The Impact of Surprise Offer-Share Adjustments on Offer-Day Returns: Evidence from Seasoned Equity Offers

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Abstract

Using a sample of seasoned equity offerings (SEOs), we examine the eleventh-hour information carried by the final offer-share adjustment. We argue that if market participants interpret the final offer-share adjustment as new information signaling the demand for the stocks issued, a greater final offer-share adjustment will affect the offer-day return positively (*demand information hypothesis*). Alternatively, if investors interpret the final offer-share adjustment as increasing the supply of stocks issued and/or as diluting the value of existing shares, a greater final offer-share adjustment will affect the offer-day returns negatively (*price-pressure and dilution hypothesis*). We show that the offer-day returns are positively related to the final offer-share adjustment, which is consistent with the demand information hypothesis. Our results remain robust even after controlling for the endogeneity and other confounding factors. Our results suggest that the final offer-share adjustment is another important determinant of offer-day returns, in addition to the final offer-price adjustment that Altinkiliç and Hansen (2003) report.

Keywords: Seasoned equity offerings, offer-day return, eleventh-hour information

***JEL* classification**: G1; G14; G32

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1. Introduction

This study examines the impact of final offer-share adjustments (i.e., last minute surprise changes in offer shares) on offer-day returns. A substantial body of work within the equity offerings literature focuses on information release during the waiting period and its impact on underpricing. This study shifts its focus to the value-relevance of eleventh-hour information contained in offer-share adjustments on the offer day. We contend that on the offer day, the stock market is affected by the release of offer-day information, such as adjustments to the number of shares offered (e.g., demand for the new issues) and the offer price. This study highlights how the market reacts to the diversion of the shares offered from those the market expects (e.g., the number of shares filed).

We define the offer-day return as the closing market price on the offer day minus the closing price on the day prior to the offer, divided by the closing price on the day prior to the offer. Underpricing is the closing market price on the offer day minus the offer price, divided by the offer price. An alternative measure of underpricing, discounting, has been used in the SEO literature. Discounting is the closing price on the day prior to the offer minus the offer price, divided by the closing price on the day prior to the offer. Because the offer price is typically below the market valuation on the day prior to the offer and the closing price on the day of the offer, mechanically, the offer-day return is positively related to underpricing and negatively related to discounting.

Previous studies focusing on the private information of issuers and underwriters agree that price adjustments are associated with underpricing. Benveniste and Spindt (1989) model the

process by which lead banks in IPOs allocate more deeply underpriced shares to their better-informed investors to pay for the information they provide. When an underwriter learns that an issue is in high demand, the offer price is raised, but not to full market value. The result is that the offer price only partially adjusts to the private information, with the rest of the adjustment coming in the form of underpricing, which compensates the suppliers of information. Hanley (1993) empirically tests implications of this model and finds that those issues with upward price revisions are the most underpriced. Bradley and Jordan (2002) refine Hanley's tests by considering amendments during the waiting period and breaking down the total price adjustments into two components: pre-offer adjustments and the final adjustments. Loughran and Ritter (2002) argue that equity issuers are more tolerant of excessive underpricing when they simultaneously learn about a post-market valuation that is higher than what they expect. This suggests that the greater the recent increase in their price, the less bargaining effort that issuers expend in their negotiations over the offer price with underwriters. If upward offer-price adjustments reflect a favorable market valuation, they will be associated with greater underpricing.

Altinkiliç and Hansen (2003) focus on eleventh-hour information on the offer day. They use unexpected discounting (analogous to the final offer price adjustment in Bradley and Jordan (2002)) and examine the impact of this surprise discounting on the offer-day return. The existence of the price on the day prior to the offer in SEOs warrants such an analysis, as offer-day returns exist for SEOs, but not for IPOs. Altinkiliç and Hansen (2003) decompose discounting into expected and surprise discounting and argue that the surprise component of discounting reflects an adjustment to the offer price and that lead banks use the discount surprise to update capital suppliers with eleventh-hour information before they commit their funds.

In this paper, we extend Altinkiliç and Hansen (2003) and consider other information available on the date of the offer: the final offer-share adjustment. Not only the final offer-price adjustment, but also the final offer-share adjustment brings new information on the date of the offer. If both offer shares and offer price are adjusted, issuers are communicating with investors by providing two different information signals. Considering that the final offer-price adjustment alone is only one signal, we argue that not only the final adjustment of the offer price, but also the final adjustment to the offer shares provide eleventh-hour information about the demand for the stock issued. If the final offer-share adjustment is interpreted as a piece of new information released about the demand for the stocks issued, the greater the final offer-share adjustment, the higher the offer-day stock returns. We call this explanation the *demand information hypothesis*. Alternatively, if the final offer share adjustment is interpreted as increasing the supply of the stocks issued and/or as diluting the value of existing shares, the greater the final offer-share adjustment, the lower the stock returns. We call this alternative explanation the *price-pressure and dilution hypothesis*.

Any value-relevant last minute information available on the offer day will affect the offer-day return because new information either increases or decreases the closing price on the offer day. Such information, however, has no effect on the closing price on the day prior to the offer, unless information leaks prior to the offer day. The existence of the price on the day prior to the offer provides the reason why there are two different underpricing measures in the SEO literature: underpricing that is analogous to that of IPOs and discounting.[1] If researchers are

[1] The underpricing of SEOs has drawn much attention among financial economists recently. Several studies (e.g., Altinkiliç and Hansen, 2003; Corwin, 2003; Mola and Loughran, 2004) report that the underpricing of SEOs has become commonplace and that the magnitude of SEO underpricing has increased more dramatically in the 1990s than it did during earlier periods. Corwin (2003) documents that SEO underpricing increased to 2.92% for offers during the 1990-1998 period from 1.15% for offers in the 1980s and that the average reached a high of 3.72% in 1996.

interested in underpricing that incorporates all the available information, including information available on the day of the offer, underpricing will provide the better measure. For researchers interested in expected underpricing that incorporates information available prior to the offer date only, discounting might be a better measure. Therefore, an examination of the impact of eleventh-hour information on offer-day returns will shed additional light on the use of different measures of underpricing in SEO studies.

Overall, our empirical findings are consistent with the *demand information hypothesis*. After controlling for the final offer-price adjustment and SEO underpricing or the SEO discount, we find that offer-day returns are positively associated with the final offer-share adjustment. The positive relation between the offer-day returns and the final offer-share adjustment remains robust for the sub-samples partitioned based on whether or not the SEO has filed an amendment during the waiting period. The positive relation is also unaffected by market condition, exchange listings, and the use of other different sub-samples. In addition, we find that the positive effect continues to hold even after we take into account potential endogeneity problems. Furthermore, we find that the final offer-price adjustment positively affects the offer-day returns in a similar fashion, supporting Altinkiliç and Hansen (2003). We interpret these results to mean that not only the final offer-price adjustment, but also the final offer-share adjustment is viewed as a crucial piece of new information on the offer day.

The rest of this paper is organized as follows. Section 2 briefly describes our hypotheses. Section 3 presents our data and research design. Empirical results are presented in Section 4. The final section provides a conclusion.

2. Hypotheses

If the actual number of shares issued on the day of the offer is greater than the number of filed/amended shares, in response to indications of strong demand, then the final offer-share adjustment, in conjunction with the increased offer price, provides favorable new information about the demand for the stocks issued. It is also plausible that high-quality firms are signaling their type by increasing the number of shares to be issued and/or by increasing the offer price. In fact, there are two axioms among IPO investors: “Cut the deal, cancel my order” and “Increase the deal, double my order” (Fitzgibbon, 1998). The existence of the price on the day prior to the offer in SEOs warrants more focused investigation of the value relevance of an eleventh-hour information release. Recently, Altinkiliç and Hansen (2003) use unexpected discounting to examine the impact of this surprise discounting on the offer-day return. We argue that not only the final adjustment of the offer price, but also the final adjustment to the offer shares provide eleventh-hour information about the demand for the stock issued. If the final offer-share adjustment reflects new information about the demand for the stocks issued, the greater the demand, then the greater the upward offer-share adjustments. Therefore, the greater the final offer share adjustments, the higher the offer-day stock returns. We call this explanation the *demand information hypothesis*.

