



Intended use of proceeds and the long-run performance of seasoned equity issuers

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ABSTRACT

We investigate the relation between seasoned equity issuers' stated intended use of proceeds and their subsequent long-run stock and operating performance. Stated intended uses of proceeds are: investment, recapitalization, and general corporate purposes. We find that issuers stating recapitalization or general corporate purposes experience abnormally poor performance in the subsequent three years, but issuers stating investment display little or no subsequent underperformance. These results suggest that issuers with specific plans to use the proceeds for investment purposes are credibly signaling profitable investment opportunities, whereas issuers without specific investment plans are more likely to be opportunistic market timers. Consistent with a timing motive, the secondary component of the offering is significantly larger when the issuer is not specific about investment plans.

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1. Introduction

Loughran and Ritter (1995) and Spiess and Affleck-Graves (1995) document that seasoned equity issuers experience poor long-run stock performance compared to matched non-issuers. Supportive evidence is provided by, among others, Eberhart and Siddique (2002) who compare equity issuers' long-run stock returns to their bond returns, and Burch et al. (2004) who conduct out-of-sample tests using 1930s and 1940s issuers. The findings of these studies support the view that managers announce seasoned equity offerings (SEOs) when the company's stock is overvalued, the market does not revalue the stock appropriately, and the stock is still overvalued when it is issued. The implication is that managers of equity issuing firms behave opportunistically by exploiting market misvaluation and investors are slow to react.

Loughran and Ritter (1997) provide evidence that SEO issuers experience a post-issue decline in operating performance and link this decline to issuers' poor subsequent stock returns. They explain that when issuing firms experience a decline in operating performance post-issue, investors recognize that the stock is still overvalued and adjust prices downward, and thus we observe the post-issuance stock underperformance. From an economic standpoint, it is important to understand why we observe poor long-run stock and operating performance subsequent to SEOs.

The purpose of this study is to link the well-documented new issues puzzle with the intended use of proceeds as stated in the firm's proxy statement. The stated use of proceeds on issuers' registration statements (S-3 form) filed with the Securities and

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Exchange Commission (SEC) is almost always investment, debt repayment, or general corporate purposes. An issuer's stated use could provide insights about the firm's motives.

Firms raise external equity capital for a variety of reasons. One of the basic tenets of corporate financial theory is that firms with potentially value-adding investment projects, but not enough internal funds to finance the projects, should raise external capital to invest and expand. The equity markets provide a means for firms to sell stock and use the proceeds for investment purposes, such as acquisitions, capital expenditures, and research and development. An alternative use of proceeds to increasing investment is recapitalization; firms can issue equity and use the proceeds to repay debt obligations. Finally, some firms might not have a specific purpose for raising equity, or at least might not wish to reveal the intended purpose.

We hypothesize that firms issuing equity specifically for investment purposes are more likely to use the proceeds for value-adding investments and less likely to be opportunistic market timers. Accordingly, we expect little evidence of long-run underperformance for these issuers. This hypothesis is consistent with the findings of Walker and Yost (2008) that issuers stating specific investment plans experience a relatively favorable market reaction at the offer announcement and an improvement in industry-adjusted operating performance.

There are tax advantages to debt financing, and debt is typically a cheaper source of external financing than equity. Unless debt is excessive, recapitalizing by issuing equity to pay down debt might reduce shareholder value. To avoid this, management could recapitalize debt by issuing stock when investors are overly optimistic about the firm's future prospects, potentially resulting in relative devaluation over the long-run. For example, Hertzel and Li (2007) find that issuing firms that are overvalued tend to reduce debt after the issue. A different insight is offered by Walker and Yost (2008), who find that firms with a stated intention of paying down debt actually have leverage ratios three years after the SEO that are similar to leverage ratios prior to the SEO. Thus, firms issuing equity to refinance may be opportunistic market timers and, therefore, we expect these firms to experience poor long-run performance.

Often firms are vague and state only that the funds will be used for general corporate purposes. We hypothesize that these firms are more likely to be timing share overvaluation compared to firms that have specific investment purposes. Consequently, we expect negative long-run performance for these firms.

We examine buy-and-hold and calendar time abnormal returns during the three years following SEOs. We find significant negative average abnormal returns when the stated intended use of proceeds is recapitalization, weaker evidence of negative abnormal returns when the stated use is general corporate purposes, and insignificant average abnormal returns when the issuer cites specific investments plans for the proceeds.

Moreover, we provide evidence of significant declines in industry-adjusted operating performance subsequent to the issue when the intended use of proceeds is recapitalization or general corporate purposes, but observe little evidence of significant declines when investment is the stated intention. We find significant differences in subsequent performance between firms with a classification of investment and those classified otherwise. These results suggest that issuers that cite specific investment plans in their S-3 form are credibly signaling profitable investment opportunities, whereas issuers that cite debt repayment or general corporate purposes are more likely to be signaling insiders' beliefs that future firm prospects are less favorable than the current share price reflects. Our findings are consistent with Hertzel and Li (2007), who find that issuers with higher growth options invest more after the SEO and do not experience poor post-issue stock returns, but issuers with greater overvaluation decrease long-term debt and increase cash after the issue and suffer poor long-run stock performance. Our findings differ, however, from the result of Walker and Yost (2008) that issuers intending to decrease debt have subsequent improvements in industry-adjusted operating performance.

Like us, several recent studies partition seasoned issuers into specific classifications when studying long-run stock performance to provide insights about issuer motivations. Cornett et al. (1998) find that banks that conduct voluntary SEOs experience poor subsequent stock performance, whereas banks that conduct involuntary SEOs exhibit no abnormal performance. Kahle (2000) finds that new security sales in which there is abnormal insider selling prior to the issue underperform in the long run, whereas those with abnormal buying do not. Clarke et al. (2004) find that secondary SEOs underperform in the long-run only when the offering is sold by an insider. These studies collectively indicate that managers are able to take advantage of temporarily high prices by issuing overvalued equity, and investors are not quick to react. Finally, Gibson et al. (2004) find that issuers with the greatest increase in institutional investment around the offer exhibit significantly more favorable abnormal stock returns in the following year than issuers with the greatest decrease in institutional investment.

