Smart investments by smart money: Evidence from seasoned equity offerings ☆

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Abstract

We document that seasoned equity issuers experiencing the greatest increase in institutional investment around the offer date outperformed their benchmark portfolios in the year following the issue by a statistically and economically significant margin relative to those experiencing the greatest decrease. No such relationship exists for a control sample of matched non-issuers. Issuers with the greatest institutional investment are also found to have the highest ratio of sell-side analyst upgrades less downgrades to total forecasts in the two quarters following the issue. Again, no such relationship is found for matched non-issuers. We interpret our results as evidence that institutions are able to identify above-average seasoned equity offering SEO firms at the time of equity issuance and increase their holdings in these potential outperformers.
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1. Introduction

Institutional investors who engage in active portfolio management spend billions of dollars every year acquiring and evaluating information in an attempt to identify mispriced securities.[1] Evidence on the value added by this active portfolio management remains a subject of debate. For example, studies of mutual fund returns net of transaction costs, management fees, and other expenses generally do not find evidence of superior performance. Grinblatt and Titman (1989, 1993), however, find evidence of higher gross mutual fund returns and interpret their results as being at least partly generated by active portfolio management strategies. Investment returns of institutions other than mutual funds have also been studied, albeit to a lesser extent. For instance, Lakonishok et al. (1992) study pension fund returns and conclude that active management by the fund portfolio managers did not yield any excess returns above a simple buy-and-hold strategy.

Evidence on the value added by the active portfolio management can also be found in studies of institutional trading following initial public offerings (IPOs). Hanley and Wilhelm (1995) document that institutions purchase a fairly constant percentage (about 70%) of the shares offered in IPOs, but Field (1995) finds considerable variation in the percentage of outstanding shares held by institutions approximately six months after the offer date. Together, these results suggest that institutions have significant differences of opinion across IPOs about valuations and act on these differences in the IPO aftermarket by buying or selling considerable stakes to individual investors (i.e., non-institutional investors). Consistent with institutions being successful in their IPO stock picking, Field finds that those IPOs with high institutional ownership performed better over a subsequent three-year period than those with little or no institutional ownership. Krigman et al. (1999) provide additional evidence that suggests institutions either possess information unavailable to individual investors at the time of the IPO or make better use of publicly available information. They find that IPOs with heavy institutional first-day selling, or flipping, perform the worst in the following year.

In this paper, we study ownership changes around seasoned equity offerings (SEOs) in an attempt to shed additional light on the value added by institutional active portfolio management. Perhaps no other event in life of a firm, with the exception of its IPO, is characterized by such a high degree of information disclosure. The SEO is accompanied by a focused energy on the part of a firm's management and investment bankers to convey its story to outside investors. The prospectus, road show, and conference calls that are part of the firm's and underwriter's SEO marketing efforts provide outside investors with extraordinary opportunities to interact with firm management, as well as members of the underwriting team such as sell-side analysts.

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[1] The equity accounts managed by the College Retirement Equities Fund (CREF) alone claimed investment advisory expenses in excess of $100 million for the one-year period ending March 31, 2003.

We investigate whether institutional investors are better able to turn this increased access into an information advantage over individual investors. If institutional portfolio managers are better informed or possess better selectivity, we would expect them to be able to separate potentially outperforming SEO firms from those expected to do worse in the aftermarket. If this were true, we would expect issuers in which institutional holdings increase around the time of the offer to significantly outperform those in which institutional investors decrease their holdings. We empirically investigate these issues by studying institutional ownership changes surrounding 2,912 SEOs conducted between 1980 and 1994.

We begin by contrasting institutional ownership changes in (SEO) firms with simultaneous ownership changes in a control sample of non-issuers with similar market capitalizations, book-to-market ratios, and stock price momentum. One might expect institutional investment in SEOs to be limited given recent empirical evidence of stock return underperformance and operating performance declines following SEOs (see, e.g., Loughran and Ritter, 1995, 1997; Spiess and Affleck-Graves, 1995; McLaughlin et al., 1996; Lee, 1997; Jegadeesh, 2000; Brav et al., 2000). Long-run underperformance following SEOs is not, however, an unchallenged result. Eckbo et al. (2000) present evidence that lower stock returns following SEOs reflect lower systematic risk exposure for issuers relative to matched non-issuers. They argue that issuers ought to exhibit lower returns after the SEO because the new equity raised lowers financial leverage and thus decreases exposures to unexpected inflation and default risk. Given the mixed evidence on the post-issue attractiveness of shares offered in SEOs, participation of presumably informed institutional investors in SEOs is an open empirical question.

We find evidence that institutions, on average, significantly increased their investments in SEO firms compared with the control sample of matched non-issuers. Prima facie, institutions did not appear concerned by the (contested) empirical evidence suggesting post-issue underperformance of SEO firms. This conclusion, however, presumes a lack of stock selection capability. Perhaps institutions were able to separate the above-average SEO firms from the truly underperforming ones and altered their trading behavior across SEOs accordingly.

An interesting pattern emerges when we impose a foresight bias on institutional investors and examine the relationship between changes in institutional investment and the post-issue stock market performance of SEO firms. We find that issuers experiencing the greatest increase in institutional investment around the offer date outperformed their benchmark portfolios in the year following the issue by a statistically and economically significant margin relative to those experiencing the greatest decrease. In contrast, we find no such pattern in the control sample of matched non-issuers. The superior one-year stock market performance of SEO firms heavily bought by institutions appears lasting, as we find no evidence of return reversals in years two through five following the offer. We find that this ability to distinguish issuers that outperform after the SEO from those that underperform is consistent, and statistically significant, across different classes of institutions.

To examine the possibility that our results are caused by a size effect instead of an ability by institutions to identify potential outperformers from among SEO firms, we separately examine small and large capitalization stocks in our sample. McLaughlin et al. (1996) and Brav et al. (2000) find that small stocks exhibit greater underperformance than large stocks following SEOs. Given the documented tendency for institutions to hold large stocks (see, e.g., Falkenstein, 1996; Gompers and Metrick, 2001), we examine the possibility that our results are simply a manifestation of institutions buying a greater share of large-firm SEOs, which in turn perform better than their smaller counterparts.

Our findings do not appear to be driven by a size effect. We find that institutions significantly increase their investments in SEO firms regardless of firm size. In fact, institutions show modestly greater ownership increases (measured as a percentage of outstanding shares) in small issuers relative to large issuers. We also find post-issue return patterns for small and large issuers that are similar to the return pattern reported above: issuers experiencing the greatest increase in institutional investment around the offer date outperformed their benchmark portfolios in the year following the issue by a statistically and economically significant margin relative to those experiencing the greatest decrease. After controlling for size, it still appears that institutions can identify potential outperformers from among SEO firms.

To gain additional insight, we use sell-side analysts' forecasts of earnings revisions from the Institutional Brokers Estimate System (IBES) database as a control variable for revelation and assimilation of public information. We find that, for SEO firms, the ratio of the number of earnings forecast upgrades less forecast downgrades to total number of forecasts at the end of the first and second calendar quarters following the issue is positively related to institutional investment. That is, SEO firms in which institutions increased their investment the most around the issue had the highest ratio of upgrades less downgrades to total forecasts at the end of each of the two quarters following the issue. This is not, in and of itself, irrefutable evidence that institutions have superior information or stock-selection ability. One might argue that sell-side analysts upgrade earnings forecasts because institutional holdings in these firms increased. If this were true, a similar pattern would be found in the control sample of matched non-issuers. However, we find no positive relation between institutional ownership changes in matched non-issuers and subsequent analyst forecasts. This absence of any such discernible trend in matched non-issuers leads us to interpret our results as evidence that institutions are able to ex ante identify above-average SEO firms at the time of equity issuance and increase their holdings in these potential outperformers.