However, the increase in the number of offer shares also can be interpreted as increasing the supply of the stocks and/or causing economic dilution. Increases in the number of offer shares will add more shares outstanding, and, assuming a negatively sloped demand curve, it may cause price pressure, thereby decreasing the stock price. To the extent that the issuing firm receives proceeds less than fair market value from new issues, issuing more shares also will dilute the value of existing shares. Considering the existence of discounting in SEOs (in which the offer price is typically below the market valuation on the day prior to the offer), issuing more

shares will further dilute the value of existing shares, and therefore decrease the stock price. Price pressure comes from the negatively sloped demand curve assuming there is temporarily a less than perfectly elastic demand for a firm's shares (e.g., Scholes, 1972; Asquith and Mullins, 1986), and the dilution story is based on the economic dilution of the shares' value. While the price pressure explanation and the dilution explanation are two different stories, they provide the same empirical prediction.[2] Together, the price pressure and dilution story can explain a negative relation between the share increase and the share value. We call this explanation the *price-pressure and dilution hypothesis*.

The demand information hypothesis and the price-pressure and dilution hypothesis provide exactly opposite empirical predictions regarding the relation between the final offer-share adjustments and the offer-day return. The demand information hypothesis predicts a positive association, while the price-pressure and dilution hypothesis predicts a negative relation. Thus, the above two explanations are mutually exclusive and await an open empirical investigation. We directly examine the issue of whether the share increase will be followed by an increase or decrease of the offer-day returns.

3. Data and Research Design

3.1. Sample selection and offer date correction

The sample of SEOs is obtained from the Securities Data Company's (SDC) New Issues Database. We collect the initial sample of U.S. common stock offerings from 1989 to 2000,

[2] Previous studies suggest that share amendment also can change the relation between earnings and returns. Huson et al. (2001) argue that expected dilution due to executive stock options and convertible securities attenuate the relation between earnings and returns. Andrade (1999) finds that the earnings per share (EPS) accretion has a positive effect on acquirer abnormal performance. Bens et al. (2003) claim that managers are more likely to undertake stock repurchases to increase the reported EPS when earnings fall short of the levels necessary to sustain prior growth rates in the reported EPS.

excluding IPOs and shelf offerings.[3] Unit offerings and rights offerings are also excluded from the sample. Of these, only 3,762 offers are available on the quarterly COMPUSTAT database and the Center for Research in Security Prices (CRSP) file. Offers without the fiscal year-end data from the COMPUSTAT file are excluded. This results in a sample of 3,099 offers. If a firm has multiple offerings during the sample period, we include only the earliest issue in the analyses to avoid overlapping data problems and cross-sectional dependency in the analyses. This process eliminates 806 offers. We also exclude 293 offers because data to calculate the final share adjustment are not available.

Lease et. al. (1991) note that stated offer dates are often misleading because some offers take place after the close of trading. After examining time stamps from the Dow Jones News Service (DJNS), they find that 25 percent of offers take place after the close. Safieddine and Wilhelm (1996) suggest that even time stamps from the DJNS may not identify the true time of the offer. Safieddine and Wilhelm (1996) and Corwin (2003) apply a volume-based offer date correction. Following these studies, we adjust the offer dates for our sample. If trading volume on the day following the SDC offer date is (i) more than twice the trading volume on the SDC offer date and (ii) more than twice the average daily volume over the previous 250 trading days, then the day following the SDC offer date is designated as the offer date.

To be included in a sample, an offer must include data: (1) to determine the offer date correction and (2) to calculate returns around the offer day and underpricing. These restrictions eliminate 120 offers. We also exclude 64 offers due to other missing data included in the regression analysis and offers trimmed at the 1st and 99th percentiles based on the final share adjustment and returns around the offer day. The final sample consists of 1,816 offers.

[3] We delete shelf offerings because the shelf offer filing price can be from an earlier shelf filing, and thus the difference between offer price and filing price is not meaningful.

3.2. Research Design

We measure the market-adjusted returns around the offer day to examine the value relevance of eleventh-hour information contained in the final offer share adjustments. RET_{-1}, is the market-adjusted return (the SEO firm's return minus market return) on day –1. RET_0 is the market-adjusted return on the offer date (day 0). RET_{-10} is the cumulative market-adjusted return from day –1 to 0 [-1, 0]. RET_1 is the market-adjusted return on day +1. Market returns are returns on the CRSP value-weighted index. We examine returns on day –1 because information about adjustments to the shares and prices may be revealed prior to the offer date. For instance, Netscape's lead underwriters proposed to the board one day before the company's scheduled IPO to increase the offering price from $14 to $28 in response to the remarkable oversubscription for Netscape's share, while the lead underwriters already prompted to increase the number of shares to be offered from 3.5 million to 5 millions.

To examine the impact of the final offer-share adjustment on the offer-day return, after controlling for other factors affecting returns, we estimate the following equation:

$$RET_t = \alpha_0 + \alpha_1 SHAREDIFF + \alpha_2 PREVISION + \alpha_3 OFFERSIZE + \alpha_4 UDPRICE + \alpha_5 EARN + \alpha_6 MBRATIO + \alpha_7 LNMVE + \varepsilon \quad (1)$$

Where RET_t is the market-adjusted return on day –1, 0, +1, and [-1, 0]; *SHAREDIFF* is the final offer-share adjustment, defined as the difference between the number of shares filed (or the number of shares in the last amendment when amendments are filed during the waiting period) and the number of shares offered, divided by the total number of shares outstanding prior to the offer; *PREVISION* is the final offer-price adjustment, measured by the offer price minus the

midpoint of the offer price's file range, divided by the midrange file price[4]; *OFFERSIZE* (%) is the shares offered divided by the total number of shares outstanding prior to the offer. *UDPRICE* is the closing market price on the offer day minus the offer price, divided by the offer price; *EARN* is the income before extraordinary items deflated by the market value of equity prior to the offer, where the market value of equity is defined on the day prior to the offer as the number of shares outstanding multiplied by price; *MBRATIO* is the beginning market-to-book equity ratio, measured as the market value of equity divided by the book value of equity prior to the offer; and *LNMVE* is the natural log of the market value of equity.

Altinkiliç and Hansen (2003) find that the final offer-price adjustment is an important determinant of the offer-day returns. Accordingly, to control for the potential effect of the final offer-price adjustment on the offer-day returns, we include *PREVISION* as a control variable in the regressions. Offer-day information release affects not only the offer-day returns, but also underpricing, while underpricing is supposed to be positively correlated with the offer-day returns. Thus, we include underpricing (*UDPRICE)* as an independent variable to control these effects.

Previous literature finds that the offer size is related to the pricing of new equity issues (Corwin, 2003; Altinkiliç and Hansen, 2003; Kim and Park, 2005). Altinkiliç and Hansen (2003) argue that, in the placement cost story, as the offering becomes more difficult to place, greater underpricing is needed to attract capital suppliers and compensate them for bearing the burden of greater illiquidity in their longer-term investing. Based on the price pressure theory, Corwin (2003) argues that larger issues are more underpriced and that the effects of price pressure should be most pronounced for securities with relatively inelastic demand (securities with low stock

[4] For some of the offers, the filing price as reported in SDC does not have a high or low filing range. In such cases, the midrange file price is equal to both the low and high filing prices.

prices). Therefore, the offer size is another proxy for price pressure in addition to the final offer share adjustment. To control for the offer size, we add *OFFERSIZE* to the regression models.

