Media coverage and the decision to withdraw an IPO

Diego Amaya[a] Jean-Yves Filbien[b] Maher Kooli[c]

Abstract

We examine and provide evidence on the impact of pre-initial public offering (IPO) media coverage on the decision to withdraw an IPO. Using a sample of 2,082 completed and withdrawn IPOs between January 1998 and December 2013, we find that media tone has a negative impact on the probability of withdrawal and that a one percent increase in media coverage results in a 34% increase in the probability of withdrawal. Our results support the idea that even when media coverage does not supply new information during the IPO process, it plays a significant role shaping investor beliefs about firm valuations, which influence the final outcome of this process.

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[a] Assistant Professor of Finance at Wilfrid Laurier University, 75 University Avenue West, Waterloo, Ontario, CANADA N2L 3C5; Tel: +1 519.884.0201, ext. 4428; Email: damaya@wlu.ca
[b] Professor of Finance at Lille University, IAE Lille, 104 avenue du Peuple Belge 59043 Lille, FRANCE ; Email : jean-yves.filbien@iae.univ-lille.fr
[c] Professor of Finance at the School of Management, CDPQ Research Chair in Portfolio Management, Université du Québec à Montréal, Department of Finance, 315 Rue Sainte-Catherine Est, Montréal, Québec, CANADA H2X 3X2, Tel: +1 514.987.3000, ext. 2082, Fax: +1 514.987.0422, Email: kooli.maher@uqam.ca
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1. Introduction

Not all filed initial public offerings (IPOs) get to the market. When a firm decides to go public, it must file a Form S-1 on the Securities and Exchange Commission's (SEC) electronic data gathering, analysis, and retrieval (EDGAR) system. However, this does not mean that the firm will go public. It still has the option to withdraw its filing and walk away. According to Busaba, Benveniste, and Guo (2001), among others, approximately 20% of filed IPOs are withdrawn.[1] Moreover, as observed in Gao, Ritter, and Zhu (2013), the annual number of IPOs in the United States dropped from an average of 310 during 1980-2000 to only 99 during 2001-2012. This suggests that firms are willing to employ alternative ways to the IPO market.

Numerous studies have attempted to explain IPO withdrawals by focusing on firm characteristics and market conditions. Dunbar and Foerster (2008) maintain that the choice to withdraw remains puzzling given the fact that firms that withdraw their IPOs due to temporary market misevaluations should return to the market after withdrawal. However, few firms do.

In this study, we investigate whether media coverage after the S-1 filing provides information about the firm's decision to withdraw its IPO. Under the book building process, underwriters market the offering to attract potential investors during a roadshow to obtain feedback about the issue's potential. However, this process also attracts the attention of the media, which uses as information sources different

[1]Lin and Chasan from the Wall Street Journal report that more than a quarter of publicly filed IPOs were withdrawn in 2015. Available at http://on.wsj.com/1LQF46M.

players familiar with the issue to generate news articles about the IPO. In this context, as suggested by Liu, Sherman, and Zhang (2007), media coverage could be a good proxy for unobservable direct feedback from investors and could shed light on the existing demand for the issue.

We collect news articles of IPOs that are published between the S-1 filing date and the issue or withdrawal date, and analyze whether media coverage includes material information related to the outcome of the IPO process. Our sample consists of 2,082 IPO filings from January 1998 to December 2013. We find that the number of articles associated with withdrawn IPOs is higher than the number for completed IPOs. This large disparity in media coverage is statistically significant, suggesting an important role of this variable in the determination of the IPO's outcome. Next, we quantify the tone of news articles by employing a list of negative and positive words from Loughran and McDonald's (2011) dictionary. Whereas the tone of news for deals that are subsequently completed is neutral, on average, the tone of the news related to subsequently withdrawn IPOs is optimistic. We use a series of multivariate analyses and find that these relations are robust to different control variables and specifications, with media coverage playing a first-order role in all our tests. In addition, we examine whether the timing of the news information during the IPO process influences the filing's outcome in different ways. We find that information arriving at an early stage of the process has the highest impact, which is likely to coincide with the time of the IPO's roadshow.

We reconcile this evidence within a framework that follows the information structure and book building process proposed in Brisley and Busaba (2007). In our setup, the issuing firm has the flexibility to withdraw the IPO if the after-market price is lower than a reservation price. This reservation price is exogenous to the process and reflects alternative financing sources to the IPO. After the S-1 filing, investors pay attention to all public information sources available to form beliefs about the firm's reservation value. In cases where investors receive information inducing them to systematically overestimate the issuer's reservation value, the total demand for the issuer's shares decreases as fewer investors are available to trade at higher prices. Consequently, the lack of demand for an overpriced issue leads to an increase in the probability that the issuing company will withdraw its IPO.

Our study contributes to two streams of literature. First, it contributes to the literature that examines the withdrawal of IPOs. This literature includes Busaba, Benveniste, and Guo (2001), Benveniste et al. (2003), and Dunbar and Foerster (2008), among others. Busaba, Benveniste, and Guo (2001) examine the option to withdraw an IPO within the book building framework. Using a sample of 113 withdrawn IPOs and 416 completed ones filed during the three-year period 1990-1992, they find that the size of the offering, the debt ratio of the issuers, and debt retirement as the primary use of proceeds positively affect the likelihood of withdrawal, while the presence of venture capital (VC) and the issuer's annual revenue before the offering negatively affect the likelihood of withdrawal. They also find a negative relation between underpricing and the issuer's ex-ante probability of

withdrawal and confirm the importance of the option to withdraw as a bargaining chip for issuers. Benveniste et al. (2003) consider a sample of 6,181 IPOs in the period 1985-2000 and find that information spillover influences the probability that a firm will complete or withdraw an attempted IPO. Dunbar and Foerster (2008) examine 138 companies that withdraw an IPO and subsequently conduct a successful IPO during the period 1985-2000. They find that issuers take into consideration the costs of withdrawal in their decision to complete or withdraw the IPO. If a firm has no chance to return to the IPO market for a second attempt, it will push forward to complete its first attempt. They also find that information spillover and macroeconomic conditions after withdrawal positively affect the possibility of a return to the market.

Second, our study also contributes to the growing literature that examines the relation between media coverage and market returns. Tetlock (2007) finds that news provides information about future stock market activity. Tetlock, Saar-Tsechansky, and Macskassy (2008) find that negative words in news stories contain useful information on firms' fundamentals and are of particular use in predicting both earnings and returns. Bhattacharya et al. (2009) analyze news articles associated with 458 Internet and non-Internet IPOs during the period 1996 to 2000 and find that media coverage is not a major factor in the Internet bubble and its subsequent crash.