The organization of the remainder of this article is as follows. In Section 2, we describe the composition of our SEO sample and the algorithm used to construct the control sample of matched non-issuers. In Section 3, we describe our institutional holdings data and provide general statistics about institutional investment in SEO firms and matched non-issuers. In Section 4, we examine the performance of issuers and matched non-issuers after the offer conditional on institutional investment at the time of the offer. We offer a summary and conclude the paper in Section 5.

2. SEO sample and matched-firm algorithm

2.1. SEO firms

Our final sample of 2,912 SEOs conducted between 1980 and 1994 was obtained as follows. We got from Securities Data Corporation an original sample of 3,848 primary SEOs that took place between 1980 and 1994. We chose 1980 as the starting point for the sample because our institutional holdings data begin in 1979. This allows us to have holdings data for at least one quarter before the earliest SEO date in the sample. Of the original sample, we lost 255 observations because of missing data in the Center for Research in Security Prices (CRSP) database and a further 673 because of missing characteristic-based ranks.[2] These rank data are vital to our matching procedure. Our matching algorithm does not find matches for eight sample firms, which we eliminated, leaving us with the final sample of 2,912 (SEOs). We present in Table 1 summary details of the SEO sample. A glance at the sample confirms that trends in overall seasoned equity issuance in the United States, familiar to researchers in this area, are mirrored in our sample.[3]

2.2. Matched non-issuer firms

Our aim is to match each SEO firm observation with a non-issuing firm that has a similar book-to-market ratio, market capitalization, and price momentum at the time of the offer. We choose these three characteristics because financial economists have identified them as best explaining the cross-sectional variation in stock returns. Moreover, recent research by Brav et al. (2000) shows that underperformance in SEO firms' stocks is concentrated in only small firms and those with low book-to-market ratios, indicating that any investigation into SEO firm performance must take these characteristics into consideration. Performance measurement with characteristic-based benchmarks is usually accomplished using the Daniel, Grinblatt, Titman, and Wermers (hereafter, DGTW) characteristic-sorted benchmark portfolios database. This database provides yearly rankings (updated every July) for each firm listed on the NYSE, Amex, and Nasdaq based on the above three characteristics.[4] These rankings are from a yearly triple sort on the universe of firms, on each of the three characteristics. In our case, however, we cannot directly use these yearly rankings to match non-issuers to issuers. The reason can be illustrated by a simple example. Consider a sample (SEO) firm with an issue date in

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[2] We are grateful to Kent Daniel for providing us with this database of characteristic-based rankings. Details of criteria for inclusion in the rankings database are provided in Daniel et al. (1997). They require, among other things, that COMPUSTAT data be available for at least two years prior to the inclusion of a firm in their database. Because these data are not available for many firms in several years, we find that 673 firms in our sample have missing ranks in the database.

[3] For classification of hot and cold periods in seasoned equity markets, see Bayless and Chaplinsky (1996) and compare the observations therein to Table 1 of this paper.

[4] For details of the definitions of size, book-to-market, and momentum used in the characteristic rankings database, see the appendix in Daniel et al. (1997).

Table 1
Key statistics for the sample of seasoned equity offering (SEO). For each year, the number of issues in each quarter is presented. The percentage of each year's observations of the total sample is also reported.

Year	Quarter				Total number	Percent
	1	2	3	4		
1980	29	29	38	76	172	5.91
1981	52	59	27	59	197	6.77
1982	36	42	47	76	201	6.90
1983	115	139	119	57	430	14.77
1984	34	33	23	33	123	4.22
1985	29	60	43	46	178	6.11
1986	60	80	53	26	219	7.52
1987	34	57	38	11	140	4.81
1988	7	19	21	15	62	2.13
1989	10	25	38	41	114	3.91
1990	30	35	23	15	103	3.54
1991	44	96	73	66	279	9.58
1992	78	86	51	41	256	8.79
1993	65	79	61	66	271	9.31
1994	48	46	26	47	167	5.73
Total	671	885	681	675	2,912	100

May 1991. Matching using the DGTW database will result in a matching firm with similar size, book-to-market, and momentum as of the end of July 1990, which is ten months prior to the event date. This use of stale (ten-month-old, in this example) rankings leads to incorrect matching on two counts. First, the most recent momentum is not accounted for during matching. Second, because SEO firms typically have a higher stock price run-up immediately prior to the issue, they will tend to be matched with smaller market capitalization firms.

To find matching firms similar to sample SEO firms without these problems, we replicate the DGTW methodology of portfolio formation in all respects except that the frequency of sorting is quarterly in our case. Benchmarking based on quarterly portfolio rankings ensures that rankings are not stale and subject to the problems discussed above. We sort the universe of firms listed on the NYSE, Amex, and Nasdaq (with available data on CRSP) every quarter, beginning March 1979 to December 1994 based on equity market capitalization (size) and six-month momentum. At each date, the universe of stocks is first sorted into quintiles based on each firm's market equity just prior to the formation date. Following DGTW, the break points for this sort are based on NYSE firms only. Then the firms in each size quintile are further sorted into quintiles based on the preceding six-month return, giving us a total of 25 portfolios. The preceding six-month return is calculated through the end of the month before quarter end. For instance, every second quarter sort is based on six-month returns ending May, while every third quarter sort is

based on corresponding six-month returns ending August, and so on.[5] This methodology avoids problems associated with market microstructure effects (see Jegadeesh, 1990). For sorting on six-month momentum, we require that each firm have at least three monthly returns (out of the preceding six) available on CRSP. Finally, the firms in each of the above 25 size/momentum portfolios are sorted based on their book-to-market rankings from the DGTW database. In other words, we do not specifically sort on book-to-market ratios of individual firms but retain the yearly rankings from the DGTW database. For the limited purpose of matching firms, we believe that this is adequate, as book-to-market rankings are not as variable as, say, momentum rankings. This procedure yields 125 size/book-to-market/momentum sorted portfolios in each quarter.

For each SEO sample firm, we look up its characteristic rankings in the issue quarter. Next, we identify a matching firm (i.e., a firm with identical characteristics in that quarter). We impose two restrictions on the matched firm. First, to ensure that we draw a clear separation between issuers and non-issuers during our sample period, the matched firm cannot have been a seasoned equity issuer in the five years preceding the SEO sample firm's issue date. Second, to ensure an independent sample of matched non-issuers large enough to facilitate meaningful statistical inference, the matched firm cannot have been selected as a matched firm for any other SEO sample firm in the past five years.

3. Institutional holdings around SEOs

3.1. Data and institutional categorization

Institutional investor holdings data for 60 quarters from the first quarter of 1980 to the fourth quarter of 1994 were obtained from the Spectrum database compiled by CDA Investment Technologies. Spectrum contains quarterly information on institutional ownership of NYSE-, Amex-, and Nasdaq-listed stocks extracted from 13(f) reports filed with the Securities and Exchange Commission. The 1975 revision to the Securities Exchange Acts requires all institutional investment managers with $100 million or more in exchange-traded or Nasdaq-quoted equity securities under management to file 13(f) reports within 45 days of the end of each calendar quarter. Institutions are required to report all equity positions greater than either 10,000 shares or $200,000 in market value.