In a closely related study, Jeanneret (2005) examines post-SEO long-run stock returns of French issuers partitioned by the intended use of proceeds. He provides evidence of underperformance in issues where the stated purpose is investment, but reports no abnormal performance when the stated purpose is recapitalization. Our evidence on long-run returns differs markedly from his. We examine U.S. firms, study a larger sample of issuers, and corroborate our long-run stock return analysis with similar findings for operating performance.

Our study contributes to the literature in four ways. First, this paper is the first, to our knowledge, to investigate the link between the ex-ante stated use of proceeds and post-SEO long-run stock performance in the U.S. equity markets. Next, we take a second look at changes in operating performance across ex-ante stated uses and provide important new insights by employing a broader sample than that studied by Walker and Yost (2008). Our third contribution is that the partitioning of SEOs on the basis of the intended use of proceeds provides an opportunity to distinguish between timing and non-timing motives. Fourth, we provide evidence on the predictive ability of publicly-available information (i.e. the stated use of proceeds) for long-run returns of SEOs. Providing evidence of such ex-ante predictive ability is important for both investors and researchers of market efficiency. In this

Table 1

Descriptive statistics of SEOs by intended use of funds categories.

	Investment		Recapitalization		General corporate purposes	
	Mean	Median	Mean	Median	Mean	Median
Market value (\$ mil.)	753	336	632	359	1306	547
Offer proceeds (\$ mil.)	102.0	62.1	95.7	74.0	122.2	88.8
Relative offer size	0.23	0.20	0.26	0.22	0.18	0.16
Debt ratio	0.18	0.09	0.35	0.34	0.17	0.05
Industry-adjusted debt	0.00	−0.06	0.14	0.12	0.04	−0.05
Percentage secondary	13.1	0.0	22.4	10.0	27.8	17.5

This table presents descriptive statistics for 880 sample SEO issuers during 1997–2003. Three categories of issuers are presented based on the stated intended uses of funds. These categories are investment ($N = 283$), recapitalization ($N = 257$), and general corporate purposes ($N = 340$). Market value is the stock price times the number of shares outstanding on the day prior to the offer. Offer proceeds equals the offer price times the number of shares offered. Relative offer size equals the number of shares offered divided by the number of shares outstanding on the day prior to the offer. Debt ratio is the ratio of long-term debt plus short-term debt to total book assets, and is the year-end figure in the year prior to the issue. Industry-adjusted debt is the debt ratio of the issuing firm minus the debt ratio of the median firm in the issuer's industry. Percentage secondary is the percentage of total shares in the offering that are issued by selling shareholders, where the seller rather than the firm receives the proceeds. Sample firms are required to have at least some primary component.

regard, our study differs from those that examine firms' ex-post use of proceeds, such as [Hertzel and Li \(2007\)](#) and [Kim and Weisbach \(2008\)](#).¹

The paper is organized as follows. Section 2 describes the data, our use of proceeds classification, and sample statistics. In Section 3 we explain the methodologies that we employ to examine long-run stock and operating performance. Section 4 provides the results and Section 5 presents concluding remarks.

2. Sample selection, use of proceeds classification, and issuer characteristics

The initial sample of seasoned offerings is obtained from Securities Data Company's (SDC) Global New Issues Database and consists of traditional seasoned equity offerings during 1997–2003 that have at least some primary component. Excluded are initial public offerings, rights offers, shelf-registered offers, unit offers, ADRs, offerings by financials (SIC code 6000–6999) or utilities ((SIC code 4900–4999), and offerings by non-U.S. firms. To be included in the sample, firms must be listed on the NYSE, AMEX, or Nasdaq, and must have stock return data available from the Center for Research in Securities Prices (CRSP) during the three years subsequent to the issue. Also, the firm must have financial data available from COMPUSTAT.

We manually collect issuers' stated intended use of proceeds from their S-3 filings in EDGAR. Our sample begins in 1997 because the SEC phased companies into the EDGAR filing over a three-year period ending in May 1996, after which all companies were required to file electronically in EDGAR. We study three specific classifications for use of proceeds: investment, recapitalization, and general corporate purposes. Issuers in the first classification are those that prominently state that the proceeds will be used for investment purposes and that do not indicate that any of the proceeds will be used for debt repayment. Issuers in the second classification prominently list repayment of debt obligations as the intended use and make no mention of specific investment plans for the proceeds. Issuers in the third classification cite neither investment nor debt repayment, instead stating only general corporate purposes as the intended use of proceeds. A relatively small percentage of issuers specifically mention both investment and debt repayment in their filing. To avoid ambiguity, we exclude these issuers from the sample.²

This information is located in two places on the filing. If the first statement of the intended use of proceeds is not clear, then we manually examine the body of the filing for more specific information to more accurately classify the sample firm into one of the four classifications. In some cases a firm's initial filing is not complete and the use of proceeds is not provided. In these instances the company usually has a more complete supplemental filing and we collect the use of proceeds information from this filing.