A substantial body of works shows that stock returns are associated with firm size, firms' performance measures, such as earnings, and growth opportunity. (e.g., Fama and French, 1993; Huson et al., 2001). To control for the potential confounding effects of these measures on the offer-day returns, we add *LNMVE*, *EARN* and *MBRATIO* to the test models.

4. Empirical results

While our main interest in this study is to examine how the offer-day market responds to the final offer-share adjustment (RET_0), we also perform the tests on the returns for days -1 to +1, RET_{-1}, RET_1, and $RET_{-10,}$ to investigate the stock-return behavior around the offerings.[5] The offer-day return, RET_0 will capture the effect of an eleventh-hour information release, such as the final share adjustment on the offer day. However, information can be leaked prior to the offer, thereby affecting the stock price. To capture the effect of potential information leakage on the day prior the offer, we examine the returns for day -1, RET_{-1}. With $RET_{1,}$ we examine whether the final offer-share adjustment continues to be informative, even on the day after the offer. Under the efficient market hypothesis, new information should be quickly reflected in the stock price as it is released. Thus, we expect the coefficients on RET_1 to be insignificant.

4.1. Descriptive statistics and bivariate association

Panel A of Table 1 provides descriptive statistics for the sample of 1,816 SEOs during the

[5] We will observe a positive association between the final offer-share adjustment and the return on the date prior to the offering, if information that affects the stock return on the day -1, also influences the issuer and underwriter's decision on the final number of shares to be offered. Alternatively, if there is any information leakage about what the number of shares offered is going to be, then we will observe the same positive association.

period from January 1, 1989 to December 2000. The mean and median market-adjusted returns from day -1 to day 0 are -0.0172 and -0.0148, respectively. As seen, there are changes in stock returns around the offerings. On average, the market-adjusted return moves down on the date prior to the offer (day -1) until the offer date, and then goes up on the day after the offer. The mean final offer-share adjustment is -1.5 percent of the number of shares outstanding prior to the offer. During the sample period, the mean (median) offer final offer price adjustment is -3.73 (-4.20) percent of the midrange file price. This suggests that the offer price is 3.73 percent lower than the midpoint of the offer price's file range. The mean (median) offer size, measured as the number of shares offered, is 25.23 (21.05) percent of the total number of shares outstanding before the offer.

[Table 1 about here.]

Panel B of Table 1 shows the statistics by the sign of the final offer-share adjustment. Interestingly, when the number of shares offered is smaller than that filed, the mean and median market-adjusted returns are much lower than those in other cases. For example, the median RET_0 is -0.0137 (0.0036) if the number of shares offered is lower (higher) than those filed. The differences in market-adjusted returns between the two groups are statistically significant (p-value=0.0001 for both the t-test and the Wilcoxon test). This is also the case for RET_{-1}, and RET_{-10}. Those results suggest that the market responds to the positive final offer-share adjustment (the number of shares offered > the number of shares filed or amended) favorably, but is disappointed about the unexpected decrease in the number of shares offered. Taken together, the results support the *demand information hypothesis*.

During the sample period, the offer price is revised downward when fewer shares are offered than filed. For example, when fewer shares are actually offered than originally filed, the

mean final offer-price adjustment is -0.0719, while the mean final offer-price adjustment is 0.0315 when more shares are offered than filed. Offer size is greater for the issuers adjusting offer shares upward. Underpricing is greater when offer shares unexpectedly increase, meaning that not all the demand information is reflected in the offer pricing, which is consistent with Benveniste and Spindt (1989), Bradley and Jordan (2002) and Loughran and Ritter (2002). Overall, the statistics presented in Table 1 suggest that when seasoned equity issuers offer more shares than originally filed, the market recognizes the increased shares offering as a positive signal.

Table 2 reports the bivariate correlations between selected variables. The Pearson (Spearman) correlation coefficients are above (below) the diagonal. The correlations between the market-adjusted returns (RET_{-1}, RET_0, and RET_{-10}) and *SHAREDIFF* are positive and significant, suggesting that having more shares offered than filed is a positive signal to the market.

[Table 2 about here.]

We further test whether the positive association between market-adjusted returns from day -1 to day 0 and *SHAREDIFF* is monotonic. We split the sample into five groups based on the magnitude of the final offer-share adjustment. Since medians are less influenced by extreme values, we report them. The highest (lowest) group consists of SEOs with the largest (smallest) final offer-share adjustments. The remainder forms the medium groups. SEOs without final offer-share adjustments are in the last group, *No SHAREDIFF*. Table 3 summarizes the stock returns for the different groups based on the magnitude of the final offer-share adjustment.

[Table 3 about here.]

As shown in Table 3, the market returns become positive or less negative monotonically as the magnitude of the final offer-share adjustment increases. The group with the largest final

offer-share adjustment experiences positive stock returns (median RET_0 = 0.0080), but the market reacts negatively to the SEOs with the smallest final offer-share adjustment (median RET_0 =-0.0173). The difference in medians based on Wilcoxon two sample test statistics are significant at the 1 percent level for three types of stock returns: RET_{-1}, RET_0, and RET_{-10}. These results are in line with our *demand information hypothesis.*

4.2. Regression analyses

Taken together, the results thus far suggest that when an equity issuer offers more (fewer) shares than the shares filed, the market reacts favorably (less favorably) to such a positive (negative) final offer-share adjustment. In this subsection, we examine the issue of whether the share increase will be followed by an increase in the offer-day returns, after controlling for other issue characteristics in a multiple regression.

Table 4 contains the regression results, with t-statistics given in parentheses. The first four regressions examine the relation between the offer-day returns and the final offer-share adjustment, *SHAREDIFF*, after controlling the final offer price adjustment (*PREVISION*) only. Focusing on the eleventh-hour information on the date of the offer, Altinkiliç and Hansen (2003) investigate the impact of the surprise component of discounting on the offer-day return. We argue that the offer-day return will be affected by new information released on the offer day, such as changes in the number of shares offered and changes in the offer price. Thus, to obtain the net impact from the final offer-share adjustment on the offer-day stock returns, we control for any potential effects of the offer-price-related information, such as the final offer-price adjustment. As shown in the first four regressions, the principal variable of interest, *SHAREDIFF*,

is significantly and positively associated with the stock returns in all regressions except the regression of RET_1.

The last four regressions include additional control variables. As reported in the last four columns, the coefficients on *SHAREDIFF* are all positive and significant in three regressions, even after controlling other issue characteristics. However, this is not the case for the RET_1 regression. We interpret these results to mean that the market recognizes the positive final offer-share adjustment as indicating an increased demand for the stocks issued, thereby leading to higher offer-day stock returns. Such a positive market reaction happens on day -1 and the offer day, but does not continue the day after the offer, which is consistent with the efficient market hypothesis.

[Table 4 about here.]

Previous research finds that underpricing is related to the price on the day before the offer (e.g., Altinkiliç and Hansen, 2003; Corwin, 2003). Altinkiliç and Hansen (2003) introduce an alternative measure for the SEO underpricing: discounting, defined as the closing price on the day prior to the offer, minus the offer price, divided by the closing price on the day before the offer. They investigate the impact of the unexpected discounting on the offer-day return. Accordingly, to control for the potential effect of the price on the day before the offer, we replace *UDPRICE* with *DISCOUNT*, discounting measured as in Altinkiliç and Hansen (2003), as a control variable in the regressions. Unreported results are in line with those in Table 4. Collectively, the evidence supports the *demand information hypothesis*.[6]

[6] In an effort to check the robustness of the results, we include the number of shares filed as an independent variable rather than OFFERSIZE. Our unreported evidence suggests the results are qualitatively the same with the t-value of 2.98 for RET_0 and 4.11 for RET_{-10}. We also replicate this analysis with the offer-share adjustment scaled by the number of shares filed instead of the total number of shares outstanding prior to the offer and find the results are qualitatively the same.