For each firm and each quarter, Spectrum reports each institution's holdings. Spectrum also classifies each institution as one of five types according to Standard and Poor's definition of the institution's primary line of business. Type 1 is made up of large bank holding companies. Type 2 is insurance companies. Type 3,

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[5] In unreported analysis, we sort the firms in each size quintile based on the preceding 12-month return. This leads to a smaller sample size, because we impose more stringent data restrictions on each firm. The results, however, are qualitatively identical to the ones presented here with six-month momentum sorting.

investment companies and their advisers, consists of mutual funds. Type 4, independent investment advisers, includes investment banks and other financial institutions but explicitly excludes commercial banks whose primary business is mutual fund management. Type 5 encompasses foundations, employee stock ownership plans, and individuals who invest others' money who are not otherwise categorized.

In the analysis that follows, we report empirical results not only for all institutions, but also for mutual funds and non-mutual fund institutions separately. The reason stems from our interest in the value of active portfolio management. Mutual funds are known to be particularly active traders, with portfolio turnover rates typically in the neighborhood of 75% for actively managed equity mutual funds.[6] Moreover, some extant research (e.g., Grinblatt and Titman, 1989, 1993) suggests that mutual funds may possess stock picking ability. We use Type 3 to represent mutual funds; the sum of Types 2, 4, and 5 for non-mutual fund institutions; and the sum of Types 1 through 5 to represent all institutions. We exclude Type 1 from non-mutual fund institutions because many large bank holding companies hold equities in association with proprietary mutual funds.

3.2. Institutional holdings around SEOs

Table 2 reports quarterly institutional ownership statistics for the SEO and matched samples, beginning two quarters before the offer quarter and ending four quarters afterward. Panels A.1, A.2, and A.3 report ownership levels at the end of the quarter as a percentage of outstanding shares for all institutions, mutual funds, and non-mutual fund institutions, respectively. Mean and median institutional holding levels in SEO firms are significantly higher than those in matched non-issuers. For example, at the end of the offer quarter, mean (median) total institutional holdings are 36.68% (35.65%) of outstanding shares for issuers and only 22.20% (14.92%) for matched non-issuers.

Panel B reports the mean change in institutional holdings as a percentage of outstanding shares over each quarter surrounding the offer. Panels B.1, B.2, and B.3 once again break out the changes separately for all institutions, mutual funds, and non-mutual fund institutions, respectively. Also reported are the *p*-values in parentheses for the null hypothesis that the quarterly changes in holdings for SEO firms and matched non-issuers are equal. The *p*-values are calculated using the Satterthwaite test, which does not assume equal variances for the issuing and matched non-issuing samples.

Indicative of the overall trend of growing institutional flows into equity markets over the sample period, total institutional holdings in both issuers and matched non-issuers increased over every quarter around the offer. Most notably, the increase is significantly greater for SEO firms in the offer quarter and the quarter prior to the offer. The difference is particularly large in the offer quarter, with total institutional holdings increasing by 6.67% for issuers and only by 0.39% for matched

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[6] As reported by Bogle (1994).

Table 2

Total institutional holdings in seasoned equity offering (SEO) firms and matched non-issuers. Institutional holdings are obtained from the Spectrum database compiled by CDA Investment Technologies. Details about the database can be found in the main body of the paper. Institutional holdings presented below are for each quarter relative to the offer quarter, which is labeled month 0. Ownership levels and changes are reported as a percentage of the issuers' or matched non-issuers' outstanding shares. Panels A.1, A.2, and A.3 report mean (median) ownership levels at the end of each quarter surrounding the offer for all institutions, mutual funds, and non-mutual fund institutions, respectively. Panels B.1, B.2, and B.3 report the mean change in holdings over each quarter surrounding the offer for all institutions, mutual funds, and non-mutual fund institutions, respectively. Panel B also provides p-values in parentheses for the null hypothesis that the quarterly changes in holdings for (SEO) firms and matched non-issuers are equal.

	Quarter						
	−2	−1	0	1	2	3	4
Panel A: levels of holdings							
A.1. All institutions							
SEO firms	29.27	30.59	36.68	36.72	37.58	37.85	38.06
	(26.53)	(27.65)	(35.65)	(36.03)	(37.10)	(37.19)	(37.45)
Matched non-issuers	22.52	22.38	22.20	22.42	22.93	23.40	24.04
	(15.45)	(15.33)	(14.92)	(15.12)	(15.79)	(16.05)	(16.89)
A.2. Mutual funds							
SEO firms	3.23	3.54	4.64	4.59	4.66	4.73	4.72
	(1.78)	(2.04)	(3.20)	(3.16)	(3.27)	(3.28)	(3.26)
Matched non-issuers	2.25	2.27	2.27	2.35	2.46	2.58	2.75
	(0.14)	(0.11)	(0.06)	(0.08)	(0.08)	(0.15)	(0.25)
A.3. Non-mutual fund institutions							
SEO firms	18.67	19.48	23.86	23.97	24.51	24.63	24.84
	(16.17)	(16.81)	(22.24)	(22.65)	(22.98)	(23.17)	(23.62)
Matched non-issuers	14.92	14.86	14.77	14.90	15.38	15.69	16.12
	(9.22)	(9.17)	(9.11)	(9.34)	(10.01)	(10.29)	(10.95)

	Between quarters					
	−2 to −1	−1 to 0	0 to 1	1 to 2	2 to 3	3 to 4
Panel B: mean change in holdings						
B.1. All institutions						
SEO firms	1.69	6.67	0.17	0.84	0.23	0.12
Matched non-issuers	0.43	0.39	0.47	0.66	0.42	0.35
Difference in changes	1.41	6.24	−0.32	0.15	−0.15	−0.17
(*p*-value)	(<0.001)	(<0.001)	(0.054)	(0.406)	(0.370)	(0.288)
B.2. Mutual funds						
SEO firms	0.36	1.18	−0.04	0.07	0.06	−0.02
Matched non-issuers	0.07	0.06	0.09	0.13	0.10	0.13
Difference in changes	0.33	1.13	−0.12	−0.08	−0.03	−0.14
(*p*-value)	(<0.001)	(<0.001)	(0.020)	(0.156)	(0.614)	(0.013)
B.3. Non-mutual fund institutions						
SEO firms	1.06	4.74	0.17	0.55	0.11	0.16
Matched non-issuers	0.32	0.26	0.30	0.54	0.29	0.24
Difference in changes	0.83	4.42	−0.16	0.00	−0.17	−0.06
(*p*-value)	(<0.001)	(<0.001)	(0.218)	(0.997)	(0.190)	(0.635)

non-issuers.[7] The marked difference in the ownership increases in the quarter before the offer and the offer quarter itself extends to both mutual funds and non-mutual fund institutions. Again the difference in the offer quarter is particularly large, with mutual fund and non-mutual fund holdings increasing by 1.18% and 4.74% respectively, for issuers and by only 0.06% and 0.26% respectively, for matched non-issuers.

Prima facie, these results suggest that institutional investors have not come to appreciate the extant empirical literature indicating the underperformance of SEO firms compared with their non-issuing counterpart, and that they are investing in a value-decreasing activity by increasing their holdings in issuing firms around SEOs. However, we can draw this conclusion only if we also assume that institutional investors do not have any stock selection capability. In other words, before we cast doubt on the portfolio decision making of institutional investors based on the above analysis, we need to examine if they were able to separate the above-average SEO firms from the truly underperforming ones.