Our study is closely related to (but also distinct from) Loughran and McDonald (2013) who examine the effect of the tone of the information contained in the S-1 filing as a

proxy for ex-ante uncertainty on IPO valuation. Using a sample of 1,887 completed IPOs for the 1997-2010 period, they find that filing text with high levels of uncertainty lead to higher first day returns, more absolute offer price revisions, and larger subsequent return volatility. They also consider a sample of 793 withdrawn IPOs and examine the effect of word frequency on the probability that the IPO is withdrawn. They find that higher uncertainty and weak modal frequency in the S-1 filing marginally increase the IPO's withdrawal probability. In contrast with the previous study, which concentrates on the information content of the S-1 filing, we analyze news articles related to the issue, from its filing to the issue or withdrawal date. Since the company and its underwriter are responsible for the information contained in the S-1 filing, the interpretation of information contained in the S-1 filing should be different from that in the mass media. Moreover, given that during the quiet period little information is available about the company, mass media is one source of information accessible to all investors. Another distinction between our paper and that of Loughran and McDonald (2013) is that while those authors focus their study on the relation between language uncertainty and first-day returns, offer price revisions, and subsequent volatility, we look for evidence of whether or not the type of media attention received by a company is indicative of the likelihood that it will end up withdrawing its IPO.

Our study also relates to Liu, Sherman, and Zhang (2007), who find that the amount of media coverage received by a company before the IPO date is significantly related to both the price revision and the degree of underpricing. They conclude that

underwriters adjust for media coverage when the offer price is revised downwards, but they only partially adjust when the offer price is revised upwards. We explore an alternative research question and analyze how IPO coverage by media outlets conveys information about the likelihood of a company withdrawing its IPO. From this perspective, we contribute to the literature by showing that the media provides information not only regarding the underpricing of IPOs, but also regarding the final outcome of the IPO attempt.

The remainder of this paper proceeds as follows. Section 2 discusses the conceptual framework and develops testable hypotheses. Section 3 describes our data and sample selection procedure. Section 4 describes our empirical tests and results. Section 5 provides further tests, and Section 6 concludes.

2. Conceptual Framework and Hypotheses Development

This section presents a simple model to understand how news articles related to the filing of an IPO influence the outcome of the issuing process. Our model follows the information structure employed in Welch (1992) and later adapted by Brisley and Busaba (2007). We start by describing the book building process associated with an IPO where agents are uncertain about the reserve value of the issuer. We then characterize the probability that the firm withdraws the IPO conditional on the information generated after filing. We present at the end of this section our testable hypotheses.

2.1 Book Building Process

Suppose a firm decides to sell a fixed fraction of its shares, Q, to a potential group of investors of size I (each of them willing to buy up to one share of the company): if successful, the after-market price of a share will be V. Prior to the selling process, the firm, its underwriter, and all investors are uncertain about the value V, but agree that this value is uniformly distributed over the interval $[V^L, V^U]$. This means that the true value of V relative to the level of uncertainty can be measured by

$$\theta = \frac{V - V^L}{V^U - V^L}. \tag{1}$$

In addition to this common information, each investor possesses a private signal about V. This signal corresponds to a low value L with probability $1-\theta$ and to a high value U with probability θ. Note that by defining these outcomes as a function of θ, a positive correlation is induced between the true value of V and the investor signal. The role of the underwriter in this process is to solicit information from the I investors (collect their signals) and aggregate them before the per share after-market price is established. The collecting process leaves the underwriter with $I+1$ outcomes, each of them representing a possible demand state $i \in \{0,1,\ldots,I\}$. This demand schedule means that in the case that i investors manifest their willingness to buy shares of the company, the after-market price V is a function of that demand, which we denote by V_i. If investors report their true interest, the number of i interested investors provides a more precise estimate of the true V, as this value

coincides with the number of U signals held by all I. As a consequence, the value of V conditional on i U signals provides the following updated estimate:[2]

$$V_i = E(V \mid i) = \frac{i+1}{I+2}. \tag{2}$$

We suppose that the issuing firm has the flexibility to withdraw the IPO if the after-market price of the share is lower than the reservation price V_R, where R refers to a particular demand state i^R. When setting the reservation price, the firm has to take into account that a high value protects itself from selling too low in the IPO. On the other hand, a reservation value that is too high reduces the interest of investors in the firm and jeopardizes the IPO's realization. This last point comes from the fact that a high reservation price generates a total demand i that is lower than the required level i^R, so the firm is not able to obtain the financing sought and withdraws its IPO. We abstract from the endogenous decision of establishing the reservation price by assuming that this value is uncertain at the time of the filing and that the firm sets the final reservation price once it has gathered information during the roadshow. Thus, the reservation value is modeled by all investors with the following asymmetric three-point distribution:

$$Pr\{\tilde{V}_R = x\} = \begin{cases} p_1, & \text{if } x = V_{R+r} \\ 1-(p_1+p_2), & \text{if } x = V_R \\ p_2, & \text{if } x = V_{R-r} \end{cases}, \tag{3}$$

[2] A detailed proof is found in Welch (1992), Lemma 1, page 699.

where p_1 and p_2 determine the weights assigned to high and low reservation values, respectively. The parameter r determines the range of uncertainty about the value V_R, with $V_{R-r} \geq V^L$ and $V_{R+r} \leq V^U$.

After the filing, investors pay attention to all public sources available to form beliefs about the firm's reservation value. Given that at this stage there is little tangible information about the company, expectations about the reservation value can be systematically overestimated ($p_1 > p_2$), underestimated ($p_1 < p_2$), or unbiased ($p_1 = p_2$), depending on the positive, negative, or neutral content of the information received.

2.2 Probability to Withdraw

The ex-ante probability that the issue is withdrawn depends on the total demand i for the issuer's shares. If this demand is below the required level i^R, the issue is withdrawn. Given that agents are uncertain about this value and the firm's reservation value, this probability is given by the following expression:

$$\begin{aligned} Pr\{i \leq i^R\} &= p_1 Pr\{i \leq i^{R+r}\} + (1 - p_1 - p_2) Pr\{i \leq i^R\} + p_2 Pr\{i \leq i^{R-r}\} \\ &= \frac{I+2}{I+1} \frac{1}{V^U - V^L} (p_1(R+r) + (1 - p_1 - p_2)R + p_2(R-r) - V^L) \\ &= \frac{I+2}{(I+1)(V^U - V^L)} (R + r(p_1 - p_2) - V^L). \end{aligned} \tag{4}$$

The second equation in (4) comes from the fact that

$$Pr\{i \leq l\} = \frac{I+2}{I+1} \frac{l - V^L}{V^U - V^L} \tag{5}$$

as shown in Busaba (2006).