Next, we examine whether the relation between the final offer-share adjustment and the offer day return is independent of the adjustment's direction. We include an interaction term, *SHAREDIFF* * $D_{PositiveSHAREDIFF}$, in the regressions, where $D_{PositiveSHAREDIFF}$ is an indicator variable that takes the value of one if the shares offered are greater than the filed shares or the latest amended shares, zero otherwise. The results are summarized in Table 5.

[Table 5 about here.]

While the *SHAREDIFF* variable remains significant, the coefficients on *SHAREDIFF* * $D_{PositiveSHAREDIFF}$ are positive and significant in three regressions, but not the regression of RET_1 (t-value =2.38, 2.28, and 3.18, respectively). These results indicate that when the issuer actually offers more shares than the market expects, the market recognizes the information as a positive signal and the increased shares offered provide an additional implication for the firm's valuation. Though the result reported in Table 4 holds for both the positive and negative adjustments to the offer shares, the relation between returns and the final share adjustments are stronger for the positive changes. The findings in Table 5 provide additional support for the *demand information hypothesis*.

4.3. The Effect of File Amendments During the Waiting Period on Offer-Day Returns

In this section, we focus on the waiting period because during the waiting period, the equity issuers can make a series of amendments to the offer price and the number of shares to be offered. Amendments during the waiting period also reflect private information that the issuers hold.[7] As a result, the impact of the final offer-share adjustment on the offer-day return may

[7] The median of the "waiting period," the period between the date of filing and the offer date, is 35 days in our sample and it is usually 35-45 days in seasoned equity offerings (Rangan, 1998; Jo and Kim, 2007; Jo, Kim, and Park, 2007).

differ between issues with amendments filed during the waiting period and issues without such amendments.

First, similar to the argument of Bradley and Jordan (2002), we examine whether the final offer share adjustments during the waiting period are different across samples with and without share or price adjustments. Panel A of Table 6 reports the difference tests for SEOs with versus without amendments of the filed shares and offer prices. Approximately half of the equity issuers revise their shares and offer prices that were originally filed. On average, fewer shares are actually offered than filed. For example, in the case of SEOs with amendments, the number of shares offered is 0.052 million shares less than that amended. The actual offer price is also lower than expected. However, the tendency is more pronounced for SEOs that do not amend their filed shares/prices. During the 1989-2000 period, the issuers without amendments actually offer 0.84 million fewer shares than the market expects. The difference in the *SHAREDIFF* for with versus without amendment groups is significant at the 1 percent level.

[Table 6 about here.]

Panel B of Table 6 displays the difference tests by the share and price amendments. Approximately half of the firms with share amendments revise their shares upward. When issuers amend the offer shares upward, they revise their offer shares up, on average, by 0.8 million shares from the originally filed numbers. Issuers that amend the offer shares down, lower the number of shares, on average by 1.34 million shares from their original filings. On average, issuers with upward (downward) share amendments eventually offer 0.16 (0.07) million fewer shares than the number of shares in the latest amendments filed with the Securities and Exchange Commission (SEC). The *SHAREDIFF*, the final offer-share adjustment deflated by the number

of shares outstanding, is more negative for issuers amending their shares upward (-1.89 percent) than for those revising their shares downward (-0.64 percent).

About 44 percent (320 out of 726) of firms with offer price amendments adjust their offer prices upward. The mean value of *SHAREDIFF* is 0.0021 when the offer price is amended upward, but -0.1086 when the issuer revises the offer price downward. These statistics indicate that firms with upward (downward) price amendments offer 0.21 (10.86) percent of the number of shares outstanding more (less) shares than they originally filed. This result suggests that the issuers amending their price upward also tend to offer more shares than the market expects.

Next, using multivariate regressions, we test the differential impact of the final offer-share adjustment on the offer-day return between issues with amendments filed during the waiting period and issues without such amendments. The sample is partitioned into two groups: SEOs with share amendments and those with no amendments. Table 7 summarizes the results.

[Table 7 about here.]

For SEOs with share amendments, the coefficients on *SHAREDIFF* are all positive and significant for the three regressions, except the regression of RET_1. For SEOs with no share amendments, the results are qualitatively similar to those for SEOs with share amendments. However, the magnitude of the impact of the final offer-share adjustment differs between the two groups. In three regressions, RET_0 , $RET\text{-}_1$, and $RET\text{-}_{10}$, the market reaction to the final offer-share adjustment with prior share amendments is much higher (more than double) than that of adjustments without share amendments. Accordingly, it appears that on the offer date, the market reflects the information contained in the final offer-share adjustment regardless of the share revisions, but the reaction's magnitude is larger for the final offer-share adjustment with prior revisions.

To examine this issue more closely, we combine the sample and use an indicator variable for the final offer-share adjustment with versus without amendments. Our unreported results suggest that consistent with the results reported earlier, *SHAREDIFF* shows a positive and significant relation to the offer-day returns in three regressions (RET_0 , $RET\text{-}_1$, and $RET\text{-}_{10}$). However, no significant results are found for $SHAREDIFF*D_{Amendment.}$ The coefficients on $SHAREDIFF*D_{Amendment}$ are insignificant for all regressions. Therefore, though the magnitude of the market reaction to the surprise offer-share adjustment is larger for issues with prior amendments filed with the SEC than those without amendments, the difference is not statistically significant.

4.4. Additional tests

We recognize a potential endogeneity bias in equation (1). It is plausible that the offering firm offers more shares than expected in the SEO because the price of the firm's publicly-traded shares is increasing. The similar case can also be made for a decrease in the number of shares offered when the price of the publicly-traded shares is falling. To correct for this potential endogeneity bias, we estimate regressions in a simultaneous equation framework, where the offer day returns are specified as a function of *SHAREDIFF* as specified in equation (1) and *SHAREDIFF* (share difference) is specified as a function of the offer day returns, the final offer price adjustment, *OFFERSIZE*, *UDPRICE, LNMVE*, and *NASDAQ* dummy.

[Table 8 about here.]

As reported in Table 8, based on the three-stage least square (3SLS) simultaneous estimation, we find the coefficient on *SHAREDIFF* is significant for RET_0 equation at the one percent level and the coefficient on *SHAREDIFF* for $RET\text{-}_{10}$ equation at the five percent level

while the coefficients on *RET* for *SHAREDIFF* equations are all insignificant. Overall, our results do not seem to be driven by the reverse causality explanation, and therefore, a potential simultaneity bias does not appear to change our inferences concerning the association between the offer day return and the final offer share adjustment.[8]

To further check the robustness of our results, we also conduct several additional tests. One concern is the impact of a hot vs. cold market or an exchange listing (i.e., Nasdaq vs. NYSE and others). In untabulated results, we find that while there are positive relations between *SHAREDIFF* and the offer-day returns of RET_{-1}, RET_0, and RET_{-10} for both hot and cold markets, the positive relation is more significant in a hot market. Similarly, we find a significant and positive relation between *SHAREDIFF* and the offer-day returns of RET_{-1}, RET_0, and RET_{-10} in both the Nasdaq market and NYSE and others.

In addition, we examine the relation between *SHAREDIFF* and the offer-day returns for SEOs with the non-zero final share adjustments only (722 offers) and those with both the non-zero share and price adjustments only (686 offers). As expected, we find a positive and significant relation between *SHAREDIFF* and the offer-day returns of RET_{-1}, RET_0, and RET_{-10} for both cases. Collectively, our inferences regarding the impact of the surprise offer-share adjustments on the offer-day returns are unaffected by market condition, exchange listings, and the use of different sub-samples.