4. SEO performance conditional on institutional investment

4.1. Data and methodology

We now examine more closely the pattern of institutional investment in SEO firms surrounding an offer. First, we sort the sample of SEO firms into quintiles based on the increase in institutional holdings around the offer. We categorize the lowest, middle three, and highest quintiles as low, moderate, and high institutional-buying stocks, respectively. Next, for each institutional-buying sub group so formed, we measure mean pre-issue stock returns during months -12 and -2 relative to the offer date and one-year post-issue stock returns from the date of the offer.[8] We measure all returns relative to a portfolio based on a triple-sort on DGTW characteristics of size, book-to-market, and momentum. The DGTW database provides monthly value-weighted returns for each of 125 portfolios. We extract monthly returns for sample firms from CRSP. Then we compute the benchmark-adjusted returns for each sample stock by subtracting the compounded return on the matched portfolio from the sample stock return over the same time period. If a sample stock is delisted during the period, we use the associated benchmark portfolio's returns to replace the sample stock's returns after delisting.

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[7] The increase in institutional ownership does not appear to be the result of increased analyst coverage triggered by the (SEO). The median number of analysts covering (SEO) firms remains unchanged at 3.67 analysts in quarters -2, -1, and 0 relative to the issue quarter. The mean number of analysts covering (SEO) firms shows only a slight increase; specifically, 5.09, 5.12, and 5.21 analysts in quarters -2, -1, and 0 relative to the issue quarter, respectively.

[8] In unreported analysis, we also replicate the analysis with post-issue returns measured not from the issue date, but from the end of the issue quarter. This coincides with the date at which the change in institutional holdings is measured. The results are qualitatively identical to those presented here.

To gain additional insight into whether institutions can discern the good SEOs from the bad, we make use of sell-side analysts' earnings forecasts contained in the IBES database. For each institutional-buying subgroup of SEO firms, we calculate an IBES revision ratio for the first and second quarters following the offer quarter. Every quarter for each institutional-buying subgroup, we count the number of firms that experienced earnings forecast upgrades and downgrades. The IBES revision ratio is calculated as the number of upgraded stocks less the number of downgraded stocks divided by the total number of stocks within each quintile.[9] Thus a higher IBES revision ratio for an institutional-buying subgroup indicates a more positive outlook by sell-side analysts regarding the firms in that subgroup.

4.2. SEO performance conditional on institutional investment

Table 3 reports results on the performance of issuers conditional on institutional investment. Column 2 shows the mean change in holdings of each institutional-buying subgroup between quarters −1 and +1 relative to the offer quarter (i.e., from the end of the quarter immediately preceding the offer quarter to the end of the one immediately succeeding it).[10] Columns 3 and 4 contain details of pre- and post-issue stock market performance of each subgroup. Columns 5 and 6 report the IBES revision ratios for the two quarters following the offer quarter for each subgroup. Also reported are the p-values for the null hypothesis that ownership changes, benchmark-adjusted returns, or IBES revision ratios are equal for the extreme institutional ownership change quintiles. The p-values are calculated using the Satterthwaite test, which does not assume equal variances for the low- and high-buying subgroups.

Panel A has results for subgroups formed based on ownership changes for all institutions. Even though institutions increase their holdings of issuers relative to non-issuers in the offer quarter on average, a wide dispersion in the changes is evident. Institutions as a whole decreased their holdings during quarters −1 through +1 in firms in the low-buying subgroup (quintile 1) by a mean amount of 4.59%. By comparison, in the high-buying subgroup (quintile 5), they increased their holdings by 21.06% during the same period.

The third column of Panel A reports that SEO firms experienced benchmark-adjusted returns ranging from 30.05% for the low-buying subgroup to 54.84% for the high-buying subgroup in the months preceding the offer. This reflects the sharp run-up in stock market performance of firms conducting SEOs and is consistent with earlier research on this subject.[11] Similar trends are apparent in the first three

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[9] Qualitative results are similar if we define the IBES revision ratio as the number of upgraded stocks divided by the total number of stocks within each quintile.

[10] In an unreported robustness check, we conduct a similar analysis sorting the sample of (SEO) firms into quintiles based on institutional change in holdings between quarters −1 and 0 relative to the offer quarter (i.e., during the offer quarter) and obtain results that are qualitatively identical to the results presented here.

[11] See, for example, Loughran and Ritter (1995) and Spiess and Affleck-Graves (1995).

Table 3

Presents data regarding post-issue stock market performance of seasoned equity offering (SEO) firms relative to a portfolio matched based on size, book-to-market ratio, and price momentum. The sample of SEO firms is sorted into quintiles by the amount of increase in institutional holdings between quarters −1 and +1 relative to the offer quarter. The lowest, middle three, and highest quintiles are categorized as low, moderate, and high institutional-buying stocks, respectively. Panels A, B, and C report this data for buying subgroups formed by sorting on the increase in total institutional holdings, mutual fund holdings, and non-mutual fund institutional holdings, respectively. Column 2 has the amount of change in holdings for each subgroup. Columns 3 and 4 report (relative to their matching characteristic portfolios) the pre-issue returns from month −12 to month −2 prior to the offer date and the one-year post-issue mean percentage stock returns from the offer date. The last two columns present the Institutional Brokers Estimate System (IBES) revision ratio, which is computed as the number of upgraded stocks minus the number of downgraded stocks to the total number of stocks within each subgroup in that quarter. Analyst forecasts are obtained from the IBES database. Data shown are for the first two quarters following the offer.

Institutional buying	Mean change	Pre-issue	Post-issue	IBES revision ratio	
		months −12 to −2	1 year	Quarter 1	Quarter 2
Panel A: all Institutions					
Low	−4.59%	30.05%	−6.77%	−4.69%	−6.33%
Moderate	5.91	38.16	−0.13	−1.04	−3.83
High	21.06	54.84	7.87	2.05	3.20
High − low difference	25.65%	24.79%	14.60%	6.70%	9.50%
(*p*-value)	(<0.001)	(<0.001)	(<0.001)	(<0.001)	(<0.001)
Panel B: mutual funds					
Low	−2.21%	36.32%	−6.13%	−3.47%	−6.49%
Moderate	0.69	35.16	0.67	−3.06	−3.20
High	5.91	57.11	4.48	3.71	3.81
High − low difference	8.11%	20.79%	10.61%	7.20%	10.30%
(*p*-value)	(<0.001)	(<0.001)	(<0.001)	(<0.001)	(<0.001)
Panel C: non-mutual fund institutions					
Low	−3.90%	35.51%	−7.97%	−3.98%	−6.19%
Moderate	4.10	36.33	1.00	−1.52	−3.27
High	16.18	54.65	5.53	1.80	1.52
High − low difference	20.08%	19.14%	13.56%	5.81%	7.72%
(*p*-value)	(<0.001)	(<0.001)	(<0.001)	(<0.001)	(<0.001)

columns of Panels B and C, which report results for mutual funds and non-mutual fund institutions.

Most interesting is the information reported on post-issue benchmark-adjusted returns of SEO firms. We see in column 4 of Panel A that SEO firms that experienced the greatest increases in institutional holdings significantly outperformed their benchmark portfolios compared with SEO firms that had lesser increases or decreases in institutional holdings around the offer. In the one-year period following

the offer, SEO firms in the high-buying subgroup beat their benchmark portfolios by 7.87%, while those in the low-buying subgroup underperformed by 6.77%. The 14.60 percentage point difference in adjusted performance between these two extreme quintiles is highly statistically significant (at the 1% level). The return pattern in the year following the offer extends to both mutual funds and non-mutual fund institutions when they are examined separately. With respect to mutual fund ownership changes, Panel B shows that high-buying firms outperformed their benchmark portfolios by 4.48%, while low-buying firms underperformed by 6.13%. With respect to non-mutual fund ownership changes, Panel C shows that high-buying firms outperformed their benchmark portfolios by 5.53%, while low-buying firms underperformed by 7.97%. The mutual fund and non-mutual fund 10.61 and 13.56 percentage point differentials in adjusted performance between the top and bottom quintiles of SEO firms respectively are both highly statistically significant (at the 1% level).