Figure 1 shows the probability to withdraw as a function of the imbalance between beliefs, $p_1 - p_2$. This figure highlights several effects of the role of investor attention on the IPO's outcome. First, we observe that attention to positive news leads investors to overestimate the issuer's reservation value ($p_1 > p_2$), increasing the likelihood to withdraw an IPO. Positive information about the upcoming IPO induces agents to expect reservation values closer to the upper limit V^U, so the total demand for the issue decreases as fewer investors are willing to trade at after-market prices close to V^U. Second, we observe that the more agents there are that underestimate the issuer's reservation value ($p_1 < p_2$), the lower the likelihood that the firm withdraws its IPO. That is, when investors are paying attention to negative information, they would expect reservation values closer to the lower limit V^L. This effect will produce an after-market price close to the reservation value, so the firm will experience enough interest to continue with the IPO. Finally, when there is little or no information about the issuing, agents will assign equal probabilities to high and low reservation values, so the distribution of $\tilde{V}_R$ is symmetric. In this case, the probability to withdraw an IPO corresponds to the one in which the reservation value is known. Note in the figure that this likelihood is higher than the one when there is underestimation, which shows how vulnerable issuers are to intangible information carrying negative content. When investors pay attention to this type of information, issuers lose their leverage against investors downplaying interest, which not only affects the likelihood of the issuing process, but can also increase the underpricing of the issue as the value of the option to withdraw is reduced.

[Insert Figure 1 Here]

2.3 Testable Hypotheses

Hypothesis 1 (H1): Media coverage of an IPO filing has an impact on the likelihood to withdraw.

Attention generated by media coverage of the S-1 filing can affect investors' beliefs about the company's reservation price. Given that information from media outlets is one of the few public sources available before the expected IPO date, media coverage can affect investors' beliefs. Whether positive or negative, the force exerted by media can impact the likelihood that the company withdraws its IPO by shifting investors' interest in the company shares.

Hypothesis 2 (H2): The tone associated with the media coverage of the IPO affects the chances that an IPO is withdrawn.

This hypothesis follows directly from Figure 1. In this figure, overestimation (underestimation) of the reservation value is observed when agents process intangible information sources with more positive (negative) content. When the level of positive (negative) content increases, so does the overestimation (underestimation) of the reservation value. The latter effect implies higher values of p_1 (p_2) and thus a higher (lower) probability of withdrawal.

3. Data and Descriptive Statistics

We collect a sample of IPO announcements from the Securities Data Company's (SDC) database. All announcements must satisfy the following criteria: (1) they occur

between January 1, 1998, and December 31, 2013; (2) the minimum offer price is $5; (3) the issue type is classified by SDC as IPO; (4) unit offerings, closed end funds, real estate investment trusts (REITs), American depository receipts (ADRSs), and limited partnerships are excluded; and (5) the IPO is classified by SDC either as completed or withdrawn. After we apply these filters, we obtain a final sample of 2082 IPOs announcements.

Our main analysis focuses on information generated from media outlets after a company has made public its intention to conduct an IPO. To this end, we use Factiva to collect news articles from major business media such as Reuters News, Dow Jones News Services, The Wall Street Journal, and other U.S. newspapers. We also include news generated from the company, which is provided by PR Newswire and available in Factiva. Only articles released between the issue date of the S-1 form and the offer or withdrawal date are used in the study. The first variable that we compute from these data is media coverage (*Media Coverage*), which is defined as the number of news articles associated with the IPO. Next, to quantify the language of a media article, we employ the variable media tone (*Media Tone*) based on the list of negative and positive words from Loughran and McDonald's (2011) dictionary. Media tone in an article is defined by the imbalance of positive to negative words divided by the total number of classified words. This definition implies that positive values are associated with optimistic sentiments about the IPO; the contrary is true for negative values. To obtain the media tone associated with a particular IPO, we sum the tone

of each news article and then divide by the total number of news articles associated with the firm.

We follow previous IPO literature (e.g., Dunbar and Foerster (2008) and Busaba, Benveniste, and Guo (2001)) and consider several control variables. First, to control for IPO characteristics, we consider the expected size of the offering (*IPO Proceeds*) (measured by the average filing price multiplied by the number of shares to be offered), a dummy variable for venture capital participation (*VC Backing*), the prestige of the underwriter (*Underwriter Prestige*),[3] a dummy variable representing whether the primary stated use of proceeds is debt retirement (*Debt retirement*), and a dummy variable representing whether the IPO issuer is a technology firm (*Tech*). Second, to control for market conditions, we consider the return on the S&P 500 index over the two months after the filing (*Market return*), the spread between the BAA and AAA corporate bonds on the day of the filing (*BAA-AAA yield spread at filing*), the change in BAA-AAA yield spread two months after the filing date (*BAA-AAA yield spread 2 months after filing)*, and the change in the industry average book-to-market ratio over the year of the filing (*Average Book-to-Market Ratio*).

Table 1 presents the summary statistics on the IPO activity. From the 2,082 IPOs in our sample, 289 deals were withdrawn (13.88%).[4] We also note that the percentage of withdrawn IPOs varies over time, ranging from 0% to 51.79%. Apart from 2013

[3] Prestige is measured by the Carter-Manaster rank of lead underwriters from Jay Ritter's website https://site.warrington.ufl.edu/ritter/ipo-data/

[4] Busaba, Benveniste, and Guo (2001) report a withdrawal ratio of 14.3 for the period between 1984 and 1994, while Dunbar and Foerster (2008) examine the period between 1985 and 2000 and find that the percentage of withdrawn IPOs is approximately 20%. Edelen and Kadlec (2005) report a withdrawal ratio of 16% for the same period.

and 2012, in which no IPO was withdrawn, 2011 presented the lowest proportion of withdrawals (1.61%), while 2001 and 2008 experienced the highest rates (51.79% and 44.83%, respectively). Regarding the number of completed IPOs, we observe that this number also varies over time. The Internet bubble period of 1999 to 2000 experienced the highest number of completed deals, while the lowest number was observed during the financial crisis period of 2008 and 2009. These trends reveal that the frequency of IPO withdrawals is intertwined with the business cycle of the economy. Notwithstanding this trend, we also observe that in the last part of the period, IPO withdrawal frequency has been decreasing in line with the general activity in the IPO sector, as shown in Gao, Ritter, and Zhu (2013).[5] Finally, when we look at those companies that withdrew their first IPO, we find that only 8.71% successfully conclude a subsequent IPO filing.[6]

[Insert Table 1 Here]

Table 2 lists the top five media sources separately in terms of number of total articles for completed and withdrawn IPOs. This table also reports the average media tone for each of the top five media sources. The principal sources of news for completed IPOs are Reuters and Dow Jones News Service, which together account for more than 50% of the articles reported. For withdrawn IPOs, Dow Jones Corporate Filings Alert and Reuters account for over 60% of the articles reported. Regarding media tone of articles, there is a notable dispersion across media outlets.

[5] Gao, Ritter, and Zhu (2013) note the drop in the number of U.S. IPO, from an average of 310 IPOs per year during 1980-2000 to only 99 IPOs per year during 2001-2012. They retain the economies of scope hypothesis as an explanation to the low level of IPOs.
[6] See section 4.4 for further investigation of this subsample.

[Insert Table 2 Here]

4. Media Coverage and the Decision to Withdraw

We begin our analysis by investigating whether media coverage relates to the likelihood that an IPO is withdrawn. To this end, we first study characteristics of completed and withdrawn IPOs using univariate analysis and we then employ logit regressions to control for factors that could also affect the IPO's outcome.

