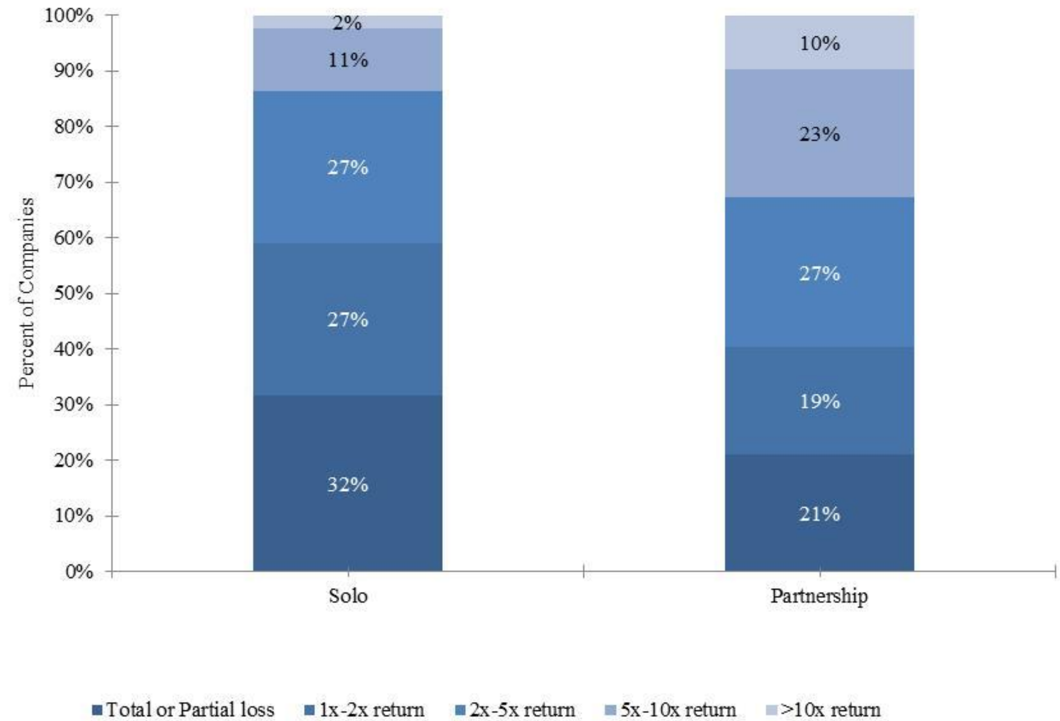
Exhibit 10
Distribution of Search Funds by Positive IRRs (n=72)[32]



Source: GSB search fund surveys, data from previous GSB search fund studies.

[32] Of the 143 search funds for which Stanford has collected returns data, 72 had reported positive IRRs as of December 31, 2015.

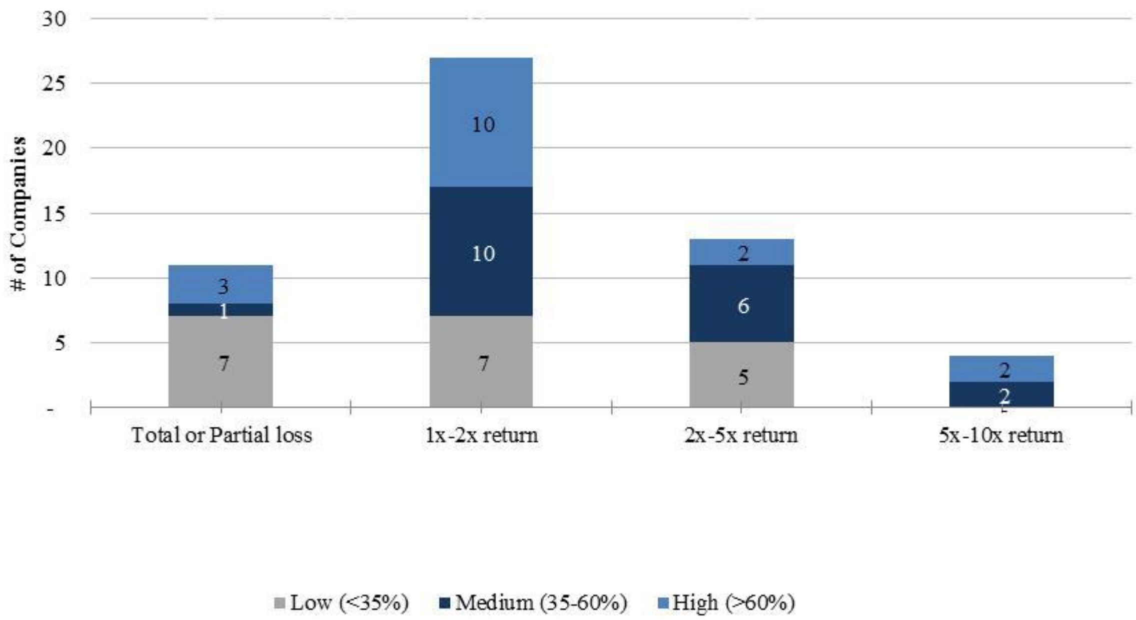
Exhibit 11
Comparison of Returns by Solo vs. Partnership Status among Funds that had Acquired a Company
(n=96, including 44 solo searches and 52 partnerships)