We also calculated benchmark-adjusted returns for years two through five following the offer. These unreported results indicate that the benchmark-adjusted returns of low- and high-buying subgroups are not significantly different from each other in any year for any institutional category. This suggests that the difference in post-issue stock market performance is confined to the year immediately following the offer. It also suggests that the superior one-year stock market performance of SEO firms heavily bought by institutions is lasting, as we find no evidence of return reversal.

The last two columns of Table 3 report the IBES revision ratios calculated for each institutional-buying subgroup. Across all institutional categories, issuers in the high institutional-buying subgroup exhibited significantly greater ratios than issuers in the low institutional-buying subgroup. That is, sell-side analysts forecast a positive outlook three to six months after the offer, for precisely those SEO firms in which institutions invested heavily around the offer.

These post-offer returns and sell-side analyst earnings revisions for SEO firms are particularly telling when we compare them with our control sample of matched non-issuers. Analogous to the methodology used for SEO firms, we form buying subgroups of matching firms based on changes in institutional investment between quarters −1 and +1 relative to the offer quarter of the corresponding SEO firm. Results are presented in Table 4. For all institutional categories, no clearly discernible relationship exists between institutional investment and pre- and post-issue stock market performance across buying subgroups of matched non-issuers. Further, the difference in post-issue stock market performance between any of the top and bottom institutional-buying quintiles is not statistically significant at conventional levels. In addition, the relationship between institutional ownership changes and IBES revision ratios that exists for SEO firms is absent in the sample of matched non-issuers.

The above results indicate that although institutions increased their proportional investments in SEO firms relative to comparable non-issuers, these increases apparently do not stem from ignorance of the fact that the average SEO is (arguably) bad news. Institutions increased their investment in those issuers that, on average,

Table 4

Presents data regarding post-issue stock market performance of non-issuer firms matched to the seasoned equity offering (SEO) sample based on size, book-to-market ratio, and price momentum. The matched sample is sorted into quintiles by the amount of increase in institutional holdings between quarters −1 and +1 relative to the matching offer quarter. The lowest, middle three, and highest quintiles are categorized as low, moderate, and high institutional-buying stocks, respectively. Panels A, B, and C report this data for buying subgroups formed by sorting on increase in total institutional holdings, mutual fund holdings, and non-mutual fund institutional holdings, respectively. Column 2 presents the amount of change in holdings for each matching subgroup. Columns 3 and 4 report (relative to their matching characteristic portfolios) the pre-issue returns from month −12 to month −2 prior to the matching offer date and the one-year post-issue mean percentage stock returns from the matching offer date. The last two columns present the Institutional Brokers Estimate System (IBES) revision ratio, which is computed as the number of upgraded stocks minus the number of downgraded stocks to the total number of stocks within each subgroup in that quarter. Analyst forecasts are obtained from the IBES database. Data shown are for the first two quarters following the offer.

Institutional buying	Mean change	Pre-issue	Post-issue	IBES revision ratio	
		months −12 to −2	1 year	Quarter 1	Quarter 2
Panel A: all institutions					
Low	−6.02%	28.74%	−2.95%	−2.12%	−2.74%
Moderate	0.46	22.53	0.27	−2.81	−3.12
High	8.65	25.10	−2.43	−0.64	−1.55
High − low difference	14.67%	−3.64%	0.50%	1.5%	1.2%
(*p*-value)	(<0.001)	(0.403)	(0.849)	(0.763)	(0.855)
Panel B: mutual funds					
Low	−1.82%	25.51%	1.48%	−2.77%	−3.06%
Moderate	1.33	23.32	−1.56	2.95	4.16
High	2.48	25.94	−1.37	−2.29	−1.46
High − low difference	4.30%	0.43%	−2.86%	0.48%	−1.6%
(*p*-value)	(<0.001)	(0.917)	(0.318)	(0.892)	(0.767)
Panel C: non-mutual fund institutions					
Low	−5.03%	30.71%	−0.92%	−3.17%	−4.38%
Moderate	0.33	21.71	0.10	−2.58	−4.86
High	6.58	25.64	−3.98	−1.55	−0.51
High − low difference	11.61%	−5.07%	−3.06%	1.7%	3.9%
(*p*-value)	(<0.001)	(0.257)	(0.297)	(0.416)	(0.109)

outperformed their benchmark portfolios in the year following the offer by significantly more than the ones that underperformed their benchmark portfolios. The apparent stock-picking prowess around SEOs displayed by the institutions in our sample is consistent with either superior information processing or an uneven disclosure of information at the time of the SEO. This evidence is consistent with earlier literature that finds that institutions have some stock selection ability in IPOs (see, e.g., Field, 1995; Krigman et al., 1999).

4.3. Robustness check: price momentum effect?

In Table 3, across all categories of institutional investment, a substantial degree of correlation exists between pre-issue adjusted returns between months -12 and -2 relative to the offer and post-offer one-year returns. This correlation leads one to suspect if the above results are simply a manifestation of institutional portfolio managers buying the biggest prior winners around the offer date. In other words, we want to admit the possibility that these findings are not a result of informed portfolio managers, but instead the outcome of an uninformed momentum strategy.[12] In unreported analysis, we sorted the sample of SEO firms into quintiles based on pre-issue benchmark returns and examined the post-issue one-year, two-year, and three-year benchmark-adjusted returns for each of these quintiles. We find no significant correlation between the pre- and post-issue adjusted returns. That is, the significant outperformance of those SEO firms in which institutional holdings increased around the offer, which we show, cannot be interpreted as a naive momentum strategy.

4.4. Robustness check: size effect?

McLaughlin et al. (1996) and Brav et al. (2000) find that small stocks exhibit the greatest price declines following SEOs. Given the documented tendency for institutions to hold large stocks (see, e.g., Falkenstein, 1996; Gompers and Metrick, 2001), a plausible potential explanation for the above results is that institutions buy a greater share of large-firm SEOs, which in turn perform better than their smaller counterparts. To examine the possibility that our results are caused by a size (or liquidity) effect instead of institutional selection ability, we divide our sample based on each quarter's beginning market capitalization using the NYSE-quintile break points. Stocks in the lowest, middle three, and highest NYSE quintiles are categorized as small-, mid-, and large-cap stocks, respectively.

Table 5 reports the size-stratified institutional ownership statistics for the SEO and matched samples. Panel A shows that the pattern of ownership levels across firm-size subgroups for issuers and matched non-issuers is similar to those reported earlier. Panel B shows that institutions significantly increase their investments in SEO firms regardless of firm size. Perhaps surprisingly, institutions show modestly greater ownership increases in small issuers relative to large issuers.

Table 6 reports size-stratified returns and IBES revision ratios for SEO firms. Mirroring our earlier findings, regardless of firm size, issuers exhibiting the greatest increase in institutional ownership outperformed their benchmark portfolios the most in the year following the issue. Panel A.1 shows that small issuers most heavily bought by all institutions outperformed their benchmark portfolios by an average of 13.19%, whereas those experiencing the steepest ownership decline underperformed by 8.03%. This 21.22 percentage point difference is statistically significant at the 1%

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[12] Recently, momentum strategies have been extensively studied in the finance literature. See Jegadeesh and Titman (1993); Grinblatt et al. (1995); Chan et al. (1996) on this subject.