[Table 1](#) provides descriptive statistics for our sample of 880 seasoned issuers partitioned by the use of proceeds. The size of the issuer and the offering proceeds are similar across investment and recapitalization classifications. The typical issuer that states 'investment' has a mean market value of \$753 million compared to \$632 million for the mean 'recapitalization' issuer; the medians are even closer. The corresponding mean proceeds are \$102.0 million and \$95.7 million. The size of the offering relative to the size of the issuer is approximately one-quarter. Firms that state 'general corporate purposes' are larger and raise more proceeds, but have smaller relative offer sizes. Notably, the ratio of debt to total assets is considerably higher for firms that have a stated intention of debt recapitalization, as we expect. The issuer's debt as a proportion of total assets is, on average,

¹ Our study is related to studies that examine the intended use of proceeds for IPOs. [Ljungqvist and Wilhelm \(2003\)](#) report greater underpricing when the use of proceeds is to fund operating expenses as opposed to capital expenditures, and [Leone et al. \(2007\)](#) find lower underpricing when there is greater specificity about the intended use of proceeds. Apparently investors view specificity about the intended use of proceeds favorably. Our evidence supports such a view in the context of SEOs, provided that the specificity regards to future investments. [Busaba et al. \(2001\)](#) provide evidence that IPOs in which the intended use of proceeds is to pay down debt are more likely to be withdrawn, supporting the hypothesis that timing is more important when the firm plans to pay down debt rather than use the proceeds for investments. Our findings are consistent with such a view.

² SDC also provides a use of proceeds variable. However, in the majority of cases this variable is listed as "general corporate purposes". Our manual collection from S-3 filings provides more precise classifications.

0.35 for recapitalization, 0.18 for investment, and 0.17 for general corporate purposes. Adjusted for the industry median debt ratio, these differences are large and indicate that issuers with high industry-adjusted debt ratios often say they intend to use the offer proceeds to pay down debt.

Finally, we provide statistics on the percentage of shares in the offering that are secondary. Secondary shares are sold by a shareholder and, thus, the seller receives the proceeds rather than the issuing firm. Our sample restriction that at least some portion of the shares must be primary is necessary because we focus on the use of proceeds. In purely secondary offers (which we exclude), the issuer receives no proceeds from the offering. It is noteworthy that offerings in which the issuer states recapitalization or general corporate purposes as an intended use have a relatively high secondary component, with means of 22.4% and 27.8%, respectively. In contrast, offerings in which the issuer states investment as the intended use have a much smaller average secondary component, 13.1%. A similar relation exists with median percentages.

The differences in the secondary component of the offering across use of proceeds classifications is consistent with a timing motive within recapitalization and general corporate purposes classifications, and a non-timing motive within the investment classification. Unreported statistical tests show that these differences in means and medians are each significant at the 1% level. This is consistent with Kim and Weisbach (2008), who find that SEO issuing firms are more likely to issue secondary shares when there is a timing motive, enabling insiders of the company to personally profit from issuing overvalued shares.

3. Methodology

3.1. Long-run stock returns

We conduct analyses of long-run abnormal stock performance using matching techniques and calendar time regressions.

3.1.1. Matched firm technique and buy-and-hold abnormal returns

We employ two matching techniques that follow previous researchers (e.g., Jegadeesh, 2000). In the first we select matched firms based on firm size and pre-issue stock performance, i.e., runup. In the second we choose matched firms based on firm size and the market-to-book ratio. Barber and Lyon (1997) argue that an examination of long-run abnormal stock returns using control firms based on size and book-to-market ratios yields test statistics that are well-specified. To obtain matching firms, each month we sort issuers and control firms into deciles based on the market value of equity. For the size/runup matching scheme we match issuers to control firms that are in the same size decile, based on market value of equity, and in the same decile of six-month compound returns prior to the calendar month of the issue. Of the control firms that meet these criteria, we choose the match that has the closest runup to that of the issuer. We require that the runup of the matched firm is within 30% of the runup of the issuer.

For the size/market-to-book matching scheme, we match issuers to control firms that are in the same size decile and have a market-to-book value of equity within 30% of the issuer in the same calendar month. Of the resulting matches, we choose the one with a market-to-book value of equity closest to that of the issuer. We calculate monthly buy-and-hold abnormal returns as the buy-and-hold return of a sample issuer minus the buy-and-hold return of the appropriate matched-firm:

$$BHAR_{i,\tau} = \prod_{t=1}^{\tau} [1 + R_{i,t}] - \prod_{t=1}^{\tau} [1 + MR_{i,t}], \quad (1)$$

where $BHAR_{i,\tau}$ is the buy-and-hold abnormal return for sample firm i for length τ months, $R_{i,t}$ is the return for sample SEO firm i in month t , where month $t=1$ is the month immediately following the offer month, and $MR_{i,t}$ is the return in month t of the matched, comparison firm associated with each sample SEO firm i . Mitchell and Stafford (2000) argue that cross-sectional correlations in issuer returns lead to unreliable statistical inferences using the BHAR approach. Using the correlation structure of Mitchell and Stafford, we calculate adjusted test statistics for BHARs.

We examine BHARs for three years following the SEO and for a 30-month period beginning in the seventh month after the SEO. Our rationale for the latter is that studies that examine post-SEO stock returns often find no underperformance in the first six months after the offering (e.g., Loughran and Ritter, 1995). This could be due to underwriter price stabilization practices whereby the underwriter buys shares in the open market to create demand, potentially obscuring differences in abnormal returns partitioned by the stated intended use of proceeds.

3.1.2. Factor model regressions

We also provide tests of long-run stock performance using factor model regressions. This approach alleviates concerns that the matched-firm technique for BHARs does not control for differences in risk between the sample SEO firms and the control firms (e.g., Eckbo et al., 2000; Brav et al., 2000). Fama (1998) suggests the use of the rolling calendar-month portfolio methodology to reduce some of the concerns about drawing inferences from BHARs.

