MEDIA COVERAGE AND THE SWEDISH IPO MARKET

A STUDY ON MEDIA COVERAGE AND IPO UNDERPRICING IN SWEDEN

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Abstract:

Using Swedish IPO market data, we analyze how pre-IPO media coverage is associated with the first-day returns for firms going public. We apply a multiple linear regression model to a sample of 266 unique issuers between the period 2010 and 2021. We find that higher media coverage, on average, is associated with higher first-day returns. The results are significant at the 1% level and robust to a multitude of additional tests. Similarly, we find evidence suggesting a positive relationship between purchase recommendations and first-day returns.

Keywords:

IPO, Media Coverage, Underpricing, Individual investors, Information asymmetry

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I. Introduction

A key theory that has laid the groundwork for research in finance is the notion of efficient markets (Fama, 1970). In said markets, investors possess the same information and share the same expectations of a security's future cash flows. Investors carry homogeneous beliefs and think rationally when investing. In practice, the assumptions of efficient capital markets seldom hold. Notable market failures such as moral hazard, transaction costs and externalities are present in nearly all markets. One market failure that is commonly present in an IPO setting is information asymmetry. This condition expresses differences in the information that agents have, for instance, about the intrinsic value of a share.

In an IPO setting, information asymmetry generally implies that issuers possess an informational advantage over the investors, particularly individual investors. This investor type is characterized by limited rationality and experience. They are typically seen as uninformed investors (Ljungqvist, Nanda, Singh, 2006). They stand in stark contrast to institutional investors, who typically resemble larger financial institutions. An issuer's informational advantage may give rise to an adverse selection, in which individual investors are unable to distinguish the quality of issuers. Subsequently, this implies that individual investors may fully participate in IPOs issued by low quality companies, while institutional investors can crowd them out when subscribing to IPOs of higher quality. This occurrence is commonly known as a winner's curse, and if left unaddressed, will ultimately deter uninformed investors from participating in the market (Thaler, 1988).

To mitigate this problem, the issuers typically hire underwriters to price the offering and implement the IPO. The underwriters tend to set a price below the offering's intrinsic value in order to entice investments from uninformed investors (Rock, 1986). This phenomenon is known as underpricing and helps to explain why many IPOs trade above their offer price when going public. Nevertheless, the efforts to decrease information asymmetry may still be insufficient. An intuitive reason for this is that companies undertaking an IPO are private and most likely unfamiliar to individual investors (Ljungqvist et al. 2006). Thus, other measures might be necessary in order to reduce the costs of information asymmetry.

In recent decades, a growing number of studies have examined media's relationship with investor behavior and the valuation of financial securities (Tetlock, 2015). A common rationale behind the studies has been to study how information dissemination from the media could help explain the pricing of securities. For this thesis, we examine the relationship between media coverage and the first-day returns of IPOs. The paper on worldwide IPO underpricing by Chen, Goyal, Veeraraghavan and Zolotoy (2020) serves as the main inspiration for our research. We replicate their study on the Swedish IPO market and assess how the quantity of media coverage (as measured by the number of news articles mentioning the issuer) is associated with the issuer's first-day return. We find a significant positive relationship between pre-IPO media coverage and first-day underpricing.

Investigating the Swedish IPO market is of academic interest because of its less regulated environment. Most of the existing literature on media coverage of IPOs cover the American market (Chen et al. 2020). While Sweden and the U.S. share many market characteristics, one should note that there are still key differences between undertaking an IPO in the U.S. and Sweden (Ritter, 2003). For instance, firms in the U.S. must comply with the so-called quiet period under which issuers and affiliated underwriters cannot disclose important business information. This period begins the day a firm registers its IPO and ends 40 calendar days after the listing day. Swedish legislation does not prevent firms or affiliated underwriters from revealing business-relevant information. In that regard, companies in Sweden have the freedom of producing more publicity and subsequently generating attention for IPOs. For other types of transactions, such as acquisitions and seasoned equity offerings, previous research has examined companies that intentionally produce more press releases in the hope of generating more attention (Ahern and Sosyura, 2014; Lang and Lundholm, 2000). These strategies have been successful in, for instance, establishing a favorable exchange ratio or temporarily increasing the stock price. Thus, our thesis yields valuable insight into how media coverage in a less regulated environment could be associated with the first-day underpricing.