4.1 Characteristics of Completed vs. Withdrawn IPOs

Table 3 presents summary information for the completed and withdrawn IPOs. When we look at the first variable of interest, media coverage, we observe that withdrawn deals have the largest number of news articles. The average level of media coverage for this outcome is about 52.65 articles; more than twice the average number associated with completed IPOs (25.87). The fact that the level of media coverage differs significantly between these two samples provides the first piece of evidence in favor of H1. Regarding the media tone of IPO coverage, completed IPOs convey a tone that is neutral, on average (-0.71%), which contrasts with the positive tone conveyed for withdrawn IPOs (12.18%). This variation in media tone across IPO coverage suggests that media outlets distinctively disseminate information that has some level of correlation with the outcome of the filing process. Given that media coverage of withdrawn IPOs has a tone that is positive, on average, we could further argue that the overestimation effect described in Section 2 and hypothesized in H2 could be a possible explanation for the withdrawal.

Table 3 also shows that there are other significant differences between these two samples. The time spent on IPOs that are completed is typically less than the time spent on IPOs that are withdrawn, as shown by the variable *Waiting period*. IPOs are typically completed in 127.69 days, but they are withdrawn, on average, in 249.45 days. This difference is statistically significant, showing that the filing process is less than trivial and that not all filings experience similar processing times. As previously reported in Dunbar and Foerster (2008), withdrawn IPOs are on average smaller than completed ones. The mean expected gross proceeds are $179.16 million for the completed IPOs, and $92.82 million for the withdrawn IPOs. This difference between completed and withdrawn IPOs is also significant at the 1% level. Results reported in Table 3 also reveal that the percentage of venture capital participation is 55% for completed IPOs, which is significantly smaller than the percentage of venture capital participation observed in withdrawn IPOs (75%). These results do not support the idea that VCs will push hard for a company to go public. Instead, they are in line with the idea that the IPO is not the only channel for VC-backed firms (see e.g., Bayar and Chemmanur (2011), Cumming (2008), and Giot and Schwienbacher (2007)).[7]

When we look at market characteristics surrounding the deal, we find that the post-filing market return is positive for completed IPOs, while it is negative for withdrawn IPOs. This result is consistent with Dunbar and Foerster (2008), who argue that completed IPOs benefit from better stock market conditions. Regarding variables

[7] Loughran and McDonald (2013) find that VC-backed IPOs have more negative S-1 tone, and explain that venture capitalists are considered as capital providers of the last resort, specifically for risky and less profitable firms.

from the bond market, the BAA-AAA yield spreads are higher for completed IPOs, confirming the fact that when default probabilities are higher, withdrawals become more likely. Finally, the industry book-to-market ratio is higher for the sample of withdrawn IPOs, suggesting that issuers facing less growth opportunities (higher book-to-market ratios) are likely to withdraw. The difference between completed and withdrawn IPOs is significant at the 1% level.

[Insert Table 3 Here]

4.2 Multivariate analysis

We employ a logit analysis to examine the determinants of IPO withdrawal. We focus on the relation between media coverage after the IPO filing and the probability of withdrawal. The dependent variable takes the value one if the IPO filing is withdrawn and zero if it is completed. We control for IPO characteristics and market conditions at the time of the filing, as previously discussed. The estimation results are presented in Table 4. We also report the marginal effect for each variable.

The first model only includes control variables as regressors. Consistent with our univariate results, we find that the relation between the expected offering size and the probability of withdrawal is negative and significant at the 1% level. The coefficient of the *log Waiting period*- log of days between S-1 and the withdrawal (completion) date- is positive and significant at the 1% level. Thus, as time passes after the filing, the likelihood that a firm withdraws its IPO increases. We also find that the coefficient of *VC Backing* is positive and significant at the 1% level, confirming the possibility that venture capitalists could have a positive impact on the

decision to withdraw an IPO. The underwriter's prestige has a negative impact on the decision to withdraw, but its coefficient is not statistically significant. Regarding the variables related to market conditions, the yield spread at filing has a negative and significant impact on the decision to withdraw, while the change in the industry book-to-market ratio has a positive and significant impact.

Column 2 presents a second model, which builds upon the first one by adding media coverage in the list of independent variables. The coefficient of *log Media Coverage* is positive and significant at the 1% level, suggesting that firms are more likely to withdraw their IPO following intense media coverage after the filing (H1). The coefficient estimate implies that the incremental effect of media coverage on the probability of withdrawing the IPO is about 5%.

Model 3 includes media tone in the base specification of Model 1.[8] In column 3, the coefficient of *Media Tone* is positive and significant at the 1% level, providing support to H2. As argued in Section 2, the probability of IPO withdrawal increases due to the lack of demand from investors perceiving an overpriced issue.

Finally, when we include both measures, Model 4, in last columns, confirms that both variables remain positive and significant. The increase in *pseudo-R^2* from 37.99% to 42.76% shows the substantial gains associated with information generated by media outlets.[9]

[8] Replacing media tone with the number of positive words divided by the total classified words does not materially change the results.

[9] We also employed a probit model and obtain similar results to those in Table 4. Results are available upon request.

Overall, our results support the idea that media coverage and media tone positively and significantly affect the probability of withdrawal. This effect relates to the investor attention hypothesis and its role on subsequent asset valuations. Barber and Odean (2008) provide evidence of attention being an important determinant of an individual investor's decision to buy stocks and conclude (p. 813) that: "*attention-based purchases by many investors could temporarily inflate a stock's price, leading to disappointing subsequent returns.*" Da, Engelberg, and Gao (2011) also examine the pattern predicted by the attention-induced price pressure hypothesis and find that increased pre-IPO investor attention is related to IPO underpricing and underperformance in the long run. Da, Gurun, and Warachka (2014) argue that investors are more attentive to information that arrives in large amounts at discrete points in time, as evidenced by quicker reactions of stocks that have greater levels of media coverage. To the extent that investor attention can also interact with behavioral biases, this mechanism can generate price overreaction (Hou, Peng, and Xiong (2009).

Different from previous evidence on the effects of attention and overestimation, this study argues that media-driven attention can shape investors' beliefs about an issuer's reservation value. Extensive coverage and positive tone create media hype that results in overestimation of reservation values. This overestimation decreases the overall demand for the issue since a reduced number of investors are willing to invest in the company, increasing the likelihood that the issue is withdrawn. Given that during this period issuers are not allowed to communicate hard information

other than what is in the prospectus (subject to the quiet period), investors are more attentive to other sources of information. In this context, soft information compiled by media from sources, such as analysts, traders, and regulators, will likely capture investor attention. Even if media coverage does not supply genuine news, it helps disseminate information from sources familiar with the deal to a broader audience in informationally incomplete markets (Fang and Peress, 2009).

An alternative interpretation of our results could be that there is more media coverage when the issuer is expected to withdraw the offering. Therefore, a higher (lower) anticipated withdraw probability causes more (less) media coverage and not the opposite. However, we can rule out this anticipation hypothesis since this would contradict evidence of media's propensity to cover firms that will attract the attention of the market and tend to do well in the future (Liu, Sherman, and Zhang, 2014).