Starting with January 1997, each calendar month we construct portfolios of firms that conduct equity offerings in the past 36 months. The portfolios are rebalanced each month as firms exit and enter. We regress the monthly return for each of these portfolios, adjusted by the risk free rate, on the monthly three-factors of Fama and French (1993). Specifically, we estimate:

$$R_{pt} - R_{ft} = \alpha_p + \beta_p[MKT_t] + s_p[SMB_t] + h_p[HML_t] + \varepsilon_{pt}, \quad (2)$$

where R_{pt} is the monthly return on the equally-weighted calendar-time portfolio of equity issuers,³ R_{ft} is the monthly return on the three-month Treasury bill, MKT is the return on the value-weighted CRSP market index minus the monthly return on the three-month Treasury bill, SMB is the difference in the returns of portfolio of small stocks and big stocks, and HML is the difference in the returns of a portfolio of high book-to-market stocks and low book-to-market stocks.

While the calendar-time approach avoids the problem of correlated BHARs, Mitchell and Stafford (2000) argue that even the three-factor model does not completely explain the cross-section of stock returns. They recommend an adjusted intercept approach where an expected intercept is subtracted from the actual estimated intercept. We calculate adjusted intercepts using this approach. We estimate expected intercepts following Mitchell and Stafford's procedures by using 1000 replications, with randomly selected firms of similar size and book-to-market equity as the issuing firm.

Additionally, we construct a four-factor model that also includes the momentum factor of Carhart (1997). In particular, we estimate:

$$R_{pt} - R_{ft} = \alpha_p + \beta_p[MKT_t] + s_p[SMB_t] + h_p[HML_t] + m_p[MOM_t] + \varepsilon_{pt}, \quad (3)$$

where MOM is the Carhart momentum factor. Each of these variables is obtained from Kenneth French's website. The intercept term, α , provides a measure of the mean monthly abnormal return on the calendar-time portfolio.

In the BHAR and calendar time approaches, we include delisting returns where necessary. Of our 880 sample SEOs, 697 remain in the sample for three years, while 183 delist.⁴ Delisting returns are available from CRSP for 172 of these firms. For the other 11, we follow Shumway (1997) and Shumway and Warther (1999) by using a delisting return of -30% for NYSE and AMEX firms and -55% for Nasdaq firms.

3.2. Operating performance

We use two measures of the operating performance of equity issuers: operating income scaled by sales and operating income scaled by total assets. We analyze median values because Barber and Lyon (1996) find that nonparametric tests are uniformly more powerful than parametric tests in studies of operating performance. We provide unadjusted measures, and also adjust the operating performance using two techniques to control for factors that have been shown to influence operating performance.

First, we compute industry-adjusted measures by subtracting the median industry level of operating performance from the issuer's level in each particular year. The median industry level is based on the two-digit SIC code. If there are fewer than three firms in the same industry, we assign a missing value to the industry measure.

Second, we follow Barber and Lyon (1996) and Heron and Lie (2004) by using a matching scheme that uses industry and pre-issue operating performance as matching variables. In particular, we subtract the operating performance of a control firm that is in the issuer's industry and has similar pre-issue performance. The rationale is that there exists mean reversion in operating performance at the industry-level. We select matching firms for this approach as follows. We match issuers to control firms that are in the same two-digit SIC code and have an operating performance that is within 10% of the issuer's operating performance. From these control firms, we choose the match with the operating performance measure closest to that of the issuer. If there is no match using a two-digit SIC code, we use a one-digit code, and if that does not generate any matches, we use the pre-issue performance and no SIC criterion. We focus on changes in post-issue operating performance over three windows around the offering: changes from the year prior to the issue to two years following the issue, the issue year to two years after the issue, and the issue year to three years after the issue.

Finally, we estimate quantile regressions to assess the differential impact of the use of proceeds classifications on operating performance. Quantile regressions focus on medians and are therefore preferable to OLS estimations when studying operating performance. OLS regressions model the relation between one or more explanatory variables and the conditional mean of the dependent variable. Quantile regressions, introduced by Koenker and Bassett (1978), extend the regression model to conditional quantiles, or percentiles, of the dependent variable, such as the median or the 75th percentile. This approach is advantageous when the data are heterogeneous in the sense that the tails and the central location of the conditional distributions vary differently with the explanatory variables. Moreover, quantile regressions also offer a degree of data robustness. They make no distributional assumptions about the error term and are robust to outlier observations of the dependent variable. Quantile regressions are beneficial when studying operating performance because these data contain outliers. Motivated by prior operating performance studies that examine medians, we employ median quantile regressions (i.e. 50th percentile) and test for significance of the coefficients using bootstrapped standard errors based on 1000 replications.

Our dependent variable in the regressions is the change in industry-adjusted operating performance from the year prior to the issue to two years following the issue, and our explanatory variables of interest are binary indicators for the recapitalization and general corporate purposes classifications. These variables take the value of one for the specified use and zero otherwise. The coefficient represents the difference between the specified classification and the investment classification. We also include as control variables the log of the market value of equity, the log of the proceeds from the offer, and the relative offer size.

³ We use equal-weighting because Loughran and Ritter (2000) argue that factor models with value-weighted portfolio returns as the dependent variable have low power to detect abnormal returns following managerial actions.

⁴ Of the 183, 128 delist due to mergers. The remainder delist for other reasons, such as bankruptcy or failure to meet listing requirements.

4. Empirical results

4.1. Abnormal stock returns

Table 2 reports mean BHARs for a 36-month horizon following the SEO and for a 30-month horizon beginning in the seventh month after the SEO. Panel A provides results for firms matched on size and runup and Panel B shows results for firms matched on size and market-to-book ratios. For the means, we report *t*-statistics and adjusted *t*-statistics following Mitchell and Stafford (2000). We also provide generalized sign test *z*-statistics to test whether the proportion of negative BHARs is significantly different than the proportion of positive BHARs. Panels C and D show *p*-values for tests of differences in mean BHARs between categories for the size and runup (Panel C) and size and market-to-book (Panel D) matching schemes.