We also conduct additional research to assess how stock recommendations from business journals are related to IPO underpricing. In this setting, we instead examine the underlying message of news stories. Previous literature, including Chen et al. (2020), attempts to do this by exploring the overall sentiment from media coverage. However, the methods of estimating sentiment from media coverage are often considered a major limitation. These problems stem from the fact that it is expressed in different and arbitrary manners (Dougal, Engelberg, Garcia and Parson, 2012). This issue is partly alleviated in our study. The data we collect comprises recommendations made by journalists from Swedish business journals. As such, the recommendations convey distinct messages to individual investors on whether to subscribe to an approaching IPO. Thus, no estimation of sentiment is needed.

Numerous studies have explored media's association with IPO underpricing. Likewise, the relationship between journalists' stock recommendations and returns on publicly traded stocks is well documented (e.g., Engelberg, Sasseville and Williams, 2012; Liu, Smith and Syed, 1990). However, to the best of our knowledge, no study has explored the relationship between journalists' stock recommendations prior to an IPO and the degree of underpricing. Thus, we acknowledge a research gap in the literature that we seek to bridge.

The outline for the remainder of this thesis will be as follows. Section 2 demonstrates previous literature and its findings. Section 3 showcases our hypothesis development. Section 4 describes the data and methodology. In section 5 we present and explain our results and in section 6 we perform additional tests. The two final sections discuss limitations and conclude the thesis.

II. Literature Review

This section presents the research that is closely related to our thesis. Subsections A and B present two opposing views that have emerged concerning the relationship between media coverage and IPO underpricing. Subsection C shows applicable findings regarding stock recommendations and IPO underpricing.

A. Investor Recognition

Early literature on media's association with investor behavior and price development can be traced to the 1980s and most notably to Robert C. Merton's theory on investor recognition (Merton, 1987). Under this theory, capital markets contain information asymmetry, and investors are not made aware of all securities available on the market. Merton illustrates how securities with less investor recognition are characterized by lower valuations and higher expected returns. In this setting, Merton's theory suggests that media coverage could play a key role since it disseminates information about a company to investors and thus, investors gain familiarity with it (Tetlock, 2015; Merton, 1987). In turn, investors may demand a lower risk premium, as it reduces information asymmetry, and the cost of capital decreases (Fang and Peress, 2009; Merton, 1987). Applying this to an IPO setting, it implies that issuers that receive more media coverage prior to an IPO would exhibit lower levels of underpricing (Chen et al. 2020; Merton, 1987).

The implication of investors demanding a lower risk premium, as posited by Merton (1987), has been subject to extensive research. Chen et al. (2020) present findings that are consistent with Merton's theory. In said study, the authors investigate how media coverage, while controlling for market and firm characteristics in different countries, is associated with first-day underpricing. The authors find a negative association between pre-IPO media coverage and underpricing. Comparable findings are made by Liu, Sherman and Zhang (2014) which show pre-IPO publicity being negatively associated with expected returns for a long-term horizon of one to three years. Fang and Peress (2009) obtain similar results when exploring the relationship between publicly traded stocks and media coverage in the U.S. They find that companies with greater media coverage exhibit lower expected returns, and thus yield higher valuations.

In summary, Merton's theory on investor recognition and subsequent literature supports the prediction that higher levels of pre-IPO media coverage are associated with a lower degree of underpricing. This result is largely motivated by the reduction in information asymmetry.

B. Limited Attention

The concept of limited attention was popularized by Kahneman (1973) and posits that human beings have limited cognitive abilities in terms of attention and retention. In an investment setting, it would imply that individual investors can only direct their attention to a limited pool of stocks (Barber and Odean, 2008). This pool of potential stocks is ultimately determined by a few attention-generating factors, such as media

coverage. The following papers have been foundational in developing the concept of limited attention: Barber and Odean (2008); Da, Engelberg and Gao (2011).