[Insert Table 4 Here]

4.3 Media Coverage and the Likelihood and Timing of Withdrawal

The logistic regression analysis does not consider the time between the IPO filing and the decision to withdraw or to complete the offer. Therefore, to examine the relation between media coverage and the likelihood and timing of withdrawal, we rely on survival analysis and run multivariate hazard regressions using the proportional hazards model proposed by Cox (1972). The basic model assumes the following form:

$$h_i(t) = \lambda_0(t)\exp\{\beta_1 x_{i1} + ... + \beta_k x_{ik}\} \quad (6)$$

Where $h_i(t)$ is the conditional hazard rate defined as the probability of withdrawal following the IPO filing. $\lambda_0(t)$ is the baseline hazard function and the second part of the equation is the exponentiated set of covariates for the i firms.

The results of the estimated Cox proportional hazards models are reported in Table 4. Since the dependent variable is the logarithm of the hazard rate, a positive (negative) coefficient on an explanatory variable indicates that changes in that variable decrease (increase) the time a company spends before withdrawing its IPO. For each of the estimated models in Table 5, we report the estimated coefficients in the first column and the hazard ratios in the second.

The first model in Table 5 includes only the control variables. We find that the time-to-withdraw the IPO is positively associated with the variables *VC Backing* and *Average Book-to-Market Ratio*. This result shows that firms that have been funded by venture capital and that face lower growth opportunities are more likely to accelerate their decisions to withdraw the IPO. This is consistent with the view that VC-backed firms have different strategies and are more likely to employ the one that maximizes their returns. For instance, Brau, Sutton, and Hatch (2010) find that VC-backed firms are more likely to follow a dual-track path to takeovers, where they file for an IPO (to increase their harvest value) while pursuing acquirers. Eventually, these firms withdraw the IPO filing and accept the takeover.

Model 2 in Table 5 adds to the base specification the variable *log Media Coverage* as an independent variable. The coefficient of this variable is positive and significant at the 1% level, indicating that the attention obtained from the media increases the

probability that the company withdraws its IPO (a decrease in the time-to-withdraw).[10]

In Model 3, in addition to the control variables, we include *Media Tone* as an independent variable. We find that the coefficient of *Media Tone* is positive and statistically significant at the 5% level, but its marginal effect is small. Finally, in Model 4 we run a regression that includes both *Media Coverage* and *Media Tone* in the list of explanatory variables. Model 4 in Table 5 confirms that after including our set of control variables, an increase in media coverage increases significantly the probability that a company withdraws its filing. This result shows that media coverage is a first order determinant of the decision to withdraw the IPO, and that although a large proportion of firms withdraw when they receive positive coverage, the likelihood that they do so relates to the media attention generated after the filing. We now assess the economic impact of all significant variables by evaluating their impact on the probability that the IPO will be withdrawn. The hazard ratios for each estimated model are reported in the second column. Regarding the model that includes all variables (Model 4), we find that if a filing company receives one percent more media coverage, this increases the chances of its IPO being withdrawn by 34%. Furthermore, our results indicate that *VC Backing* and *Average Book-to-Market*

[10] We also investigate a possible interaction effect between VC and media coverage. In particular, the presence of VC could strengthen or weaken the media coverage effect. This analysis is carried out by including an interaction term in Model 2. We find that the coefficient of media coverage remains positive and significant. In addition, we include an interaction between the Average Book-to-Market Ratio and the media coverage variable to test if media coverage covers more growth firms. Again, the coefficient of the media coverage variable remains positive and significant as well.

Ratio have important hazard ratios, confirming that VC-backed and growth firms have valuable alternative strategies.

[Insert Table 5 Here]

5. Further Analyses

In this section, we further analyze the relation between media coverage and the likelihood that the company withdraws its IPO. We first characterize at which stage of the IPO process the information from the media arrives and then analyze its effect on the outcome of the filing. Subsequently we investigate whether companies completing an IPO after withdrawing their first attempt receive different coverage from media.

5.1 Information Timing and the Decision to Withdraw

The conceptual framework presented in Section 2 builds on the idea that investors form beliefs about the issuer's reservation value from signals parallel to the book building process. This particular structure implies that when we look at the arrival of information during different stages of the IPO process, the timing of this information might have a different impact on the process. On one hand, the arrival of information at early stages should play a more determinant role in demand schedules since it is during this period that investors form their first impressions about the issuer. On the other hand, information arriving at later stages of the IPO process should have a smaller marginal impact since at these stages investor beliefs are more likely to be well established.

To explore possible differences about the timing of information during the IPO process, for each IPO in our sample, we divide the timeframe from the S-1 filing to the resolution date (completion or withdrawal) into four equal periods. Then, for each of these periods, we measure the number of articles published and their media tone, which provides us with four new variables of media coverage (*Q1-Q4 Media coverage*) and media tone (*Q1-Q4 Media Tone*). Table 6 shows media coverage and media tone for each of these periods categorized by the IPO's final status (completed vs. withdrawn). We observe that across periods and status, these variables are similar on average, reflecting a balanced flow of information across the IPO process.

[Insert Table 6 Here]

Next, we employ these new measures in a series of multivariate regressions to examine the impact of information timing on the likelihood of withdrawal. Results of these regressions are reported in Table 7. Models 1, 2, 3, and 4 show that once we account for several control variables, the individual effect of media coverage in a particular period is positive and significant, confirming our previous results that measure media coverage during the whole IPO process (see Table 4). Then, when we control by the individual effect in Model 5, we note how the marginal coefficients are inversely related to the period in which they are computed. Whereas the coefficients of media coverage during the first two periods are positive and significant, the effect of media coverage during the last part of the IPO process is negative and significant. These results show that information timing is important during the IPO process,

since information arriving at early stages exerts the highest impact on the overall demand for a particular IPO.

The second set of analyses that we present in Table 7 relate to the role of media tone when measured at different stages of the IPO process. Models 6 to 9 show that the individual impact of this variable is positive and significant, again, in line with the evidence presented in Table 4. When we control for this variable's timing, namely, when this variable is measured (Model 10 in Table 4), we find that its coefficients are positive and significant in all but the second period. Given that the marginal effects for these variables are similar, we suggest that it is the positive aspect of media tone rather than the moment at which it is observed that drives the relation between this variable and the probability of a company withdrawing its IPO.

[Insert Table 7 Here]

5.2 Decision to Return to the Market After the First Withdrawal

As shown in Table 1, from the total sample of IPOs withdrawn, 8.65% return for a subsequent successful offering.[11] This subsample is of particular interest in our case because we have the opportunity to analyze differences in media attention between companies that decide to conduct a second attempt and those that do not. We can also examine whether companies that can complete their IPOs receive a different level of media attention on their second attempt.

[11] See Dunbar and Foerster (2008) for a detailed analysis on the effect of other variables previously considered on withdrawals to explain the probability of successful return.