5. Conclusions

This paper examines the impact of the final offer-share adjustment (e.g., an unexpected change in offered shares) on offer-day returns. We find that an increase of shares offered affects

[8] The results are qualitatively the same when we use *OFFERSIZE* instead of *SHARESFILED* as control variables in simultaneous equations.

offer-day returns positively. The results suggest that the final offer-share adjustment as well as the final offer-price adjustment, in response to indications of strong demand, positively influence the offer-day returns, supporting the *demand information hypothesis*. The observed, positive relation is also consistent with practitioners' two axioms: "Cut the deal, cancel my order" and "Increase the deal, double my order." In addition, our results indicate that the final offer-share adjustment does not affect the stock returns of one day after the offering in any fashion, suggesting that the stock price incorporates valuable, eleventh-hour information available on the offer day immediately. These implications are consistent with the efficient market hypothesis.

Altinkiliç and Hansen (2003) suggest that the final offer-price adjustment is an important determinant of offer-day returns. Our results suggest that last minute changes in the number of shares offered in an SEO have an impact on the offer-day returns. Specifically, upward (downward) revisions have a favorable (unfavorable) impact, suggesting that the final offer-share adjustment is another important determinant. Together with the literature on underpricing in seasoned equity offerings, our results underscore the economic importance of eleventh-hour information from the surprise component of offered shares in the equity-offering market.

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Table 1. Descriptive statistics

The total sample consists of 1,816 SEOs issued from January 1989 to December 2000. RET_{-1}, is the market-adjusted return (SEO firm's return minus market return) on day –1. RET_0 is the market-adjusted return on the offer date (day 0). RET_{-10} is the cumulative market-adjusted return from day –1 to 0 [-1, 0]. RET_1 is the market-adjusted return on day +1. *SHAREDIFF* is the final offer share adjustment, defined as the difference between the number of shares offered and the number of shares filed (or amended), divided by total number of shares outstanding prior to the offer. *OFFERSIZE* (%) is the shares offered divided by total number of shares outstanding prior to the offer. *PREVISION* is the final offer price adjustment, measured by the offer price minus midpoint of the file range of the offer price, divided by the midrange file price. *UDPRICE* is the closing market price on the offer day minus the offer price, divided by the offer price. *EARN* is the income before extraordinary items deflated by the market value of equity prior to the offer, where the market value of equity is defined on the day prior to the offer as the number of shares outstanding multiplied by price. *MBRATIO* is the beginning market to book equity ratio, measured as the market value of equity divided by the book value of equity prior to the offer. *LNMVE* is the natural log of the market value of equity. In panels B, *p*-values listed below the *t*-test are from a *t*-test of the two sample mean difference. *P*-values listed below Wilcoxon are from a test of the restriction that mean are equal across samples based on an analysis of variance (Wilcoxon rank sum test).

Panel A: Full sample

				Percentiles		*t*-test	Wilcoxon
	Mean	Median	Std. Dev.	75th	25th	*p*-value	*P*-value
RET_{-1}	-0.0136	-0.0108	0.0465	0.0115	-0.0379	0.0001	0.0001
RET_0	-0.0036	-0.0056	0.0622	0.0251	-0.0355	0.0152	0.0001
RET_1	0.0064	0.0022	0.0417	0.0193	-0.0113	0.0001	0.0001
RET_{-10}	-0.0172	-0.0148	0.0818	0.0244	-0.0613	0.0001	0.0001
SHAREDIFF	-0.0150	0.0000	0.0700	0.0000	0.0000	0.0001	0.0001
PREVISION	-0.0373	-0.0420	0.1931	0.0133	-0.1129	0.0001	0.0001
OFFERSIZE	0.2523	0.2105	0.2197	0.3048	0.1326	0.0001	0.0001
UDPRICE	0.0370	0.0136	0.2049	0.0548	0.0000	0.0001	0.0001
EARN	0.0041	0.0076	0.0220	0.0151	-0.0012	0.0001	0.0001
MBRATIO	8.0810	4.3057	42.7935	7.8788	2.5158	0.0001	0.0001
LNMVE	5.5197	5.4016	1.4674	6.4028	4.6068	0.0001	0.0001

Panel B: By the sign of final offer share adjustment

	SHAREDIFF > 0 (N=311)		*SHAREDIFF* < 0 (N=411)		*SHAREDIFF* = 0 (N=1,094)		Difference Test *t*-test	Difference Test Wilcoxon
	Mean	Median	Mean	Median	Mean	Median	*P*-value	*P*-value
RET_{-1}	-0.0017	-0.0024	-0.0272	-0.0208	-0.0119	-0.0091	0.0001	0.0001
RET_0	0.0104	0.0036	-0.0147	-0.0137	-0.0033	-0.0044	0.0001	0.0001
RET_1	0.0078	0.0006	0.0041	0.0017	0.0068	0.0026	0.2168	0.4008
RET_{-10}	0.0087	0.0032	-0.0419	-0.0415	-0.0154	-0.0120	0.0001	0.0001
SHAREDIFF	0.0298	0.0252	-0.0888	-0.0492	0.0000	0.0000	0.0001	0.0001
PREVISION	0.0315	0.0000	-0.0719	-0.0819	-0.0439	-0.0423	0.0001	0.0001
OFFERSIZE	0.2516	0.2266	0.1952	0.1654	0.2740	0.2252	0.0001	0.0001
UDPRICE	0.0529	0.0338	0.0171	0.0069	0.0400	0.0128	0.0001	0.0001
EARN	0.0022	0.0054	0.0032	0.0067	0.0050	0.0088	-0.5204	-0.0419
MBRATIO	11.3496	5.2017	9.8455	4.1545	6.4904	4.1488	0.5445	0.0006
LNMVE	5.7507	5.6599	5.9327	5.8287	5.2991	5.2476	-0.1077	-0.1008

Table 2. Bivariate correlations

The total sample consists of 1,816 SEOs issued from January 1989 to December 2000. Pearson (Spearman) correlation coefficients are above (below) the diagonal. RET_{-1}, is the market-adjusted return (SEO firm's return minus market return) on day –1. RET_0 is the market-adjusted return on the offer date (day 0). RET_{-10} is the cumulative market-adjusted return from day –1 to 0 [-1, 0]. RET_1 is the market-adjusted return on day +1. *SHAREDIFF* is the final offer share adjustment, defined as the difference between the number of shares offered and the number of shares filed (or amended), divided by total number of shares outstanding prior to the offer. *UDPRICE* is the closing market price on the offer day minus the offer price, divided by the offer price. *OFFERSIZE* (%) is the shares offered divided by total number of shares outstanding prior to the offer. *PREVISION* is the final offer price adjustment, measured by the offer price minus midpoint of the file range of the offer price, divided by the midrange file price. *EARN* is the income before extraordinary items deflated by the market value of equity prior to the offer, where the market value of equity is defined on the day prior to the offer as the number of shares outstanding multiplied by price. *MBRATIO* is the beginning market to book equity ratio, measured as the market value of equity divided by the book value of equity prior to the offer. *LNMVE* is the natural log of the market value of equity.