Barber and Odean (2008) show that individual investors, when accounting for trade volume, abnormal returns and media coverage, tend to be net-buyers of attention-grabbing stocks. This implies that stocks which catch the attention of individual investors are more likely to be purchased than being subject to short-selling. In fact, the authors find that individual investors typically only sell stocks that they already own. Additionally, the authors show empirical support that stocks which give rise to attention are more likely to be purchased than non-attention generating stocks. Thus, these two implications help to explain why stocks covered in the media may experience a temporary surge in demand. In an IPO setting, the results from Barber and Odean (2008) could imply that attention-generating IPOs exhibit upward price pressure in the aftermarket trading (Chen et al. 2020). Therefore, empirical findings suggest that increased media coverage is associated with higher levels of underpricing.

Furthermore, Da et al. (2011) test the predictions of net-buying individual investors developed by Barber and Odean (2008). Using data on public Google searches, the authors assess the relationship between investor attention and IPO underpricing. Similarly, they observe that individual investors' increase in attention (as measured by Google searches prior to an IPO) is associated with a higher first-day return.

In addition to the literature on limited attention (Kahneman, 1973) and its subsequent findings (e.g., Barber and Odean, 2008; Dougal et al. 2012), related research supports the idea that increased pre-IPO publicity is associated with higher underpricing (e.g., Cook, Kieschnick and Van Ness, 2006). Using media coverage as a proxy for investor attention, they examine how pre-IPO media coverage is related to first-day underpricing. Their results correspond to previous findings, that is, issuers who experience more pre-IPO media coverage are associated with higher levels of first-day underpricing.

In summary, on the topic of limited attention and related literature, previous research indicates a positive relationship between media coverage of IPO issuers and first-day returns.

C. Recommendations and Investor Sentiment

Papers closest to our research on stock recommendations include Engelberg et al. (2012) and Liu et al. (1990). The former paper examines the impact of stock recommendations made on the American television show *Mad Money* and the returns of those stocks. The authors construct a portfolio comprising the recommended stocks and find that such a portfolio exhibited positive abnormal returns of more than 2 percentage points the following day. Similar findings are made by Liu et al. (1990) who studied recommendations made by journalists from the *Wall Street Journal*. The authors find that "buy" and "sell" recommendations have a positive and negative association with the short-term returns, respectively. Thus, these findings relate to the concept of limited attention described above.

In addition to papers on stock recommendations, numerous studies have examined the overall sentiment that media coverage produces. Although the following papers study sentiment rather than distinct recommendations, they still provide relevant insight about the content of media coverage. Research from Bajo and Raimondo (2017) and Guldiken, Tupper, Nair and Yu (2017) show how optimistic news stories prior to an IPO are positively associated with first-day returns.

In conclusion, the literature findings on stock recommendations resemble those of limited attention. There is also empirical support implying that optimistic news stories are associated with higher levels of underpricing.

III. Hypothesis

Proceeding from the literature review, two conflicting views emerge concerning the relationship between media coverage and IPO underpricing. One strand of the literature finds a relationship between increased media coverage and a lower degree of underpricing. This result is largely explained by information dissemination which mitigates the costs of information asymmetry (Merton, 1987). The other view is that individual investors net-buy attention-generating stocks which predict a higher level of underpricing.

Thus, there lies an ambiguity regarding the predicted outcome and against that background, we hypothesize the following:

H_1: Pre-IPO Media coverage of an issuer is associated with IPO first-day returns

Furthermore, we examine the relationship between subscription recommendations from journalists and underpricing. From the literature, we notice that "buy" recommendations on publicly traded stocks from the media have shown a positive relationship with the short-term returns of those stocks. Against that background, we hypothesize the following:

H_2: Purchase recommendations prior to the listing day are positively associated with the first-day returns

H_3: Purchase recommendations prior to the listing day influence the interaction of media coverage with first-day returns

IV. Data Collection & Methodology

The data collection and methodology used in this study predominantly follow Chen et al. (2020). Deviations will occur due to usage of different databases, along with varying sample structures.

A. Data Collection

Following Chen et al. (2020), we collect data on issuers from the SDC Platinum New Issues database. This data includes information about each company to be used such as identifiers, date of listing, and SIC codes. Furthermore, financial data used for constructing our control variables are simultaneously collected via the New Issues database. Due to incomplete data, that is, missing values for a large portion of the financial information provided by the SDC database, additional methods of data collection are employed to extend the dataset. These complements include the databases S&P CapitalIQ and Refinitiv Eikon which are used to fill in the data.