For all issuers, we find significantly negative mean BHARs, ranging from -11% to -14% , for both horizons and using either matching method. Ordinary *t*-statistics are significant at the 1% level, and adjusted *t*-statistics are often significant at the 10% level. Moreover, the *z*-statistics indicate a significantly greater proportion of negative BHARs than positive BHARs. When investment is stated as the intended use of funds, mean BHARs are insignificant based on *t*-statistics and adjusted *t*-statistics. Sign test *z*-statistics are insignificant for months 1–36, but are significantly negative for months 7–36. In the recapitalization sample, the table reports significantly negative BHARs of approximately -21% to -23% using either matching procedure. Ordinary *t*-statistics are significant at the 1% level, adjusted *t*-statistics are significant at the 5% level, and sign test *z*-statistics are significant at the 10% level or better. Finally, in the general corporate purposes category, the evidence is mixed. Although the magnitudes of BHARs are always negative, they are only weakly significant with traditional *t*-statistics, insignificant with adjusted *t*-statistics, and only sometimes significant with sign test *z*-statistics.

In Panels C and D, for the 36-month analysis, differences between categories (1) versus (2) are significant at the 10% level, indicating that BHARs are significantly higher if investment is stated as an intended use of proceeds than if recapitalization is stated. Overall, Table 2 reveals that (i) recapitalization as an intended use of proceeds is associated with significantly negative abnormal BHARs, while investment is often not associated with abnormal performance and (ii) BHARs over the three-year horizon are significantly greater when investment is stated as opposed to recapitalization.

Estimated coefficients from calendar-time regressions of three and four-factor models are presented in Table 3. Coefficients from a three-year horizon are in Panel A and those from a 30-month horizon beginning in the seventh month after the SEO are in Panel C. Our main focus is on the estimated intercepts (alphas). Adjusted intercepts for the three-factor model, based on Mitchell and Stafford (2000), for months 1–36 (7–36) are in Panel B (D).

Table 2
Stock performance in the three years following issuance.

	Months 1–36				Months 7–36				
	Mean BHAR	<i>t</i> -stat	Adjusted <i>t</i> -stat	Sign test <i>z</i> -stat	Mean BHAR	<i>t</i> -stat	Adjusted <i>t</i> -stat	Sign test <i>z</i> -stat	
Panel A: BHARs (%) matched on size and runup									
All issuers	−12.61	−3.39***	−1.76*	−2.73***	−14.11	−3.60***	−1.87*	−4.45***	
Investment (1)	−6.25	−0.89	−0.66	1.56	−9.27	−1.26	−0.91	−2.31**	
Recapitalization (2)	−22.80	−3.44***	−2.54**	−1.81*	−21.04	−3.23***	−2.39**	−2.85***	
General (3)	−9.80	−1.72*	−1.22	−1.37	−12.67	−1.98**	−1.41	−2.57***	
Panel B: BHARs (%) matched on size and market-to-book									
All issuers	−11.15	−2.90***	−1.46	−2.72***	−13.55	−3.42***	−1.72*	−3.89***	
Investment (1)	−1.93	−0.28	−0.20	0.85	−8.23	−1.13	−0.81	−2.80***	
Recapitalization (2)	−20.69	−3.08***	−2.26**	−1.79*	−21.47	−3.41***	−2.50**	−2.42**	
General (3)	−11.59	−1.84*	−1.25	−2.04**	−11.98	−1.78*	−1.21	−1.60	
				Months 1–36					Months 7–36
Panel C: <i>p</i> -values of differences in mean BHARs matched on size and runup									
(1) versus (2)					0.0890				0.2321
(1) versus (3)					0.6953				0.7268
(1) versus (2 and 3)					0.2509				0.4046
Panel D: <i>p</i> -values of differences in mean BHARs matched on size and market-to-book									
(1) versus (2)					0.0536				0.1695
(1) versus (3)					0.3026				0.7066
(1) versus (2 and 3)					0.1001				0.3581

This table presents buy-and-hold abnormal stock returns (BHARs) of issuing firms in relation to matched non-issuers during the three years after the offering. BHARs are reported for two periods: months 1–36 and months 7–36. Panel A presents buy-and-hold returns of the issuer in excess of the buy-and-hold return for non-issuers matched on market capitalization (size) and pre-issue stock performance (runup). Panel B presents similar statistics using matches based on size and market-to-book. The first row of each panel displays BHARs for all firms, and the subsequent three rows display BHARs for three categories of firms based upon their stated intended use of proceeds: (1) firms where investment is the stated use of proceeds; (2) firms where recapitalization is the stated use of proceeds; and (3) firms where general corporate purposes is the stated use of proceeds. In Panel A adjusted *t*-statistics are based on the methods of Mitchell and Stafford (2000), and the generalized sign test *z*-statistic examines whether the fraction of negative BHARs is significantly greater than the fraction of positive BHARs. ***, **, * indicate that the test statistic is statistically significant at the 1, 5, and 10% levels, respectively. Panels C and D show *p*-values for tests of differences in mean BHARs between categories for the size and runup (Panel C) and size and market-to-book (Panel D) matching schemes.

Table 3

Calendar time regressions of long-run stock returns.