To do so, we first divide the sample of withdrawn IPOs into two subsamples: (1) companies that withdrew their first IPO and then became public through a second filing (*successful returners*) and (2) companies that never return to the IPO market (*quitters*). Panel A of Table 8 presents statistics about the level of media coverage and media tone for these two subsamples measured at the first IPO attempt (between the S-1 filing and the withdrawal date). We observe that although *Media Coverage* is higher for quitters than for successful returners, there is no significant difference between these two samples. A similar observation is made regarding *Media Tone*, which is more positive for quitters than for successful returners, but this difference is not significant either. Nonetheless, we do observe a difference regarding the time to withdraw the filing, with successful returners withdrawing their offerings sooner than quitters. These results show that both groups of firms receive, on average, the same type of media attention, suggesting that this media coverage is based on a common characteristic about a firm's capacity to complete its IPO. Thus, whether a company decides to return for a second filing is not likely to be related to the coverage received during its first attempt.

Next, we focus on the subsample of companies that completed their second filing and examine changes in media coverage between attempts. This time we compute media variables between the second filing date and the IPO date, and compare these values to those obtained during the first attempt. Panel B of Table 8 reveals that both *Media Coverage* and *Media Tone* decrease in the second attempt period. From the two measures, only *Media Coverage* is statistically significant at all standard levels.

These results are consistent with H1 and H2 from Section 2, indicating that a lower reservation price could induce a larger demand for the issue, thus explaining the success in the second attempt for the IPO. [12]

[Insert Table 8 Here]

6. Conclusion

While previous studies on media coverage and IPOs focus mainly on the effect of the media on IPO first-day returns, offer price revisions, long-term performance, and subsequent volatility, we provide evidence on the impact of pre-IPO media coverage on the decision to withdraw an IPO. Using a sample of 2,082 completed and withdrawn IPOs between January 1998 and December 2013, we find that firms with more media coverage before their IPO have a significantly higher probability of withdrawal.

Throughout our analyses we consider two measures to analyze pre-IPO media coverage: (1) the number of articles published related to the IPO and (2) the imbalance of positive to negative words using Loughran and McDonald's (2011) list of words as our measure of the tone in news stories. Our results show that media coverage and tone have a positive impact on the probability of withdrawal, which is consistent with our theoretical model. In this model, we argue that when investors receive positive information about the issue, they overvalue the company's

[12] We also estimate, but do not report, logit models controlling for other previously considered factors and our findings remain consistent with our univariate results.

reservation value, which leads to a decrease in the share's demand as less investors are willing to participate in the overpriced issue.

Our results support the retail attention hypothesis highlighted by Barber and Odean (2008). These authors find that individual investors display attention-driven buying behavior. Using the proportional hazards model proposed by Cox (1972), we find that a one percent increase in the media coverage results in a 34% increase in the probability of withdrawal. We further examine whether the timing of the information has an effect on the outcome of the IPO filing and find that information arriving at early stages exerts the highest impact on the overall demand for a particular IPO. As a result, not all that glitters is gold and not all IPO filings that attract media attention go public.

Our results contribute to the rapidly growing literature on the role of media coverage. We confirm that even if media coverage does not supply genuine news, it plays a significant role in disseminating information that relates to companies' decisions to go public.

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Appendix A- Variables description

Type	Variable	Description
Media		
	log Media Coverage	The logarithm of the number of articles reported in the major business media resources prior to the offering date
	Media Tone (%)	The average of the imbalance of positive and negative words relative to total number of classified words Issue news are selected on the interval going from filing date until one day before issue date
IPO Characteristics		
	Withdrawn (dummy) (SDC)	Equals one if the IPO is classified as withdrawn, and 0 otherwise
	Waiting period	The number of days between the S-1 filing and the withdrawal or completed IPO date
	IPO Proceeds ($ mil.) (SDC)	The average filing price multiplied by the number of shares to be sold as indicated in the initial filing
	VC Backing (dummy)	Equals one if the issue is venture capital-backed, and 0 otherwise
	Tech (dummy)	Equals one if the IPO issuer is a technology firm, and 0 otherwise
	Underwriter Prestige (dummy) (Jay Ritter's web site)	Equals one if the lead underwriter has an updated Carter and Manaster (1990) rank of 8 or higher on a 9-point scale, and 0 otherwise
	Debt retirement (dummy) (SDC)	Equals one if the primary stated use of proceeds is debt retirement, and 0 otherwise
Market Conditions		
	BAA-AAA yield spread at filing (%) (Moody's)	The spread between BAA and AAA corporate bonds on the day of the filing
	BAA-AAA yield spread 2 months after filing (%) (Moody's)	The BAA-AAA yield spread two months after the filing date less the yield spread on the filing date
	Market return (%) (Bloomberg)	The return on market index (S&P500) two months after filing
	Average Book-to-Market Ratio (Compustat)	Change in industry book-to-market over year of filing is the industry average book-to-market ratio at the end of the filing year less the average ratio at the beginning of the filing year (http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html)

Figure 1
Probability to withdraw
The figure shows the probability to withdraw in Equation (4) as a function of investor beliefs.