Table 5

Total institutional holdings in seasoned equity offering (SEO) firms and matched non-issuers conditional on market capitalization. Institutional holdings are obtained from the Spectrum database compiled by CDA Investment Technologies. Details about the database can be found in the main body of the paper. Institutional holdings presented below are for each quarter relative to the offer quarter, which is labeled month 0. Ownership levels and changes are reported as a percentage of the issuers' or matched non-issuers' outstanding shares. For each stock and each quarter, we also measure beginning-of-quarter market capitalization. Stocks in the lowest, middle three, and highest NYSE quintiles are categorized as small, mid, and large capitalization stocks, respectively. Panels A.1 through A.3 report mean (median) ownership levels at the end of each quarter surrounding the offer for all institutions, mutual funds, and non-mutual fund institutions, respectively. Panels B.1 through B.3 report the mean change in holdings over each quarter surrounding the offer for all institutions, mutual funds, and non-mutual fund institutions, respectively. Panel B also provides p-values in parentheses for the null hypothesis that the quarterly changes in holdings for SEO firms and matched non-issuers are equal.

	Quarter						
	−2	−1	0	1	2	3	4
Panel A: levels of holdings							
A.1. All institutions							
A.1.1. Small cap							
SEO firms	28.38	29.56	36.51	36.17	37.09	38.52	39.96
(N = 653)	(26.71)	(26.95)	(35.09)	(35.75)	(37.97)	(38.60)	(40.85)
Matched non-issuers	22.59	22.45	22.29	22.34	22.76	22.46	23.67
	(16.00)	(16.31)	(16.29)	(17.27)	(17.64)	(16.00)	(17.40)
A.1.2. Mid cap							
SEO firms	28.89	30.14	36.32	36.33	37.08	37.52	38.38
(N = 1,926)	(25.69)	(26.91)	(35.50)	(35.38)	(36.20)	(36.45)	(37.30)
Matched non-issuers	22.85	22.70	22.48	22.84	22.41	23.34	23.86
	(15.59)	(15.50)	(15.07)	(15.23)	(15.86)	(15.76)	(16.48)
A.1.3. Large cap							
SEO firms	31.64	33.40	38.20	38.84	40.12	40.92	40.27
(N = 333)	(29.45)	(30.78)	(36.85)	(37.66)	(39.65)	(40.67)	(40.26)
Matched non-issuers	21.12	21.03	20.99	20.83	21.20	21.92	23.81
	(12.97)	(13.28)	(13.61)	(13.63)	(14.91)	(15.03)	(16.75)
A.2. Mutual funds							
A.2.1. Small cap							
SEO firms	2.97	3.35	4.65	4.68	4.88	4.87	5.03
(N = 653)	(1.55)	(2.01)	(3.27)	(3.10)	(3.47)	(3.60)	(3.89)
Matched non-issuers	2.44	2.40	2.41	2.50	2.57	2.33	2.40
	(0.30)	(0.34)	(0.45)	(0.36)	(0.33)	(0.22)	(0.26)
A.2.2. Mid cap							
SEO firms	3.17	3.44	4.53	4.44	4.46	4.50	4.56
(N = 1,926)	(1.67)	(1.93)	(3.10)	(3.00)	(3.15)	(3.15)	(3.26)
Matched non-issuers	2.25	2.28	2.28	2.35	2.47	2.47	2.54
	(0.09)	(0.09)	(0.02)	(0.04)	(0.03)	(0.06)	(0.12)
A.2.3. Large cap							
SEO firms	3.70	4.10	5.05	5.06	5.23	5.48	5.32

Table 5 (*Continued*)

	Quarter						
	−2	−1	0	1	2	3	4
(N = 333)	(2.09)	(2.52)	(3.70)	(3.44)	(3.53)	(3.64)	(3.33)
Matched non-issuers	2.10	2.11	2.12	2.18	2.29	2.44	2.71
	(0.15)	(0.03)	(0.00)	(0.00)	(0.01)	(0.07)	(0.22)
A.3. Non-mutual fund institutions							
A.3.1. Small cap							
SEO firms	18.40	19.14	24.05	23.65	24.19	25.38	26.25
(N = 653)	(16.72)	(17.67)	(23.12)	(23.07)	(23.40)	(25.18)	(26.15)
Matched non-issuers	14.65	14.60	14.56	14.63	14.93	15.00	15.83
	(9.71)	(9.52)	(9.93)	(9.74)	(10.26)	(9.43)	(11.99)
A.3.2. Mid cap							
SEO firms	18.51	19.24	23.70	23.84	24.32	24.55	25.20
(N = 1,926)	(15.65)	(16.35)	(22.06)	(22.39)	(22.64)	(22.53)	(23.34)
Matched non-issuers	15.23	15.15	15.01	15.21	15.78	15.75	16.22
	(9.38)	(9.25)	(9.15)	(9.33)	(9.94)	(10.04)	(10.65)
A.3.3. Large cap							
SEO firms	19.56	20.79	24.28	24.82	25.62	25.95	25.55
(N = 333)	(17.89)	(18.32)	(22.50)	(23.33)	(24.17)	(24.79)	(23.75)
Matched non-issuers	13.95	13.95	14.00	13.92	14.21	14.85	15.99
	(8.38)	(8.15)	(8.29)	(8.53)	(10.02)	(10.68)	(12.13)

	Between quarters					
	−2 to −1	−1 to 0	0 to1	1 to 2	2 to 3	3 to 4
Panel B: mean change in holdings						
B.1. All institutions						
B.1.1. Small cap						
SEO firms	1.65	7.63	−1.10	0.84	0.48	0.22
Matched non-issuers	0.41	0.31	0.29	0.48	0.17	0.49
Difference in changes	1.44	7.17	−0.18	0.28	0.38	−0.06
(*p*-value)	(<0.001)	(<0.001)	(0.638)	(0.507)	(0.416)	(0.928)
B.1.2. Mid cap						
SEO firms	1.63	6.68	0.11	0.74	0.36	0.02
Matched non-issuers	0.41	0.41	0.59	0.75	0.34	0.30
Difference in changes	1.34	6.20	−0.54	−0.02	0.05	−0.22
(*p*-value)	(<0.001)	(<0.001)	(0.008)	(0.945)	(0.836)	(0.384)
B.1.3. Large cap						
SEO firms	1.94	5.60	0.73	1.29	0.06	0.06
Matched non-issuers	0.49	0.41	0.19	0.43	0.69	0.63
Difference in changes	1.66	5.46	0.44	0.70	−0.54	−0.53
(*p*-value)	(<0.001)	(<0.001)	(0.275)	(0.082)	(0.171)	(0.135)

Table 5 (*Continued*)

	Between quarters					
	−2 to −1	−1 to 0	0 to 1	1 to 2	2 to 3	3 to 4
B.2. Mutual funds						
B.2.1. Small cap						
SEO firms	0.43	1.39	0.07	0.19	−0.05	0.03
Matched non-issuers	0.02	0.06	0.10	0.11	−0.07	0.08
Difference in changes	0.43	1.32	0.00	0.08	0.04	−0.09
(*p*-value)	(0.001)	(<0.001)	(0.992)	(0.523)	(0.783)	(0.603)
B.2.2. Mid cap						
SEO firms	0.32	1.15	−0.08	0.02	0.09	−0.04
Matched non-issuers	0.07	0.06	0.09	0.15	0.06	0.04
Difference in changes	0.31	1.09	−0.17	−0.15	0.04	−0.05
(*p*-value)	(<0.001)	(<0.001)	(0.010)	(0.020)	(0.635)	(0.545)
B.2.3. Large cap						
SEO firms	0.44	1.07	0.02	0.16	−0.02	−0.08
Matched non-issuers	0.11	0.06	0.06	0.10	0.05	0.08
Difference in changes	0.32	1.12	−0.06	0.05	−0.09	−0.15
(*p*-value)	(0.009)	(<0.001)	(0.643)	(0.765)	(0.548)	(0.351)
B.3. Non-mutual fund institutions						
B.3.1. Small cap						
SEO firms	1.02	5.35	−0.25	0.49	0.43	0.25
Matched non-issuers	0.35	0.25	0.18	0.28	0.30	0.34
Difference in changes	0.83	4.92	−0.34	0.18	0.17	−0.07
(*p*-value)	(0.016)	(<0.001)	(0.297)	(0.550)	(0.633)	(0.886)
B.3.2. Mid cap						
SEO firms	1.01	4.75	0.19	0.51	0.22	0.07
Matched non-issuers	0.29	0.24	0.35	0.64	0.23	0.28
Difference in changes	0.76	4.44	−0.24	−0.12	0.02	−0.19
(*p*-value)	(<0.001)	(<0.001)	(0.127)	(0.505)	(0.921)	(0.348)
B.3.3. Large cap						
SEO firms	1.29	4.04	0.59	0.78	−0.02	0.14
Matched non-issuers	0.37	0.33	0.18	0.36	0.56	0.54
Difference in changes	1.12	3.83	0.34	0.30	−0.57	−0.33
(*p*-value)	(0.001)	(<0.001)	(0.282)	(0.309)	(0.074)	(0.252)