	All issuers		(1) Investment		(2) Recapitalization		(3) General corporate purposes	
	a	b	1a	1b	2a	2b	3a	3b
Panel A: coefficient estimates using months 1–36								
Alpha	−0.39 (0.29)	−0.02 (0.21)	−0.49 (0.42)	−0.02 (0.35)	−0.74** (0.35)	−0.50 (0.33)	0.01 (0.32)	0.34 (0.28)
MKT	1.43*** (0.07)	1.26*** (0.05)	1.37*** (0.10)	1.17*** (0.09)	1.34*** (0.09)	1.23*** (0.08)	1.54*** (0.08)	1.40*** (0.07)
SMB	0.93*** (0.10)	1.03*** (0.05)	1.07*** (0.11)	1.19*** (0.09)	0.81*** (0.09)	0.88*** (0.08)	0.92*** (0.08)	1.01*** (0.07)
HML	−0.21** (0.10)	−0.29*** (0.07)	−0.25* (0.14)	−0.35*** (0.11)	0.50*** (0.12)	0.45*** (0.11)	−0.64*** (0.11)	−0.71*** (0.09)
MOM	–	−0.38*** (0.04)	–	−0.47*** (0.06)	–	−0.25*** (0.06)	–	−0.33*** (0.05)
Adjusted R ²	0.90	0.95	0.82	0.88	0.77	0.80	0.91	0.94
Panel B: adjusted alphas for the three-factor model using the Mitchell and Stafford (2000) approach for months 1–36								
Adjusted alpha	−0.41 (0.29)	–	−0.54 (0.42)	–	−0.82** (0.35)	–	0.01 (0.32)	–
Panel C: coefficient estimates using months 7–36								
Alpha	−0.42 (0.36)	0.04 (0.24)	−0.49 (0.50)	0.04 (0.40)	−0.89** (0.38)	−0.58* (0.34)	0.05 (0.38)	0.45 (0.30)
MKT	1.45*** (0.09)	1.22*** (0.06)	1.37*** (0.13)	1.10*** (0.10)	1.34*** (0.09)	1.18*** (0.09)	1.58*** (0.09)	1.38*** (0.08)
SMB	0.91*** (0.09)	1.06*** (0.06)	1.01*** (0.13)	1.19*** (0.10)	0.83*** (0.10)	0.94*** (0.09)	0.90*** (0.10)	1.03*** (0.08)
HML	−0.12 (0.12)	−0.23*** (0.08)	−0.18 (0.16)	−0.30** (0.13)	0.60*** (0.12)	0.53*** (0.11)	−0.61*** (0.12)	−0.70*** (0.10)
MOM	–	−0.50*** (0.04)	–	−0.58*** (0.07)	–	−0.34*** (0.06)	–	−0.43*** (0.05)
Adjusted R ²	0.86	0.94	0.75	0.85	0.74	0.80	0.89	0.93
Panel D: adjusted alphas for the three-factor model using the Mitchell and Stafford (2000) approach for months 7–36								
Adjusted Alpha	−0.56 (0.36)	–	−0.67 (0.50)	–	−1.07*** (0.38)	–	−0.08 (0.38)	–

This table presents monthly estimates from regressing calendar-time portfolio monthly returns on the Fama-French (1993) three factors (MKT, SMB, HML) and the four-factor model that also includes Carhart's (1997) momentum factor (MOM). The four factors are obtained from Ken French's website. Panel A reports the coefficient estimates using a three-year horizon; Panel B uses the same horizon, but reports adjusted alphas for the three-factor model using the adjusted intercept approach of Mitchell and Stafford (2000). The adjusted alpha is the difference between the estimated alpha using sample firms and the expected alpha, which is estimated as the mean alpha from 1000 calendar-time portfolio regressions with randomly selected non-issuing firms that are in the same size/book-to-market group as the sample firms. Panels C and D report the respective estimates using only months 7–36. In each panel, the first set of columns (a and b) display estimates for all issuers, and the subsequent sets of columns (1a and 1b, 2a and 2b, and 3a and 3b) display coefficients for the three categories of firms based on their stated intended use of proceeds: (1) firms where investment is the stated use of proceeds; (2) firms where recapitalization is the stated use of proceeds; and (3) firms where general corporate purposes is the stated use of proceeds. Standard errors are in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

With a three-year horizon in Panel A, the alpha for the recapitalization sample in the three-factor model, −0.74%, is significantly negative at the 5% level. In Panel B, the adjusted alpha for recapitalization remains significant at the 5% level. No other alphas in Panels A or B enter significantly. For months 7–36 in Panel C, the alpha for the recapitalization sample enters significantly negative in both the three-factor model (−0.89%; 5% significance level) and four-factor model (−0.58%; 10% significance level). In Panel D the corresponding adjusted alpha is significant at the 1% level. No other alphas in Panels C or D are significant.

The significant alphas for the recapitalization category average about three-quarters of a percent per month, or about 9% per year. For equivalent time periods these results are similar to the recapitalization BHARs reported in Table 2. The lack of significant alphas for the investment category is consistent with a similar lack of significance for these stocks for BHARs in Table 2. The general corporate purposes category has insignificant alphas, indicating a lack of negative abnormal returns. These findings are fairly similar to those in Table 2, in which negative BHARs are marginally significant with traditional *t*-statistics and insignificant with adjusted *t*-statistics. Overall, the results in Tables 2 and 3 are generally consistent with our hypotheses. The stocks of issuers that state debt recapitalization as the intended use of proceeds experience abnormally low BHARs and are often associated with significantly negative alphas from calendar time regressions. In contrast, stocks of issuers that cite specific investment plans are associated with insignificant BHARs and alphas. When issuers state general corporate purposes, there is only weak evidence, at best, of abnormally low long-run stock returns. These findings support the notion that an investment statement of intended use is a credible signal of profitable investment opportunities, while statements of recapitalization and, perhaps, general corporate purposes are more consistent with opportunistic market timing.

Carlson et al. (2006) and Lyandres et al. (2008) offer an investment-based explanation for the poor stock performance after equity offers. The investment-based explanation is premised on the notion that equity issuers convert risky growth options into less risky assets-in-place, which causes lower subsequent returns. Thus, assuming no misvaluation at the time of the issue, firm that invests more should have lower subsequent returns. This effect biases against finding support for our hypothesis. Under our hypothesis, firms that do not cite credible investment opportunities in their S-3 filing are more likely to be overvalued at the issue and therefore experience poorer subsequent performance. The supportive evidence we present therefore cannot be attributed to the investment-based explanation.