	RET_{-1}	RET_0	RET_1	RET_{-10}	*SHAREDIFF*	*UDPRICE*	*OFFERSIZE*	*PREVISION*	*EARN*	*MBRATIO*	*LNMVE*
RET_{-1}		0.1103***	-0.0463**	0.6515***	0.0881***	-0.0125	0.0172	0.1873***	0.0705***	-0.0102	-0.0021
RET_0	0.1183***		0.0580**	0.8259***	0.0643***	-0.0463**	-0.0727***	0.1597***	0.0889***	0.0211	0.1546***
RET_1	-0.0505**	0.0715***		0.0195	0.0403*	-0.0636***	0.0649***	-0.0189	0.0053	-0.0641***	-0.0029
RET_{-10}	0.6317***	0.7879***	0.0379		0.0989***	-0.0424*	-0.0464**	0.2286***	0.1084***	0.0089	0.1183***
SHAREDIFF	0.1778***	0.1415***	0.0133	0.1946***		0.0207	0.0840***	0.0123	-0.0257	0.0205	-0.0172
UDPRICE	0.0214	-0.4534***	-0.0098	-0.3063***	0.0006		0.0772***	0.0010	-0.0823***	0.0121	0.0187
OFFERSIZE	-0.0436*	-0.0834***	0.0301	-0.0877***	0.1687***	0.2847***		-0.0473**	-0.0544**	-0.0580**	-0.5294***
PREVISION	0.2679***	0.2105***	-0.0331	0.3187***	0.2294***	-0.1969***	-0.0885***		0.0946***	0.0313	0.1766***
EARN	0.0791***	0.0560**	0.0298	0.0917***	-0.0352	-0.1527***	0.0917***	0.0374		-0.0446*	0.0542**
MBRATIO	-0.0432*	0.0188	-0.0732***	0.0003	0.0763***	0.1003***	-0.1333***	0.0628***	-0.4284***		0.0592**
LNMVE	0.0208	0.1704***	0.0027	0.1416***	-0.0437*	-0.3549***	-0.6500***	0.2218***	-0.1173***	0.2135***	

Table 3. Returns around the offer date by portfolios based on the magnitude of the final offer share adjustment

The total sample consists of 1,816 SEOs issued from January 1989 to December 2000. RET_{-1}, is the market-adjusted return (SEO firm's return minus market return) on day –1. RET_0 is the market-adjusted return on the offer date (day 0). RET_{-10} is the cumulative market-adjusted return from day –1 to 0 [-1, 0]. RET_1 is the market-adjusted return on day +1. *SHAREDIFF* is the final offer share adjustment, defined as the difference between the number of shares offered and the number of shares filed (or amended), divided by total number of shares outstanding prior to the offer. The sample with final offer share adjustment is classified into four groups based on *SHAREDIFF*. The highest (lowest) group consists of SEOs with final offer share adjustments that belong to the fourth (first) quartile. Wilcoxon test p-values are reported for each group. The Wilcoxon Z-value and corresponding p-value are from a median two-sample test for difference between highest and lowest final offer share adjustment samples.

		RET_{-1}		RET_0		RET_1		RET_{-10}	
	N	Median	p-value	Median	p-value	Median	p-value	Median	p-value
SHAREDIFF>3Q	181	0.0001	0.4454	0.0080	0.0309	0.0004	0.1691	0.0077	0.0743
MEDIAN< *SHARDIFF* =< 3Q	181	-0.0105	0.0001	-0.0009	0.9230	0.0020	0.0951	-0.0086	0.0248
1Q < SHARDIFF =< MEDIAN	181	-0.0191	0.0001	-0.0137	0.0002	0.0010	0.1835	-0.0387	0.0001
SHAREDIFF=<1Q	179	-0.0248	0.0001	-0.0173	0.0001	0.0014	0.2924	-0.0458	0.0001
No SHAREDIFF	1,094	-0.0091	0.0001	-0.0044	0.0024	0.0026	0.0001	-0.0120	0.0001
Total	1,816								
Wilcoxon Z-valueH-L		6.41	0.0001	4.75	0.0001	0.28	0.3901	6.75	0.0001

Table 4. Regressions of returns on final offer share adjustment: Demand information hypothesis versus price-pressure and dilution hypothesis

The sample consists of 1,816 offers from 1989 through 2000. The following equation is estimated:

$$RET_t = \alpha_0 + \alpha_1 SHAREDIFF + \alpha_2 PREVISION + \alpha_3 OFFERSIZE + \alpha_4 UDPRICE + \alpha_5 EARN + \alpha_6 MBRATIO + \alpha_7 LNMVE + \varepsilon$$

The dependent variable, RET_t is the market-adjusted return (SEO firm's return minus market return) on day –1, 0, +1, and [-1, 0]. *SHAREDIFF* is the final offer share adjustment, defined as the difference between the number of shares offered and the number of shares filed (or amended), divided by total number of shares outstanding prior to the offer. *PREVISION* is the final offer price adjustment, measured by the offer price minus midpoint of the file range of the offer price, divided by the midrange file price. *OFFERSIZE* (%) is the shares offered divided by total number of shares outstanding prior to the offer. *UDPRICE* is the closing market price on the offer day minus the offer price, divided by the offer price (in panel B, *UDPRICE* is the SEO discount measured as negative one times the difference between the offer price and the closing market price on the day prior to the offer, divided by the closing market price on the day prior to the offer. *DISCOUNT* is the offer discount, measured as the closing price on the day prior to the offer minus offer price, divided by the closing price on the day prior to the offer. *EARN* is the income before extraordinary items deflated by the market value of equity prior to the offer, where the market value of equity is defined on the day prior to the offer as the number of shares outstanding multiplied by price. *MBRATIO* is the beginning market to book equity ratio, measured as the market value of equity divided by the book value of equity prior to the offer. *LNMVE* is the natural log of the market value of equity.

	RET_{-1}	RET_0	RET_1	RET_{-10}	RET_{-1}	RET_0	RET_1	RET_{-10}
INTERCEPT	-0.0111	-0.0008	0.0066	-0.0119	-0.0048	-0.0327	-0.0156	-0.0382
	(-9.98)***	(-0.52)	(6.46)***	(-6.16)***	(-0.81)	(-4.28)***	(-2.95)***	(-3.82)***
SHAREDIFF	0.0584	0.0577	0.0214	0.1176	0.0575	0.0589	0.0134	0.1164
	(3.70)***	(2.81)***	(1.53)	(4.28)***	(3.64)***	(2.95)***	(0.97)	(4.33)***
PREVISION	0.0448	0.0512	-0.0034	0.0961	0.0452	0.0406	-0.0047	0.0858
	(8.09)***	(6.87)***	(-0.68)	(9.98)***	(8.01)***	(5.51)***	(-0.92)	(8.94)***
OFFERSIZE					-0.0001	-0.0038	0.0347	-0.0038
					(-0.02)	(-0.50)	(6.66)***	(-0.39)
UDPRICE					0.0120	0.0603	0.0093	0.0721
					(2.29)**	(8.82)***	(1.97)**	(8.08)***
EARN					0.1239	0.2566	0.0243	0.3812
					(2.53)**	(4.02)***	(0.55)	(4.58)***
MBRATIO					-0.0001	0.0001	-0.0001	-0.0001
					(-0.59)	(0.40)	(-2.29)**	(-0.11)
LNMVE					-0.0013	0.0053	0.0024	0.0041
					(-1.48)	(4.64)***	(3.04)***	(2.76)***
Adj. R^2	0.0413	0.0286	0.0004	0.0607	0.0461	0.0901	0.0284	0.1061

Table 5. Regressions of returns on the sign of final offer share adjustment

The sample consists of 1,816 offers from 1989 through 2000. The following equation is estimated:

$$RET_t = \alpha_0 + \alpha_1 SHAREDIFF + \alpha_2 (SHAREDIFF * D_{PositiveSHAREDIFF}) + \alpha_3 PREVISION + \alpha_4 OFFERSIZE$$
$$+ \alpha_5 UDPRICE + \alpha_6 EARN + \alpha_7 MBRATIO + \alpha_8 LNMVE + \varepsilon$$

The dependent variable, RET_t is the market-adjusted return (SEO firm's return minus market return) on day –1, 0, +1, and [-1, 0]. *SHAREDIFF* is the final offer share adjustment, defined as the difference between the number of shares offered and the number of shares filed (or amended), divided by total number of shares outstanding prior to the offer. $D_{PositiveSHAREDIFF}$ is an indicator variable that takes value of 1 if the shares offered is greater than filed shares, 0 otherwise. *PREVISION* is the final offer price adjustment, measured by the offer price minus midpoint of the file range of the offer price, divided by the midrange file price. *OFFERSIZE* (%) is the shares offered divided by total number of shares outstanding prior to the offer. *UDPRICE* is the closing market price on the offer day minus the offer price, divided by the offer price. *EARN* is the income before extraordinary items deflated by the market value of equity prior to the offer, where the market value of equity is defined on the day prior to the offer as the number of shares outstanding multiplied by price. *MBRATIO* is the beginning market to book equity ratio, measured as the market value of equity divided by the book value of equity prior to the offer. *LNMVE* is the natural logarithm of the market value of equity.