As multiple observations in our data remain incomplete, we perform parts of the data accumulation manually. We search for each memorandum or prospectus[1] associated with the IPO, gathering the missing financial information. Following how the larger databases collect their information, we retrieve the latest reported values in relation to the IPO date. The majority of the manually collected values are reported in SEK, and we subsequently convert them into USD.[2]

We gather media coverage data from the Swedish media archive Retriever. It has access to a large number of Swedish news sources, and major international news outlets. The data gathering of media coverage for each issuer is done by counting each news story that mentions the company's name in its headline or lead paragraph. We also construct boolean commands (see Figure AI in the appendix). The reason for placing restrictions is to exclude news items that have no affiliation with the issuer. The selected time period for counting news items is thirty days prior to the listing day. By excluding news from the listing day, we construct a proxy for media coverage during the book-building process (Bajo and Raimondo, 2017).

We additionally use Retriever to access stock recommendations for each issuer We use the following business journals in our analysis: *Affärsvärlden, Börsveckan, Dagens Industri, Privata Affärer and Börsplus*. All journals issue recommendations to provide guidance to investors on whether to subscribe to the approaching IPO. Following Liu et al. (1990), we sort the recommendations into two groups: "purchase" and "do not purchase". Some issuers do not receive recommendations prior to their IPOs, and they are subsequently removed from our sample. We argue that this removal is necessary considering that we merely examine recommendations that send a distinct and clear message to the individual investors, in accordance with Liu et al. (1990).

B. Sample

We initially retrieve 354 Swedish IPOs from the time period 01/01/2010 to 31/12/2021. In accordance with prior literature (e.g., Chen et al. 2020; Cook et al. 2006), we exclude unit offers, closed-end funds, real estate investment trusts, and limited partnerships from

[1] Prospectus' approved by "Finansinspektionen" for firms issuing an IPO can be retrieved from https://www.fi.se/sv/marknad/prospekt/ (In Swedish)

[2] We retrieve data containing the historical daily exchange rates between SEK and USD from (https://excelrates.com/historical-exchange-rates/SEK-USD) and match the file to the issue date for each individual firm to convert the values into USD.

our sample. Furthermore, manual inspections reveal canceled IPOs, listings on additional exchanges, as well as multiple duplicates within the dataset, all of which are consecutively removed. Our final sample consists of 266 observations of Swedish IPOs. The final sample relating to purchase recommendations consists of 157 observations.

C. Variables

Our Main regression is defined as follows:

$$(1) \quad FIRST\_DAY\_RETURN_i = a + B_1 MEDIA\_COVERAGE_i + B_2 FIRM\_SIZE_i + B_3 PROFITABILITY_i + B_4 LEVERAGE_i + B_5 ASSET\_TURNOVER_i + \sum FE + \varepsilon_i$$

where B denotes the unstandardized regression coefficients, i denotes the individual firm, $\sum FE$ denotes the fixed effects and ε denotes the error term.

Our choice of variables closely follows Chen et al. (2020). The dependent variable, FIRST_DAY_RETURN, is the IPO first-day return, calculated as the percentage difference between the first-day closing price and its offer price. (e.g., Ellul and Pagano 2006; Chen et al. 2020). Our explanatory variable of interest is denoted as MEDIA_COVERAGE. Following prior studies (Liu et al. 2014; Chen et al. 2020), we count the number of news articles for the IPO firm in a 30-day window prior to the IPO, the stopping point being the day before the firm listing. Articles submitted on the day of a listing are not included in our media sample (Liu et al. 2014; Chen et al. 2020). Moreover, we use the log-transformed version of this number, that is the natural logarithm of 1 plus the number of news articles, as our measure of media coverage for each firm (Chen et al. 2020). If a firm has zero news articles during this period, the resulting value becomes ln(1) which is equal to zero.