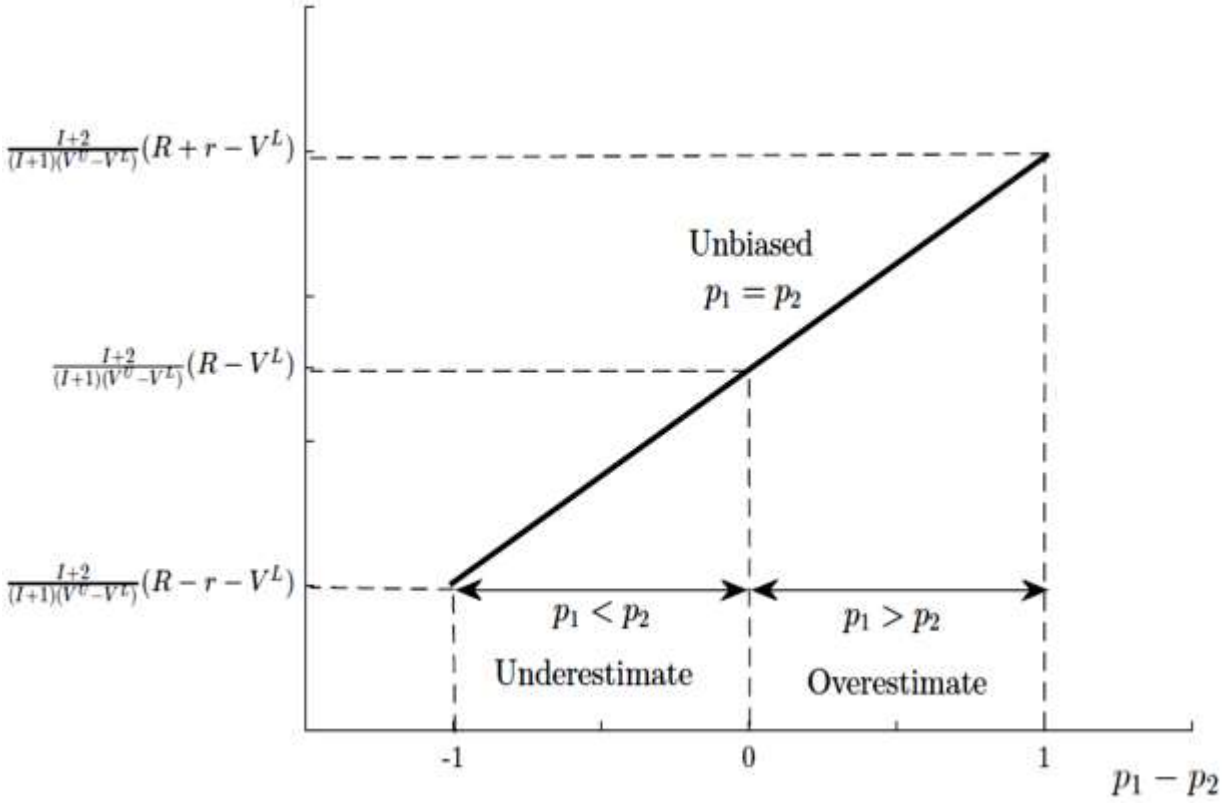

Table 1
Sample distribution

Distribution of completed and withdrawn IPOs filed with the SEC across years. The sample includes 2082 IPOs announced between January 1, 1998, and December 31, 2013. Variable definitions are provided in Appendix A.

Year	Withdrawn IPOs	Completed IPOs	% of withdrawn IPOs	Expected withdrawn proceeds ($ millions)	Completed proceeds ($ millions)	Days to withdrawal	Days to completion	% of successful return	Days to successful return
1998	35	184	15.98	120	121	95	103	22.86	123.00
1999	43	366	10.51	66	109	204	100	4.65	262.00
2000	58	286	16.86	81	138	182	107	5.26	412.50
2001	58	54	51.79	78	292	316	155	10.34	
2002	14	52	21.21	78	163	401	146		748.00
2003	6	44	12.00	48	153	320	144	16.67	1781.00
2004	9	120	6.98	86	141	244	120	11.11	1344.75
2005	16	117	12.03	69	179	285	134	12.50	
2006	17	113	13.08	117	169	251	139		1140.67
2007	13	110	10.57	237	166	218	137	7.69	1862.33
2008	13	16	44.83	71	265	363	197	7.69	
2009	4	35	10.26	213	332	662	294		
2010	2	60	3.23	167	403	1043	153		2004.00
2011	1	61	1.61	18	286	142	175		963.00
2012		76			377		193		
2013		99			265		109		
Total	289	1793	13.88	92	179	249	127	8.71	1139.80

Table 2
Media Coverage and Sources

This table lists the top five media sources by the number of articles reported and their frequency for completed and withdrawn IPOs. The sample includes 2082 IPOs announced between January 1, 1998, and December 31, 2013.

Completed IPOs					Withdrawn IPOs				
Rank	Source	N	Frequencies	Media Tone	Rank	Source	N	Frequencies	Media Tone
1	Reuters News	14259	31.68	-33.77	1	Dow Jones Corporate Filings Alert	5812	40.18	45.87
2	Dow Jones News Service	9023	20.04	0.67	2	Reuters News	2608	18.03	-33.62
3	PR Newswire	4278	9.5	47.40	3	Dow Jones News Service	1992	13.77	-0.35
4	Associated Press Newswires	3484	7.74	-21.50	4	PR Newswire	1305	9	42.05
5	Dow Jones Corporate Filings Alert	3448	7.66	0.35	5	The Wall Street Journal	369	2.55	-9.13
6	Others	10524	23.38		6	Others	2382	16.47	

Table 3
Univariate Statistics

Descriptive statistics on the full IPO sample and both completed and withdrawn IPO subsamples filed with the SEC between January 1, 1998, and December 31, 2013. Variable definitions are provided in Appendix A. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Variable	N	All	Completed (1)	Withdrawn (2)	Diff. (1)-(2)
Media Coverage	2082	29.59	25.87	52.65	-26.777***
Media Tone	2066	1.1	-0.71	12.18	-12.893***
Waiting period	2082	144.59	127.69	249.45	-121.76***
IPO Proceeds	2080	167.24	179.16	92.82	86.343***
VC Backing (dummy)	2047	0.57	0.55	0.75	-0.200***
Tech (dummy)	2082	0.09	0.09	0.09	0.001
Underwriter Prestige	2082	0.09	0.09	0.08	0.016
Debt retirement (dummy)	2082	0.1	0.11	0.08	0.025
BAA-AAA yield spread at the filing	2079	0.85	0.86	0.77	0.092***
BAA-AAA yield spread 2 months after filing	2069	0.86	0.87	0.81	0.055***
Market return	2023	0.01	0.01	-0.01	0.019***
Average Book-to-Market Ratio	1863	0.01	0.01	0.03	-0.024***

Table 4
Logit Analysis

Logit analysis of the decision to withdraw an IPO. The sample includes 2082 IPOs announced between January 1, 1998, and December 31, 2013. The dependent variable in each regression is one for withdrawn offerings and zero for completed ones. Variable definitions are provided in Appendix A. Year fixed effects are included. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

	(1)		(2)		(3)		(4)	
	Coeff.	ME	Coeff.	ME	Coeff.	ME	Coeff.	ME
Intercept	−13.088***	-1.017	−13.191***	-0.973	−12.549***	-0.972	−12.599***	-0.921
log Media Coverage	.		0.672***	0.050	.		0.707***	0.052
Media Tone	.		.		0.005**	0.000	0.009***	0.001
log Waiting period	1.746***	0.136	1.544***	0.114	1.706***	0.132	1.469***	0.107
log IPO Proceeds	−0.148	-0.011	−0.345***	-0.025	−0.181	-0.014	−0.366***	-0.027
VC Backing (dummy)	0.997***	0.078	0.912***	0.067	0.945***	0.073	0.859***	0.063
Tech (dummy)	−0.251	-0.02	−0.049	-0.004	−0.276	-0.021	−0.076	-0.006
Underwriter Prestige	−0.197	-0.015	−0.162	-0.012	−0.185	-0.014	−0.163	-0.012
Debt retirement (dummy)	0.036	0.003	0.047	0.003	0.076	0.006	0.067	0.005
BAA-AAA yield spread at filing	−1.750**	-0.136	−2.409***	-0.178	−1.741**	-0.135	−2.493***	-0.182
BAA-AAA yield spread 2 months after filing	0.35	0.027	0.996	0.073	0.228	0.018	0.908	0.066
Market return	−0.495	-0.038	−0.270	-0.02	−0.666	-0.052	−0.360	-0.026
Average Book-to-Market Ratio	3.333***	0.259	2.553**	0.188	3.279***	0.254	2.336*	0.171
N	1816		1816		1804		1804	
Year Dummies	Yes		Yes		Yes		Yes	
Maximum Likelihood	405.9		454.5		411		462.4	
Percent Concordant	86.6		88.1		86.7		88.1	
R^2 Adjusted	37.99%		41.99%		38.53%		42.76%	