4.2. Operating performance

The literature reports that issuers conducting traditional SEOs experience a subsequent deterioration in operating performance (e.g., Hansen and Crutchley, 1990; McLaughlin et al., 1996; Loughran and Ritter, 1997; Heron and Lie, 2004). A

Table 4

Median operating income scaled by sales.

	Fiscal year relative to issue					Changes		
	– 1	0	+ 1	+ 2	+ 3	– 1 to + 2	0 to + 2	0 to + 3
<i>All issuers</i>								
Unadjusted	.100	.121	.110	.092	.098	–.008	–.014***	–.014***
Industry adjusted	.015	.035	.026	.008	.012	–.009	–.018***	–.023***
Industry/performance adjusted	.000	.015	.012	.007	.002	.007	–.011***	–.014**
Observations	831	789	708	631	538			
<i>Investment (1)</i>								
Unadjusted	.049	.091	.081	.066	.074	.007*	–.000	–.005
Industry adjusted	–.044	–.003	–.003	–.010	.000	.011*	–.002	–.003
Industry/performance adjusted	.000	.019	.023	.012	.008	.009	–.016	–.004
Observations	253	242	212	180	155			
<i>Recapitalization (2)</i>								
Unadjusted	.122	.133	.121	.114	.120	–.011***	–.019***	–.012***
Industry adjusted	.035	.046	.036	.015	.025	–.016***	–.020***	–.019***
Industry/performance adjusted	.000	.011	.012	.001	.009	–.000	–.011	–.004
Observations	254	250	233	214	182			
<i>General corporate purposes (3)</i>								
Unadjusted	.096	.123	.108	.084	.086	–.012	–.022***	–.036***
Industry adjusted	.018	.044	.033	.008	.003	–.011	–.019***	–.044***
Industry/performance adjusted	.000	.019	.006	.011	–.017	.009	–.010**	–.028***
Observations	324	297	263	237	201			

This table presents median levels and median changes in operating income scaled by sales in the years surrounding the equity issue. Industry-adjusted operating income is computed by subtracting the median industry level (based on the two-digit SIC code) of operating income from the issuer's level in each particular year. Industry and performance adjusted operating income is computed by subtracting from the issuer's operating income the operating income of a control firm that is in the issuer's industry and has similar pre-issue performance. For changes, we use a Wilcoxon signed rank test to examine whether the change is significantly different from zero; ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively. The significance levels reported are qualitatively similar to significance levels using generalized sign tests (unreported) that examine whether the fraction of negative changes is significantly greater than the fraction of positive changes.

Table 5

Median operating income scaled by total assets.

	Fiscal year relative to issue					Changes		
	– 1	0	+ 1	+ 2	+ 3	– 1 to + 2	0 to + 2	0 to + 3
<i>All issuers</i>								
Unadjusted	.105	.105	.097	.083	.087	–.020***	–.021***	–.020***
Industry adjusted	.003	.007	.004	–.011	.000	–.016***	–.019***	–.021***
Industry/performance adjusted	–.000	.004	–.001	–.014	–.017	–.012***	–.018***	–.015***
Observations	843	796	711	633	541			
<i>Investment (1)</i>								
Unadjusted	.026	.058	.065	.048	.072	–.004	–.011***	–.007*
Industry adjusted	–.068	–.034	–.027	–.034	–.015	.011	–.013**	.001
Industry/performance adjusted	–.000	–.006	.003	–.002	–.007	–.006	–.013	.004
Observations	262	248	216	183	158			
<i>Recapitalization (2)</i>								
Unadjusted	.129	.137	.121	.111	.118	–.019***	–.023***	–.017***
Industry adjusted	.032	.037	.024	.012	.020	–.023***	–.021***	–.015***
Industry/performance adjusted	–.000	.015	–.001	–.015	–.014	–.014*	–.024***	–.007*
Observations	255	250	232	213	181			
<i>General corporate purposes (3)</i>								
Unadjusted	.096	.097	.080	.057	.058	–.032***	–.024***	–.043***
Industry adjusted	.005	.009	–.002	–.012	–.014	–.022***	–.018***	–.042***
Industry/performance adjusted	–.000	–.003	–.003	–.021	–.028	–.023***	–.023***	–.043***
Observations	326	298	263	237	202			

This table presents median levels and median changes in operating income scaled by total book assets in the years surrounding the equity issue. Industry-adjusted operating income is computed by subtracting the median industry level (based on the two-digit SIC code) of operating income from the issuer's level in each particular year. Industry and performance adjusted operating income is computed by subtracting from the issuer's operating income the operating income of a control firm that is in the issuer's industry and has similar pre-issue performance. For changes, we use a Wilcoxon signed rank test to examine whether the change is significantly different from zero; ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively. The significance levels reported are qualitatively similar to significance levels using generalized sign tests (unreported) that examine whether the fraction of negative changes is significantly greater than the fraction of positive changes.

Table 6

Regressions of changes in operating income.

	Industry-adjusted operating income/sales	Industry-adjusted operating income/total assets	Industry-adjusted operating income/sales	Industry-adjusted operating income/total assets
	(1) Median quantile	(2) Median quantile	(3) OLS	(4) OLS
Intercept	−0.0534 (0.0511)	−0.0536 (0.0581)	0.0029 (0.0918)	−0.0476 (0.0410)
Recapitalization	−0.0229*** (0.0083)	−0.0317*** (0.0106)	−0.0785*** (0.0237)	−0.0285*** (0.0107)
General corporate purposes	−0.0186** (0.0094)	−0.0282** (0.0121)	−0.613** (0.0283)	−0.0288** (0.0122)
Log (market value)	−0.0183 (0.0167)	0.0115 (0.0189)	0.0199 (0.0245)	0.0108 (0.0112)
Log (proceeds)	−0.0160 (0.0169)	−0.0056 (0.0181)	−0.0148 (0.0272)	−0.0039 (0.0120)
Relative offer size	0.0918 (0.0777)	0.0602 (0.0702)	0.0391 (0.1015)	0.0307 (0.0500)
Adjusted R^2	—	—	0.0133	0.0088
Likelihood ratio (p -value)	11.3 (0.05)	13.0 (0.02)	—	—
Number of obs.	609	617	609	617