Our control variables similarly follow prior studies (e.g., Ellul and Pagano 2006; Chen al. 2020). FIRM_SIZE is defined as the natural logarithm of the firm's total assets. LEVERAGE is the firm's total debt divided by its total assets. PROFITABILITY is the firm's earnings before interest and taxes divided by its total assets. ASSET_TURNOVER is calculated as the revenue of the firm divided by the firm's total assets. To adjust for outliers having a significant impact on the result, all of our continuous variables are winsorized at the 1st and 99th percentile (Chen et al. 2020).[3]

Our fixed effects include both year- and industry-fixed effects. Following Chen et. al (2020), we classify industries by downloading the 10 industry portfolios from Kenneth R. French's website (http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/). The

[3] Chen et al. (2020) include two additional control variables in the regression. These variables are the market-to-book value of the company at the time of the IPO along with a dummy variable indicating if the firm includes a book-building process. However, due to data limitations and time constraints, we are unable to include these in our regression.

portfolio assigns ranges of SIC codes into one of the ten possible industry groups. We then match the SIC codes of the companies within our sample to the corresponding industry portfolio (denoted as 1 through 10 in the regression).

Our second regression concerning purchase recommendations is defined as:

$$(2) \quad FIRST\_DAY\_RETURN_i = a + B_1 MEDIA\_COVERAGE_i + B_2 RECOMMENDATION_i + B_3 RECOMMENDATION_i * MEDIA\_COVERAGE_i + B_4 FIRM\_SIZE_i + B_5 PROFITABILITY_i + B_6 LEVERAGE_i + B_7 ASSET\_TURNOVER_i + \sum FE + \varepsilon_i$$

where B denotes the unstandardized regression coefficients, i denotes the individual firm, $\sum FE$ denotes the fixed effects and ε denotes the error term.

We extend Equation (1) by including a second explanatory variable of interest, RECOMMENDATION. This is a dummy variable denoted 1 if the firm only receives "purchase" recommendations, and 0 if the firm receives at least one "do not purchase" recommendation. In addition, we also introduce the interaction term RECOMMENDATION*MEDIA_COVERAGE, denoting the two variables' combined relationship with FIRST_DAY_RETURN.

Table I

Summary Statistics

Table I presents summary statistics for the variables used in our research. FIRST_DAY_RETURN is the percentage difference between the first-day closing price and its offer price. MEDIA_COVERAGE is the log-transformed version of the number of news articles for the IPO firm in a 30-day window prior to the IPO. FIRM_SIZE is defined as the natural logarithm of the firm's assets. PROFITABILITY is calculated as the firm's earnings before interest and taxes divided by its total assets. LEVERAGE is calculated as the firm's total debt divided by its assets. ASSET_TURNOVER is calculated as the revenue of the firm divided by the firm's total assets. Prior to the computations, the sample is winsorized at the 1st and 99th percentile.

Statistic	N	Mean	St. Dev.	Pctl(75)	Pctl(25)	Median
FIRST_DAY_RETURN	266	0.104	0.364	0.201	-0.034	0.054
MEDIA_COVERAGE	266	3.478	0.676	3.984	3.008	3.466
FIRM_SIZE	266	3.431	2.470	5.420	1.574	3.263
PROFITABILITY	266	-0.149	0.490	0.101	-0.218	0.036
LEVERAGE	266	0.235	0.234	0.370	0.021	0.190
ASSET_TURNOVER	266	0.949	1.068	1.325	0.112	0.733

D. Descriptive Statistics

Table I reports summary statistics for each continuous variable included in the study. The number of observations is 266. The average first-day return for the sample is 10.4%. The average (log-transformed) number of news articles is 3.478. The average firm size is 3.431, leverage is 0.235 and asset turnover is 0.949. The average profitability of the firms within our sample is negative, at -0.149, a result that is (at least partly) driven by many firms reporting an absence of revenue and consecutively negative earnings. The summary statistics are all calculated using the winsorized values.

Table II presents the yearly distribution of the sample over the range 2010-2021. It reveals a large disproportion of the number of IPOs for each year, with the highest number in 2021 with 89 IPOs in comparison to 2012 and 2013 which only contain a single IPO. This sizable variation is partly mitigated by the year-fixed effects included in the regression, controlling for unobserved time-variant characteristics at the macro level. Correspondingly, the average number of news articles has a considerable variation, due to the single observations in 2012 and 2013 containing 8 and 116 articles respectively. The average number of news articles for the entire sample is 43.232. To further address the large disproportion, we later perform regressions excluding each individual year (see Table IV) and find qualitatively similar results as our main regression.