Note: The data reflected is for all search funds that had acquired a company (including those that were operating, had exited or were shut down) at least one year prior to December 31, 2015. Funds that were searching for an acquisition or had concluded as an unsuccessful search as of December 31, 2015 were not included in this analysis.

Source: GSB search fund surveys.

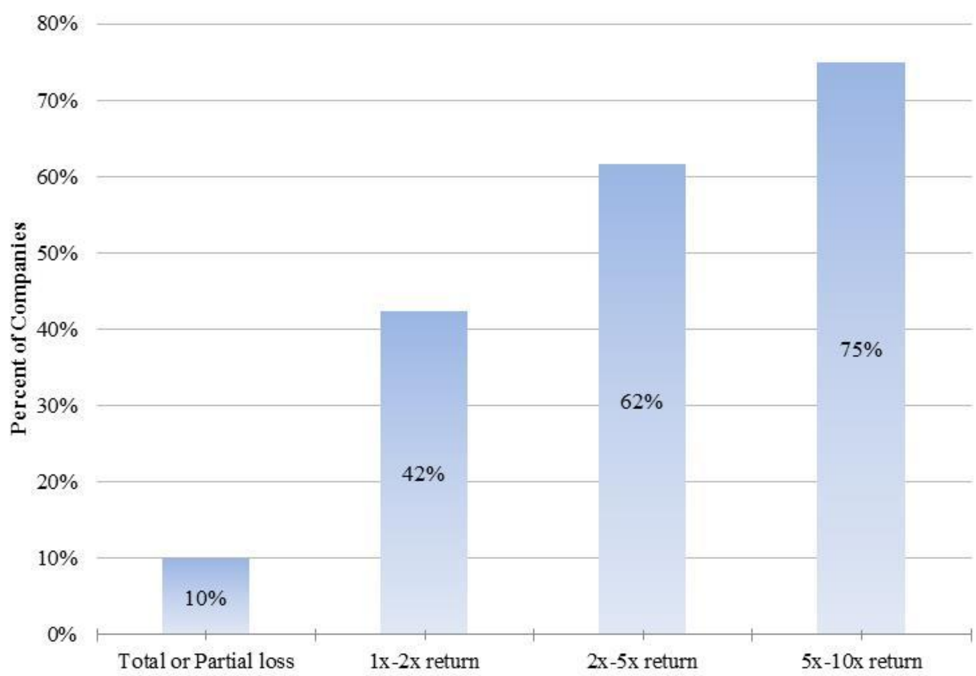
Exhibit 12
Operating Leverage at Time of Acquisition, by Fund ROI * (n=55)



*Note: Only 55 searchers with current returns data provided company characteristic data. Actual breakdown of returns by degree of operating leverage across all search fund companies could be materially different from what is represented above.

Source: GSB search fund surveys.

Exhibit 13
Percentage of Companies with High Recurring Revenue at Time of Acquisition, by Fund ROI* (n=55)



*Note: Only 55 searchers with current returns data provided company characteristic data. Actual breakdown of returns by proportion of recurring revenue across all search fund companies could be materially different from what is represented above.

Source: GSB search fund surveys.