	RET_{-1}	RET_0	RET_1	RET_{-10}
INTERCEPT	-0.0057	-0.0340	-0.0156	-0.0404
	(-0.98)	(-4.43)***	(-2.94)***	(-4.04)***
SHAREDIFF	0.0452	0.0445	0.0133	0.0886
	(2.72)***	(2.12)**	(0.91)	(3.14)***
SHAREDIFF * $D_{PositiveSHAREDIFF}$	0.1871	0.2339	0.0029	0.4252
	(2.38)**	(2.28)**	(0.04)	(3.18)***
PREVISION	0.0435	0.0385	-0.0047	0.0820
	(7.67)***	(5.19)***	(-0.92)	(8.50)***
OFFERSIZE	-0.0009	-0.0047	0.0347	-0.0055
	(-0.15)	(-0.63)	(6.65)***	(-0.57)
UDPRICE	0.0119	0.0600	0.0093	0.0717
	(2.27)**	(8.80)***	(1.97)*	(8.06)***
EARN	0.1289	0.2627	0.0244	0.3926
	(2.64)***	(4.11)***	(0.55)	(4.72)***
MBRATIO	-0.0001	0.0001	-0.0001	-0.0001
	(-0.71)	(0.29)	(-2.29)**	(-0.27)
LNMVE	-0.0013	0.0053	0.0024	0.0041
	(-1.48)	(4.64)***	(3.04)***	(2.76)***
Adj. R^2	0.0486	0.0922	0.0279	0.1106

Table 6. Final offer share adjustments with versus without share/price amendments during the waiting period

The total sample consists of 1,816 SEOs issued from January 1989 to December 2000. The statistics for the number of shares are stated in millions and those for prices are in dollars. *FINAL OFFER SHARE ADJUSTMENT* for SEOs without (with) amendments is the difference between shares offered and original shares filed (amended shares). *FINAL OFFER PRICE ADJUSTMENT* for SEOs without (with) amendments is the difference between offer price and original mid-range price filed (amended mid-rang price). *SHAREDIFF* is the difference between the number of shares offered and the number of shares filed (or amended), divided by total number of shares outstanding prior to the offer. *P*-values of *t*-test are from a *t*-test of the two sample mean value differences of final offer share adjustment: with versus without amendments in panel A, with versus without share/price amendments in panel B. *P*-values of Wilcoxon rank test are from a test of the restriction that mean are equal across samples based on an analysis of variance.

Panel A: With versus without share/price amendments

				Percentiles	
	Mean	Median	Std. Dev.	75th	25th
SEOs without Amendments (N=924)					
SHARES OFFERED (A)	3.2824	2.4000	3.1780	3.5200	1.6000
ORIGINAL SHARES FILED (B)	4.1263	2.5000	5.4793	4.0000	1.7500
OFFER PRICE (C)	30.2707	24.5000	24.4286	36.0000	16.0000
ORIGINAL MID-RANGE PRICE FILED (D)	31.3619	24.5000	25.4985	35.9400	17.0000
FINAL OFFER SHARE ADJUSTMENT (A-B)	-0.8439	0.0000	3.8830	0.0000	-0.2200
FINAL OFFER PRICE ADJUSTMENT (C-D)	-1.0912	-0.7500	9.8037	1.0000	-2.5000
SHAREDIFF	-0.0224	0.0000	0.0835	0.0000	-0.0121
SEOs with Amendments (N=892)					
SHARES OFFERED (A)	3.2000	2.4000	3.8563	3.5000	1.1616
ORIGINAL SHARES FILED	3.5015	2.5000	5.0526	3.8000	1.7000
AMENDED SHARES (B)	3.2516	2.5000	3.8348	3.5000	1.7194
FINAL OFFER SHARE ADJUSTMENT (A-B)	-0.0516	0.0000	0.5377	0.0000	0.0000
OFFER PRICE (C)	20.0455	17.2500	13.8591	26.000	10.5625
ORIGINAL MID-RANGE PRICE FILED	21.0276	18.6700	13.8497	27.6250	11.8750
AMENDED MID-RANGE PRICE (D)	21.0616	18.1250	14.2041	27.2500	11.6875
FINAL OFFER PRICE ADJUSTMENT (C-D)	-1.0161	-0.7500	3.0475	0.0000	-2.0000
SHAREDIFF	-0.0073	0.0000	0.05137	0.0000	0.0000

Difference Test for the SHAREDIFF	
P-value of t-test	0.0001
P-value of Wilcoxon rank test	0.0001

Table 6: continued

Panel B: By share and price amendments

	Mean	Median	Std. Dev.	Percentiles 75th	25th
SEOs with Share Amendments					
SHARES AMENDED UP (N=149)					
SHARES OFFERED (A)	3.4283	2.6000	2.6672	4.0000	1.8750
ORIGINAL SHARES FILED	2.7915	2.0000	2.2617	3.4000	1.4671
SHARES AMENDED (B)	3.5846	2.5600	2.7899	4.4750	2.0000
FINAL OFFER SHARE ADJUSTMENT (A-B)	-0.1563	0.0000	0.9119	0.0000	0.0000
SHAREDIFF	-0.0189	0.0000	0.0910	0.0000	0.0000
SHARES AMENDED DOWN (N=146)					
SHARES OFFERED (A)	3.1207	2.1825	6.6487	3.1239	1.4500
ORIGINAL SHARES FILED	4.5301	2.9750	9.6879	4.2000	2.0000
SHARES AMENDED (B)	3.1875	2.2248	6.6460	3.2000	1.5000
FINAL OFFER SHARE ADJUSTMENT (A-B)	-0.0668	0.0000	0.0420	0.0000	0.0000
SHAREDIFF	-0.0064	0.0000	0.0409	0.0000	0.0000
Difference Test for the SHAREDIFF					
P-value of t-test	0.0091				
P-value of Wilcoxon rank test	0.3291				
SEOs with Price Amendments					
PRICE AMENDED UP (N=320)					
OFFER PRICE (A)	22.2733	19.4375	14.6892	29.0000	17.5000
ORIGINAL MID-RANGE PRICE FILED	20.5011	18.3750	12.6833	27.6250	11.7500
MID-RANGE PRICE AMENDED (B)	23.6852	20.3750	15.1172	30.9375	13.7500
FINAL OFFER PRICE ADJUSTMENT (A-B)	-1.4119	-0.9100	3.8919	-0.1250	-2.3750
SHAREDIFF	0.0021	0.0000	0.5819	0.0000	0.0000
PRICE AMENDED DOWN (N=406)					
OFFER PRICE (A)	18.1653	16.0000	11.7972	24.0000	10.0000
ORIGINAL MID-RANGE PRICE FILED	21.3127	19.0000	13.5340	27.5000	12.1250
MID-RANGE PRICE AMENDED (B)	18.8809	16.6900	11.9284	25.0000	10.5000
FINAL OFFER PRICE ADJUSTMENT (A-B)	-0.7156	-0.6275	2.1299	0.0000	-1.6300
SHAREDIFF	-0.1086	0.0000	0.5633	0.0000	0.0000
Difference Test for the SHAREDIFF					
P-value of t-test	0.0257				
P-value of Wilcoxon rank test	0.0007				