Table II

Sample Distribution & Statistics

Table II reports sample distribution & summary statistics. It presents the number of IPOs, the average first-day return, the average number of news articles and the average value of the MEDIA_COVERAGE variable for each year in the range 2010-2021. MEDIA_COVERAGE is the log-transformed version of the number of news articles for the IPO firm in a 30-day window prior to the IPO. Prior to the computations, the sample is winsorized at the 1st and 99th percentile.

Year	N	Average First-Day Return	Average # of News Articles	Average MEDIA_COVERAGE
2010	10	0.344	30.700	2.923
2011	5	-0.010	44.600	3.696
2012	1	0.029	8.000	2.197
2013	1	0.053	116.000	4.762
2014	16	0.094	66.531	4.047
2015	29	-0.005	56.862	3.849
2016	26	0.126	41.910	3.459
2017	44	0.149	26.575	3.130
2018	13	0.078	30.462	3.239
2019	11	0.152	36.591	3.280
2020	21	0.125	47.381	3.745
2021	89	0.087	35.084	3.478
Sum	266	0.104	43.232	3.478

V. Results

A. Univariate results

Figure I
Media Coverage & First-Day Returns: Univariate Results

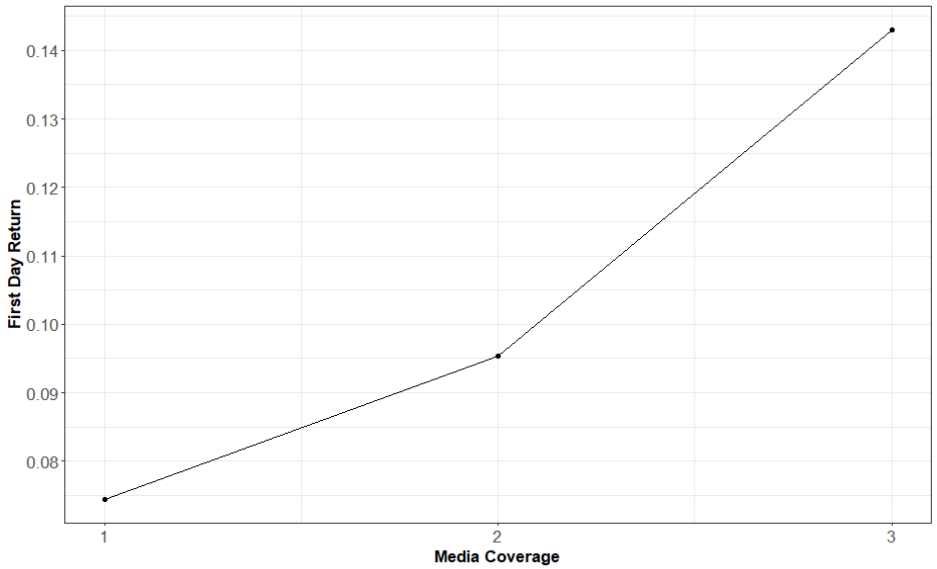

Figure 1 plots the average first day return for quantiles by media coverage, divided into 3 groups based on the size of the MEDIA_COVERAGE variable

We begin by performing a univariate analysis on the association of media coverage with the first-day return following an IPO. Similar to Chen et al. (2020), we divide our sample into quantiles based on media coverage and calculate the mean of the first-day return variable for each group. We split our sample into three groups, leaving us with 88 or 89 observations in each group.[4] The results are presented in Figure 1. As each subsequent group presents a higher average first-day return than the previous, the graph reveals a general trend indicating that first-day returns are positively correlated with media coverage prior to the IPO. By comparison, group 1 has an average first-day return of 7.4%, while the average for group 3 is 14.3% (see table AI in the appendix). However, a two-tailed t-test at the 95% confidence level does not reveal a significant effect between the averages of the two groups (p-value of 0.195, see table AII in the appendix). As such, the univariate results do not provide evidence of a relationship between media coverage and first-day returns. Nonetheless, we require a sturdier model to analyze and draw more robust conclusions regarding the potential interaction between the two variables. We explore this in the next section through a multiple linear regression.

[4] Splitting the sample into a larger number of groups, such as deciles in accordance with Chen et al. (2020), might cause the sample to become too diluted in relation to our sample size, increasing the weight of individual firms and as such increasing the chance for the average of each group to be driven by individual outliers.