level. Panels A.2 and A.3 show that the return differentials of 12.99 and 14.60 percentage points for mid- and large-cap issuers, respectively, are also significant at the 1% level. Also mirroring earlier results, regardless of firm size, issuers in the high institutional-buying subgroup exhibited significantly greater IBES revision ratios than issuers in the low institutional-buying subgroup. Panels B and C, which report results for mutual funds and non-mutual fund institutions, show a similar pattern in both post-issue returns and IBES revision ratios across size categories. However, for mutual funds, the return differentials for small and large issuers, although

Table 6

Presents data regarding post-issue stock market performance of seasoned equity offering (SEO) firms relative to a portfolio matched based on size, book-to-market ratio, and price momentum. The sample of SEO firms is sorted into quintiles by the amount of increase in institutional holdings between quarters −1 and +1 relative to the offer quarter. The lowest, middle three, and highest quintiles are categorized as low, moderate, and high institutional-buying stocks, respectively. Panels A, B, and C report this data for buying subgroups formed by sorting on increase in total institutional holdings, mutual fund holdings, and non-mutual fund institutional holdings, respectively. For each stock and each quarter, we also measure beginning-of-quarter market capitalization. Stocks in the lowest, middle three, and highest NYSE quintiles are categorized as small, mid, and large capitalization stocks, respectively. We report the results for the capitalization subgroups within each panel. Column 2 presents the amount of change in holdings for each subgroup. Columns 3 and 4 report (relative to their matching characteristic portfolios) the pre-issue returns from month −12 to month −2 prior to the offer date and the one-year post-issue mean percentage stock returns from the offer date. The last two columns present the Institution Brokers Estimate System (IBES) revision ratio, which is computed as the number of upgraded stocks minus the number of downgraded stocks to the total number of stocks within each quintile in that quarter. Analyst forecasts are obtained from the IBES database. Data shown are for the first two quarters following the offer.

Institutional buying	Mean	Pre-issue	Post-issue	IBES revision ratio	
	change	months −12 to −2	1 year	Quarter 1	Quarter 2
Panel A: all institutions					
A.1. small cap					
Low	−3.92%	15.22%	−8.03%	−3.69%	−6.23%
Moderate	6.28	46.41	0.26	−1.01	−5.37
High	21.12	61.08	13.19	3.21	2.04
High − low difference	25.04%	45.86%	21.22%	6.90%	8.27%
(*p*-value)	(<0.001)	(<0.001)	(0.004)	(0.029)	(0.011)
A.2. mid cap					
Low	−4.46%	33.78%	−6.94%	−5.01%	−6.96%
Moderate	5.78	36.80	−0.53	−1.46	−3.84
High	20.92	52.42	6.05	1.17	2.19
High − low difference	25.38%	18.64%	12.99%	6.18%	9.15%
(*p*-value)	(<0.001)	(<0.001)	(<0.001)	(<0.001)	(<0.001)
A.3. large cap					
Low	−5.80%	29.91%	−4.83%	−4.13%	−3.33%
Moderate	6.07	35.21	1.10	0.97	−1.92
High	21.64	58.45	9.77	4.17	9.37
High − low difference	27.44%	28.54%	14.60%	8.30%	12.70%
(*p*-value)	(<0.001)	(0.013)	(0.057)	(0.012)	(<0.001)
Panel B: mutual funds					
B.1. small cap					
Low	−1.97%	38.70%	−1.47%	0.34%	−8.34%
Moderate	0.68	38.83	0.86	−2.78	3.28
High	5.94	59.06	4.70	3.02	3.08
High − low difference	7.91%	20.36%	6.17%	2.68%	11.42%
(*p*-value)	(<0.001)	(0.085)	(0.412)	(0.367)	(<0.001)

Table 6 (*Continued*)

Institutional buying	Mean	Pre-issue	Post-issue	IBES revision ratio	
	change	months −12 to −2	1 year	Quarter 1	Quarter 2
B.2. mid cap					
Low	−2.21%	36.69%	−7.80%	−5.09%	−6.47%
Moderate	0.68	34.04	0.05	−3.03	−3.68
High	5.76	57.72	5.09	3.51	2.62
High − low difference	7.98%	21.03%	12.89%	8.60%	9.09%
(*p*-value)	(<0.001)	(<0.001)	(<0.001)	(<0.001)	(<0.001)
B.3. large cap					
Low	−2.36%	33.05%	−3.59%	−0.81%	−4.78%
Moderate	0.75	35.95	3.07	−3.63	0.20
High	6.52	51.14	1.24	5.62	10.15
High − low difference	8.88%	18.09%	4.83%	6.43%	14.93%
(*p*-value)	(<0.001)	(0.062)	(0.509)	(0.013)	(<0.001)
Panel C: non-mutual fund institutions					
C.1. small cap					
Low	−4.27%	35.32%	−7.31%	−3.58%	−7.93%
Moderate	4.05	39.82	0.87	−1.10	−5.96
High	16.17	61.46	10.47	2.93	2.65
High − low difference	20.44%	26.14%	17.78%	6.51%	10.58%
(*p*-value)	(<0.001)	(0.034)	(0.019)	(0.058)	(0.003)
C.2. mid cap					
Low	−3.56%	36.69%	−8.22%	−3.80%	−6.39%
Moderate	4.10	35.80	0.39	−2.13	−2.71
High	16.28	52.39	4.89	0.82	−0.21
High − low difference	19.84%	15.70%	13.11%	4.62%	6.18%
(*p*-value)	(<0.001)	(0.003)	(<0.001)	(0.010)	(0.002)
C.3. large cap					
Low	−5.11%	30.06%	−7.49%	−5.49%	−2.95%
Moderate	4.17	34.79	3.58	0.48	1.88
High	15.76	56.61	2.30	4.95	8.17
High − low difference	20.87%	26.55%	9.79%	10.44%	11.12%
(*p*-value)	(<0.001)	(0.017)	(0.212)	(0.003)	(<0.001)

economically significant, are statistically insignificant at conventional levels. For non-mutual funds, the return differential for large issuers is statistically insignificant.

Table 7, in contrast, shows no discernable pattern in post-issue returns for matched non-issuers in any of the size categories. Likewise, no discernable pattern is apparent in the IBES revision ratios for any size-stratified matched non-issuers.