This table presents median quantile and OLS regressions in which the dependent variable is the change in industry-adjusted operating income scaled by sales or total assets from year -1 to year $+2$. Industry-adjusted operating income is computed by subtracting the median industry level (based on the two-digit SIC code) of operating income from the issuer's level in each particular year. The main explanatory variables are: recapitalization, which takes the value of 1 for firms where recapitalization is the stated use of proceeds and 0 otherwise; and general corporate purposes, which equals 1 where general corporate purposes is the stated use of proceeds and 0 otherwise. Also included are the natural log of the market value, calculated as the stock price times the number of shares outstanding on the day prior to the offer, the natural log of the offer proceeds equaling the offer price times the number of shares offered, and the relative offer size equaling the number of shares offered divided by the number of shares outstanding on the day prior to the offer. In the median quantile regressions (models 1 and 2) bootstrapped standard errors based on 1000 replications are reported in parentheses. In the OLS estimations (models 3 and 4) heteroskedasticity-adjusted standard errors based on White's (1980) procedure are in parentheses. In the OLS estimations, operating income is winsorized at the 5th and 95th percentiles. Coefficients are presented with standard errors in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

notable exception is Walker and Yost (2008), who find that industry-adjusted operating performance either improves or remains unchanged. We examine changes in operating performance using the three categories of firms based on their stated intended use of proceeds.

Tables 4–6 report the findings. In Table 4 we examine operating performance, measured as operating income scaled by the book value of sales, during each of the five years beginning the year prior to the issue and ending three years after the issue. In Table 5 we provide the same analysis using operating income scaled by total assets. For each use of proceeds classification, we examine changes in operating performance using raw (unadjusted) measures, industry-adjusted measures, and industry- and pre-issue adjusted performance measures.

From Tables 4 and 5, for all issuers we observe significant declines in operating performance in the two to three years following the issue, which is consistent with the findings of prior researchers, except for the industry-adjusted results of Walker and Yost (2008). For the three categories of use of proceeds, we find significant declines in performance for the recapitalization and general corporate purpose classifications, but virtually no evidence of declines for the investment group.⁵ In unreported tests, we find that issuing firms that state recapitalization or general corporate purposes are associated with significantly greater deterioration in post-issue performance than issuing firms that cite a specific investment use for the proceeds. These findings are generally consistent with our analysis of long-run abnormal stock returns.

In Table 6, the first two columns report the results of quantile regressions in which the dependent variable is the change in industry-adjusted operating income, scaled by either sales or total assets, from the year prior to the issue to two years following the issue. While quantile regressions are preferred, we also present estimates from OLS regressions, with winsorizing at the 5th and 95th percentiles, in the last two columns of Table 6. Our explanatory variables include indicators for the recapitalization and general corporate purposes classifications. The coefficients on these variables represent differences from the investment category.

In all models the coefficients of the recapitalization and general corporate purposes indicator variables enter significantly negative. This indicates that there are greater declines in operating performance when the intended use is recapitalization or general corporate purposes as opposed to investment. The control variables have no significant impact on changes in operating performance.

In sum, the results indicate that the motivations for conducting SEOs differ across categories of intended use of proceeds. Based on long-run stock and operating performance, the strongest finding is better performance when investment is the intended use of proceeds than when recapitalization is the intended use. A stated intention to use the proceeds for investment purposes conveys reliable information of a non-timing motive for the offering while, in contrast, a statement that does not include a specific intention for investment conveys to some degree a timing motive to market participants. These findings are important because the stated intended use of proceeds is an ex-ante measure that is available to market participants at or before the offering. In contrast, the actual use of proceeds is not known a priori.

5. Conclusion

We find that SEO issuers' stated intention in their S-3 filing regarding the use of proceeds provides information about the motivation for the offering. For issuers that state debt repayment or general corporate purposes as the intended use, and make no

⁵ Walker and Yost (2008) do not find significant declines for their recapitalization group.

mention of investment, we provide evidence of long-run stock underperformance and post-issue declines in operating performance. The underperformance is stronger when debt repayment is the intended purpose. In contrast, for issuers that state a specific investment purpose, we observe little evidence of long-run underperformance.

Even though there is an apparent timing motive of issuers that cite debt recapitalization as the intended use of proceeds, these issuers actually do have higher pre-issue industry-adjusted leverage ratios compared to issuers that do not cite plans for recapitalization. Nevertheless, a value-maximizing firm that wishes to pay down its debt with proceeds from an equity issue should issue the equity when the market temporarily overvalues its stock. Our evidence supports such a financing strategy. Although the evidence is somewhat mixed, issuers that are vague in their S-3 filing by only stating general corporate purposes appear to have a similar timing strategy. These issuers could potentially stockpile cash for future debt repayments or investments. Given no immediate need for capital, offers in this classification may occur when the issuer's shares are overvalued.

Finally, firms that refer to specific investment expenditures in their S-3 filing are arguably more likely to be conducting the offer in response to arising investment opportunities, regardless of the degree of under- or over-valuation of their shares. Accordingly, these issuers are not expected to underperform after the offering. We find little significant evidence of underperformance.

The advantage of our approach over studies that examine the actual use of proceeds is that our measure is available at the time of the issue, whereas the actual use of proceeds can only be observed years after the offering. This has important implications for the predictability of post-issue performance. Our results suggest that an easily collected, ex-ante piece of information provides insights about the future stock and operating performance of the issuing firm.

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