B. Main Regression Model

In this section, we analyze the relationship between media coverage 30 days prior to the IPO and the post-IPO first-day returns using our baseline regression model as presented in Equation (1). Following prior literature, we estimate the regressions using a pooled OLS model, with standard errors adjusted for heteroskedasticity. (Chen et al. 2020). The results of the regression are reported in Table III. Column 1 estimates the significance of the dependent variable MEDIA_COVERAGE, excluding all control variables. Column 2 includes every independent variable and as such corresponds to the complete regression as presented in Equation (1). Both regressions include year- and industry-fixed effects. Included in the regression table are the robust standard errors for each variable (presented in the parentheses below the regression coefficient), the total number of observations, R^2 and adjusted R^2.

The results of our regression show that media coverage is positively associated with the first-day return of a firm undertaking an IPO. This result is shown to be true in both outcomes presented. As denoted by the asterisks in the table, both results are also shown to be statistically significant, at the 1% level.[5] As the coefficients reported are in their unstandardized form, interpreting the results of the full regression suggests that increasing the (log-transformed) value of the media coverage variable by one unit, on average increases first-day return by 0.100 units, or 10%, holding all other variables constant. As the mean of first-day return is 10.4%, we find this effect economically meaningful. Furthermore, the regression coefficient of the MEDIA_COVERAGE variable sees a moderate change when excluding the control variables (from 10% to 8.5%), suggesting some correlation between the dependent variables. To address potential concerns for multicollinearity within our set of variables, we perform a VIF-test on the full regression model. The results of this test suggest that multicollinearity should not be a concern for the regression (see Table AIII in the appendix).

Table III also suggests significant results (on at least the 10% level), for PROFITABILITY, and ASSET_TURNOVER, with the two being positively associated with first-day returns. However, as they are reported in their unstandardized forms, direct comparisons of the size of their estimated effect would prove misleading, due to single-unit changes of their values having considerably varying effects in relation to their mean and standard deviation (see Table I).

Based on the preceding findings, we reject the null hypothesis stating that media coverage is not associated with first-day returns. Instead, we find that a greater quantity of media coverage prior to an IPO is associated with higher first-day returns. These findings are consistent with the concept of limited attention (e.g., Kahneman, 1973; Barber and Odean, 2008; Da et al. 2011). To explain the results, one can imagine that greater information dissemination from the media catches the attention of a large group of potential investors. In accordance with Barber and Odean (2008) it is likely that a

[5] In untabulated tests, we also find that this result is robust to different methods to control for heteroskedasticity.

considerable number of these investors are susceptible to attention-generating IPOs. That is, IPOs that catch the investors' attention are more likely to be purchased than those IPOs not covered in the media. Thus, one could anticipate a temporary surge in demand, and higher levels of underpricing. (Barber and Odean, 2008; Chen et al. 2020).

Table III

Media Coverage & First-Day Returns: Main Regression

Table III presents the results from the main regression as denoted in Equation (1). FIRST_DAY_RETURN is the percentage difference between the first-day closing price and its offer price. MEDIA_COVERAGE is the log-transformed version of the number of news articles for the IPO firm in a 30-day window prior to the IPO. FIRM_SIZE is defined as the natural logarithm of the firm's assets. PROFITABILITY is calculated as the firm's earnings before interest and taxes divided by its total assets. LEVERAGE is calculated as the firm's total debt divided by its assets. ASSET_TURNOVER is calculated as the revenue of the firm divided by the firm's total assets. The regressions are performed using a pooled OLS model with heteroskedasticity-robust standard errors. Column (1) reports the results of the regression performed only including the MEDIA_COVERAGE variable and the fixed effects. Column (2) reports the results of the full regression model.

	Dependent variable: FIRST_DAY_RETURN	
	(1)	(2)
MEDIA_COVERAGE	0.085***	0.100***
	(0.030)	(0.037)
FIRM_SIZE		-0.013
		(0.013)
PROFITABILITY		0.137**
		(0.063)
LEVERAGE		-0.137
		(0.095)
ASSET_TURNOVER		0.064*
		(0.037)
Year Fixed Effects	Yes	Yes
Industry Fixed Effects	Yes	Yes
Observations	266	266
R^2	0.097	0.173
Adjusted R^2	0.019	0.087
Note:		*p<0.1; **p<0.05; ***p<0.01

C. Purchase Recommendations

In this section, we compute the results and analyze the potential effect of the regression model as presented in Equation (2). Similar to our main regression model, we employ a pooled OLS model with standard errors adjusted for heteroskedasticity.