Table 7
Presents data regarding post-issue stock market performance of non-issuer firms matched to the seasoned equity offering SEO sample based on size, book-to-market ratio, and price momentum. The matched sample is sorted into quintiles by the amount of increase in institutional holdings between quarters −1 and +1 relative to the matching offer quarter. The lowest, middle three, and highest quintiles are categorized as low, moderate, and high institutional-buying stocks, respectively. Panels A, B, and C report this data for buying subgroups formed by sorting on increase in total institutional holdings, mutual fund holdings, and non-mutual fund institutional holdings, respectively. For each stock and each quarter, we also measure beginning-of-quarter market capitalization. Stocks in the lowest, middle three, and highest NYSE quintiles are categorized as small, mid, and large capitalization stocks, respectively. We report the results for the capitalization subgroups within each panel. Column 2 presents the amount of change in holdings for each matching subgroup. Columns 3 and 4 report (relative to their matching characteristic portfolios) the pre-issue returns from month −12 to month −2 prior to the matching offer date and the one-year post-issue mean percentage stock returns from the matching offer date. The last two columns present the Institutional Broker Estimate System (IBES) revision ratio, which is computed as the number of upgraded stocks minus the number of downgraded stocks to the total number of stocks within each quintile in that quarter. Analyst forecasts are obtained from the IBES database. Data shown are for the first two quarters following the offer.

Institutional buying	Mean change	Pre-issue	Post-issue	IBES revision ratio	
		months −12 to −2	1 year	Quarter 1	Quarter 2
Panel A: all institutions					
A.1. small cap					
Low	−5.29%	40.13%	−8.06%	−1.52%	−2.58%
Moderate	0.47	32.99	0.11	−0.97	−7.51
High	7.78	50.37	−3.73	1.88	1.44
High − low difference	13.06%	10.24%	4.33%	3.40%	4.02%
(*p*-value)	(<0.001)	(0.398)	(0.446)	(0.295)	(0.226)
A.2. mid cap					
Low	−6.40%	28.58%	−3.20%	−3.74%	−6.34%
Moderate	0.45	21.43	0.05	−3.40	−4.51
High	8.98	21.02	−1.43	−1.72	−1.83
High − low difference	15.38%	−7.55%	1.77%	2.02%	4.51%
(*p*-value)	(<0.001)	(0.159)	(0.631)	(0.177)	(0.09)
A.3. large cap					
Low	−5.37%	16.78%	2.99%	0.38%	2.24
Moderate	0.49	16.11	1.08	−2.99	−3.93
High	7.98	12.66	−4.97	4.04	8.08
High − low difference	13.35%	−4.11%	−7.97%	3.66%	5.84%
(*p*-value)	(<0.001)	(0.579)	(0.181)	(0.191)	(0.054)
Panel B: mutual funds					
B.1. small cap					
Low	−1.92%	32.21%	−6.36%	−2.50%	−3.17%
Moderate	0.018	39.14	1.36	−1.44	−7.54
High	2.44	40.04	−8.92	−4.26	−1.19

Table 7 (*Continued*)

Institutional buying	Mean change	Pre-issue	Post-issue	IBES revision ratio	
		months −12 to −2	1 year	Quarter 1	Quarter 2
High − low difference	4.36%	7.83%	−2.55%	−1.76%	1.98%
(*p*-value)	(<0.001)	(0.407)	(0.619)	(0.389)	(0.519)
B.2. mid cap					
Low	−1.80%	26.17%	3.66%	2.97%	3.55%
Moderate	0.01	21.31	−2.17	3.89	3.59
High	2.47	23.10	−1.75	1.11	0.92
High − low difference	4.28%	−3.07%	−5.41%	−1.86%	−2.63%
(*p*-value)	(<0.001)	(0.570)	(0.149)	(0.694)	(0.511)
B.3. large cap					
Low	−1.76%	15.69%	1.92%	2.31%	1.12%
Moderate	0.02	14.78	−2.24	0.43	1.23
High	2.57	19.01	9.22	5.70	6.49
High − low difference	4.33%	3.32%	7.30%	3.39%	5.37%
(*p*-value)	(<0.001)	(0.706)	(0.302)	(0.183)	(0.122)
Panel C: non-mutual fund institutions					
C.1. small cap					
Low	−4.79%	44.23%	−4.38%	−1.27%	−2.89%
Moderate	0.36	31.39	−1.91	−1.01	−8.07
High	6.50	52.57	−2.42	1.06	−1.70
High − low difference	11.29%	8.34%	1.96%	2.33%	1.19%
(*p*-value)	(<0.001)	(0.513)	(0.774)	(0.475)	(0.690)
C.2. mid cap					
Low	−5.16%	29.71%	−1.97%	1.64%	1.55%
Moderate	0.31	20.81	0.60	−3.49	−5.27
High	6.65	21.29	−3.95	1.65	0.42
High − low difference	11.80%	−8.42%	−1.98%	0.01%	−1.13%
(*p*-value)	(<0.001)	(0.119)	(0.595)	(0.972)	(0.866)
C.3. large cap					
Low	−4.73%	19.08%	6.02%	0.17%	−1.66%
Moderate	0.35	15.12	0.45	−0.42	2.67
High	6.33	13.99	−5.55	1.61	3.72
High − low difference	11.06%	−5.08%	−11.57%	1.44%	5.38%
(*p*-value)	(<0.001)	(0.533)	(0.739)	(0.592)	(0.105)

Taken together, results in Tables 5–7 suggest that after controlling for size, it still appears that institutional investors either possess superior information processing abilities or are privy to information at the time of the SEO that is unavailable to individual investors.

5. Summary and conclusions

A large body of empirical research has examined the value added by active institutional portfolio management by comparing institutional portfolio returns with pre-defined benchmarks. We take an alternative tack, similar to previous studies of institutional trading around IPOs. We examine the value-adding nature of institutional portfolio management by studying the trading behavior instead of the performance of institutional portfolio management. We develop a straightforward test to understand if institutional money managers possess superior information- processing abilities relative to individual investors or are privy to information that is unavailable to individual investors.

Examining a sample of SEOs conducted during the period 1980 to 1995, we find that institutions increase their investment in SEO firms significantly more than in a matched sample of non-issuers. Given previous research that suggests the average SEO is bad news, this appears to be a counterintuitive investment strategy. However, upon imposing a foresight bias on institutions, we find that issuers experiencing the greatest increase in institutional investment around the offer date outperformed their benchmark portfolios in the year following the issue by a statistically and economically significant margin relative to those experiencing the greatest decrease. There is no such relationship for a control sample of non-issuers. Moreover, issuers with the greatest institutional investment are also found to have the highest ratio of sell-side analyst upgrades less downgrades to total forecasts in the two quarters following the issue. Again, no such relationship is found for a control sample of non-issuers. We interpret our results as evidence that institutions are able to identify above-average SEO firms at the time of equity issuance. This evidence is consistent with previous evidence from institutional investment around IPOs (see, e.g., Field, 1995; Krigman et al., 1999).

It is important to recognize that institutions' apparent stock picking prowess around SEOs perhaps is not the exclusive result of superior information processing but could instead be partly or wholly attributable to an uneven disclosure of information at the time of the SEO. Regulation FD, which took effect after our sample period (October 23, 2000), is the SEC's effort to level the playing field for investors by requiring public companies to fully disclose material data and relevant information that could influence investment decisions to all investors at the same time, not just selectively to institutions. If instead we had found that institutions fared no better than individuals in picking SEO stocks, it would have called into question the need for Regulation FD. Although the net benefit of Regulation FD could be debatable from a social welfare perspective, our results suggest that it is at least plausible that the institutional foresight displayed in our sample is the result of selective information disclosure to institutions during the SEO marketing process.

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