Table 7. The effect of file amendments during the waiting period on the offer-day returns

The sample consists of 1,816 offers from 1989 through 2000. The following equation is estimated:

$$RET_t = \alpha_0 + \alpha_1 SHAREDIFF + \alpha_2 PREVISION + \alpha_3 OFFERSIZE + \alpha_4 UDPRICE + \alpha_5 EARN + \alpha_6 MBRATIO + \alpha_7 LNMVE + \varepsilon$$

The dependent variable, RET_t is the market-adjusted return (SEO firm's return minus market return) on day –1, 0, +1, and [-1, 0]. *SHAREDIFF* is the final offer share adjustment, defined as the difference between the number of shares offered and the number of shares filed (or amended), divided by total number of shares outstanding prior to the offer. *PREVISION* is the final offer price adjustment, measured by the offer price minus midpoint of the file range of the offer price, divided by the midrange file price. *OFFERSIZE* (%) is the shares offered divided by total number of shares outstanding prior to the offer. *UDPRICE* is the closing market price on the offer day minus the offer price, divided by the offer price. *EARN* is the income before extraordinary items deflated by the market value of equity prior to the offer, where the market value of equity is defined on the day prior to the offer as the number of shares outstanding multiplied by price. *MBRATIO* is the beginning market to book equity ratio, measured as the market value of equity divided by the book value of equity prior to the offer. *LNMVE* is the natural logarithm of the market value of equity.

	With Filed Shares Amended (N=892)				Without Filed Shares Amended (N=924)			
	RET_{-1}	RET_0	RET_1	RET_{-10}	RET_{-1}	RET_0	RET_1	RET_{-10}
INTERCEPT	0.0014	-0.0388	-0.0206	-0.0391	-0.0112	-0.0104	-0.0006	-0.0216
	(0.17)	(-3.57)***	(-2.59)***	(-2.81)***	(-1.13)	(-0.93)	(-0.08)	(-1.43)
SHAREDIFF	0.1106	0.1092	-0.0086	0.2450	0.0515	0.0471	0.0235	0.0986
	(3.21)***	(2.70)***	(-0.29)	(4.10)***	(2.83)***	(2.29)**	(1.55)	(3.54)***
PREVISION	0.0832	0.0776	-0.0038	0.1598	0.0323	0.0259	-0.0048	0.0582
	(7.33)***	(5.03)***	(-0.34)	(8.11)***	(4.94)***	(3.51)***	(-0.87)	(5.83)***
OFFERSIZE	-0.0006	0.0042	0.0412	0.0040	0.0009	-0.0489	0.0084	-0.0480
	(-0.09)	(0.48)	(6.55)***	(0.36)	(0.07)	(-3.20)***	(0.74)	(-2.32)**
UDPRICE	0.0115	0.0324	0.0102	0.0431	0.0311	0.0082	-0.0016	0.3693
	(2.14)**	(4.47)***	(1.91)*	(4.65)***	(1.85)*	(17.80)***	(-0.11)	(14.38)***
EARN	0.1041	0.1829	0.0121	0.2872	0.1345	0.3786	0.0560	0.5131
	(1.71)*	(2.20)**	(0.20)	(2.71)***	(1.69)*	(4.22)***	(0.84)	(4.23)***
MBRATIO	0.0001	0.0000	-0.0001	0.0000	-0.0002	-0.0000	-0.0001	-0.0002
	(0.55)	(0.73)	(-1.79)*	(0.80)	(-3.13)***	(-0.29)	(-1.25)	(-2.26)**
LNMVE	-0.0022	0.0065	0.0029	0.0046	-0.0000	0.0017	0.0010	0.0016
	(-1.69)*	(3.71)***	(2.22)**	(2.05)**	(-0.03)	(1.10)	(0.87)	(0.80)
Adj. R^2	0.0761	0.0887	0.0507	0.1340	0.0465	0.2881	-0.0010	0.2399

Table 8. Regression results of simultaneous equations model of offer day return and the final offer-share adjustment

The dependent variables are RET_t and *SHAREDIFF*. RET_t is the market-adjusted return (SEO firm's return minus market return) on day –1, 0, +1, and [-1, 0]. *SHAREDIFF* is the final offer share adjustment, defined as the difference between the number of shares offered and the number of shares filed (or amended), divided by total number of shares outstanding prior to the offer. *PREVISION* is the final offer price adjustment, measured by the offer price minus midpoint of the file range of the offer price, divided by the midrange file price. *SHARESFILED* is the number of shares filed divided by total number of shares outstanding prior to the offer. *UDPRICE* is the closing market price on the offer day minus the offer price, divided by the offer price. *EARN* is the income before extraordinary items deflated by the market value of equity prior to the offer, where the market value of equity is defined on the day prior to the offer as the number of shares outstanding multiplied by price. *MBRATIO* is the beginning market to book equity ratio, measured as the market value of equity divided by the book value of equity prior to the offer. *LNMVE* is the natural log of the market value of equity. *NASDAQ* is an indicator variable that takes value of one if the equity-offering firm is listed on the Nasdaq market, zero otherwise.

Models	(1)		(2)		(3)		(4)	
Dependent Variable	RET_{-1}	*SHAREDIFF*	RET_0	*SHAREDIFF*	RET_1	*SHAREDIFF*	RET_{-10}	*SHAREDIFF*
INTERCEPT	0.0469	0.1024	-0.1992	0.1068	0.0084	0.1059	-0.1523	0.1064
	(1.60)	(7.22)***	(-3.24)***	(7.35)***	(0.39)	(10.24)***	(-2.70)***	(8.57)***
SHAREDIFF	-0.3826		1.4627		-0.0210		1.0805	
	(-1.54)		(2.80)***		(-0.12)		(2.26)**	
RET		0.3563		0.0421		-0.1734		0.0396
		(0.24)		(0.17)		(-0.25)		(0.28)
PREVISION	0.0407	-0.0042	0.0292	0.0073	-0.0029	0.0086	0.0700	0.0059
	(6.12)***	(-0.08)	(2.09)**	(0.54)	(-0.59)	(1.03)	(5.45)***	(0.31)
SHARESFILED	-0.0907	-0.1864	0.2759	-0.1923	-0.0065	-0.1929	0.1852	-0.1917
	(-1.87)*	(-6.74)***	(2.70)***	(-17.58)***	(-0.19)	(-17.44)***	(1.98)**	(-16.19)***
UDPRICE	0.0177	0.0112	0.0390	0.0129	0.0035	0.0160	0.0567	0.0126
	(2.55)**	(0.60)	(2.66)***	(0.78)	(0.69)	(2.12)**	(4.23)***	(0.74)
EARN	0.0341		0.2156		-0.0268		0.2490	
	(0.75)		(2.24)**		(-0.81)		(2.83)***	
MBRATIO	0.0000		0.0000		-0.0001		0.0000	
	(0.67)		(0.77)		(-2.33)**		(0.98)	
LNMVE	-0.0073	-0.0132	0.0262	-0.0142	-0.0002	-0.0139	0.0189	-0.0141
	(-0.97)**	(-4.15)***	(3.36)***	(-7.28)***	(-0.06)	(-10.88)***	(2.65)***	(-9.19)***
NASDAQ		0.0117		0.0097		0.0102		0.0099
		(1.73)*		(2.06)**		(3.21)***		(2.59)***
System-weighted R^2	0.1035		0.1488		0.0853		0.1436	