Table 5
Hazard Analysis

We estimate Cox proportional hazard models to examine the relation between media coverage and timing of withdrawal. The sample includes 2082 IPOs announced between January 1, 1998, and December 31, 2013. We compute the number of days from the IPO filing to either the withdrawal date or the IPO completion date. The dependent variable is the logarithm of the hazard rate. A positive (negative) coefficient on an explanatory variable indicates that an increase in the variable is associated with an increase (decrease) in the probability of withdrawal and a decrease (increase) in the time-to-withdrawn. For each of the estimated models, we report the estimated coefficients in the first column and the hazard ratios in the second. Variable definitions are provided in Appendix A. Year fixed effects are included. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

	(1)		(2)		(3)		(4)	
	Coeff.	HR.	Coeff.	HR.	Coeff.	HR.	Coeff.	HR.
log Media Coverage	.		0.310***	1.36	.		0.290***	1.34
Media Tone	.		.		0.004*	1	0.003	1.00
log IPO Proceeds	-0.125	0.88	-0.184**	0.83	-0.125	0.88	-0.177**	0.84
VC Backing (dummy)	0.856***	2.35	0.890***	2.43	0.828***	2.29	0.871***	2.39
Tech (dummy)	0.148	1.16	0.245	1.28	0.150	1.16	0.245	1.28
Underwriter Prestige	-0.097	0.91	-0.076	0.93	-0.069	0.93	-0.065	0.94
Debt retirement (dummy)	0.013	1.01	-0.094	0.91	0.037	1.04	-0.064	0.94
BAA-AAA yield spread at the filing	-1.162*	0.31	-1.010	0.36	-0.851	0.43	-0.817	0.44
BAA-AAA yield spread 2 months after filing	-1.283***	0.28	-0.870	0.42	-1.423**	0.24	-0.990*	0.37
Market return	-0.122	0.89	-0.112	0.89	-0.274	0.76	-0.202	0.82
Average Book-to-Market Ratio	2.138***	8.48	2.293***	9.9	2.215***	9.17	2.328***	10.25

Table 6
Media Coverage and Time to Event

The sample includes 2082 IPOs announced between January 1, 1998, and December 31, 2013. We divide the period from the S-1 filing to the resolution date (completion or withdrawal) into four equal periods. For each of these periods, we measure the number of articles published and their media tone, which provides us with four new variables of media coverage (*Q1-Q4 Media coverage*) and media tone (*Q1-Q4 Media Tone*).

Quantiles	Withdrawn IPOs			Completed IPOs		
	Media Coverage		*Media Tone*	*Media Coverage*		*Media Tone*
	N	%	Mean	N	%	Mean
Q1 (begin)	5585	27	15.54	11579	25	-8.4
Q2	4930	24	19.81	10446	23	-5.6
Q3	5156	25	19.7	11881	26	-6.24
Q4 (end)	4895	24	19.74	12054	26	-9.27

Table 7
Decision to withdraw an IPO and the timing of information

Logit analysis of the decision to withdraw an IPO and the timing of information during the IPO process. The sample includes 2082 IPOs announced between January 1, 1998, and December 31, 2013. The dependent variable in each regression is one for withdraw offerings and zero for completed ones. Variable definitions are provided in Appendix A. We divide the period from the S-1 filing to the resolution date (completion or withdrawal) into four equal periods. For each of these periods, we measure the number of articles published and their media tone, which provides us with four new variables of media coverage (*Q1-Q4 Media coverage*) and media tone (*Q1-Q4 Media Tone*). Year fixed effects are included. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Intercept	-0.865	-0.556	-1.139	-0.495	-1.520	0.086	0.384	0.105	0.821	0.881
Q1 Media Coverage	1.072***	.	.	.	1.194***	.	.	.	.	.
Q2 Media Coverage	.	1.052***	.	.	0.805***	.	.	.	.	.
Q3 Media Coverage	.	.	0.995***	.	0.323	.	.	.	.	.
Q4 Media Coverage	.	.	.	0.785***	-0.908***	.	.	.	.	.
Q1 Media Tone	.	.	.	.	.	0.006***	.	.	.	0.007***
Q2 Media Tone	.	.	.	.	.	.	0.004**	.	.	0.001
Q3 Media Tone	.	.	.	.	.	.	.	0.005***	.	0.003
Q4 Media Tone	.	.	.	.	.	.	.	.	0.007***	0.005**
log IPO Proceeds	-0.610***	-0.567***	-0.553***	-0.512***	-0.646***	-0.346***	-0.359***	-0.382***	-0.400***	-0.413***
VC backing (dummy)	0.626***	0.639***	0.622***	0.659***	0.689***	0.751***	0.660***	0.600***	0.686	0.621***
Tech (dummy)	-0.115	-0.027	0.000	-0.144	-0.226	-0.492*	-0.361	-0.367	-0.404	-0.467
Underwriter Prestige	-0.126	-0.255	-0.216	-0.234	-0.138	-0.153	-0.240	-0.258	-0.101	-0.163
Debt retirement (dummy)	0.392	0.282	0.089	0.036	0.214	0.316	0.339	0.199	0.18	0.149
BAA-AAA yield spread at filing	-4.282***	-4.164***	-4.205***	-4.483***	-4.334***	-3.865***	-3.586***	-3.779***	-3.872***	-3.684***
BAA-AAA yield spread 2 months after filing	1.338	0.892	1.12	0.256	0.472	0.333	-0.010	0.446	-0.899	-0.993
Market return	-1.352	-0.486	-0.510	0.579	0.837	-1.279	-1.077	-0.845	0.972	1.244
Average Book-to-Market Ratio	2.350*	1.94	2.233*	2.615**	2.096	2.918**	2.667**	2.887**	3.074**	3.089**

Table 8
Descriptive statistics for successful returners versus quitters

We divide the sample of withdrawn IPOs into two subsamples: (1) companies that withdrew their IPO and then conducted a second filing and successfully returned to the market (*successful returners*) and (2) companies that never return to the market (*quitters*) for the period between January 1, 1998, and December 31, 2013. Panel A of Table 8 presents statistics about the level of media coverage and media tone for successful returners versus quitters (287 IPOs). Media variables are associated to the first time they file for an IPO (between the filing and the withdrawal date). Panel B of Table 8 presents statistics about the subsample of returners that were able to complete their second attempt versus those that did not. For this subsample of 25 IPOs, we compute media variables between the second filing date and the IPO date. Variable definitions are provided in Appendix A.

	All	(1)	(2)	Diff. (1)-(2)
Panel A: Quitters (1) vs. successfully returners (2)				
Media Coverage	52.85	53.49	46.08	7.412
Media Tone	12.47	12.98	7.10	5.879
Waiting period	249.74	257.89	164.32	93.573**
Panel B: At the withdrawn IPO (1) vs. at the successful return IPO (2)				
Media Coverage	36.3	46.08	26.52	19.560**
Media Tone	3.73	7.10	0.36	6.745
Waiting period	135.24	164.32	106.16	58.160