First, we analyze the relation between purchase recommendations and first-day returns directly. This is done through excluding the interaction term from Equation (2). The results of this are reported in Column 1 in Table IV. We find that RECOMMENDATION is positively associated with FIRST_DAY_RETURN at the 1% significance level. As RECOMMENDATION is a categorical variable, the interpretation of this effect suggests that when a firm receives at least one "purchase" recommendation and no "do not purchase" recommendations, the average first-day return increases by 21.9%, assuming all other variables are held constant. Furthermore, we also find that the coefficient of MEDIA_COVERAGE remains statistically significant within this expanded regression model. This implies that both the categorical purchase recommendation and the count of news articles have a meaningful impact on first-day returns following an IPO.

Second, we apply the full regression model. Column 2 presents the results of the model as expressed in equation (2). The reported interaction coefficient is negative and therefore proposes a neutralizing impact on the relationship between MEDIA_COVERAGE and FIRST_DAY_RETURN. However, the result is not significant and as such, we cannot distinguish it as statistically different from 0. The interaction model has a slightly lower adjusted r-squared compared to the non-interaction model, 0.211 and 0.215 respectively. This further suggests that the added interaction term has no explanatory power within the model.[6]

The results from Table IV display two outcomes concerning recommendations and media coverage. First, we find that purchase recommendations have a significant positive association with first-day returns. Therefore, we can reject the null hypothesis stating that purchase recommendations are not associated with first-day returns. This result coincides with the findings of Engelberg et al. (2012) and Liu et al. (1990). In the very short-term, individual investors may exhibit a surge in demand for stocks that have been recommended by business journals. The results could also be attributed to individual investors developing a short-term interest for issuers with optimistic news stories (Bajo and Raimondo 2017; Guldiken et al. 2017). However, we do not observe any support for the interaction term between media coverage and purchase recommendations. As such, we cannot reject the null hypothesis stating that purchase recommendations do not influence the interaction of media coverage with first-day returns.

[6] Comparing the r-squared and adjusted r-squared between Table III and Table IV is impractical, as the values could be largely affected by the considerably smaller sample sizes in Table IV resulting from excluding articles with no recommendations.

Table IV

Media Coverage & First-Day Returns: Recommendation effect

Table IV presents the results by including the RECOMMENDATION variable and interacting it with MEDIA_COVERAGE, as presented in Equation (2). FIRST_DAY_RETURN is the percentage difference between the first-day closing price and its offer price. MEDIA_COVERAGE is the log-transformed version of the number of news articles for the IPO firm in a 30-day window prior to the IPO. FIRM_SIZE is defined as the natural logarithm of the firm's assets. PROFITABILITY is calculated as the firm's earnings before interest and taxes divided by its total assets. LEVERAGE is calculated as the firm's total debt divided by its assets. ASSET_TURNOVER is calculated as the revenue of the firm divided by the firm's total assets. RECOMMENDATION is a dummy variable denoted 1 if the firm receives at least one purchase recommendation and no recommendations to abstain from purchasing, and 0 if the firm receives at least one recommendation telling the investor to abstain from the purchase. The regressions are performed using a pooled OLS model with heteroskedasticity-robust standard errors. Column (1) presents the results without interacting the two variables. Column (2) reports the results of including the interaction.

	Dependent variable: FIRST_DAY_RETURN	
	Recommendation	Recommendation & Interaction
	(1)	(2)
MEDIA_COVERAGE	0.150***	0.177***
	(0.048)	(0.060)
MEDIA_COVERAGE * RECOMMENDATION		-0.054
		(0.060)
RECOMMENDATION	0.219***	0.421*
	(0.046)	(0.234)
FIRM_SIZE	-0.029	-0.031
	(0.019)	(0.019)
PROFITABILITY	0.137*	0.133*
	(0.081)	(0.080)
LEVERAGE	0.039	0.054
	(0.101)	(0.106)
ASSET_TURNOVER	0.110**	0.110**
	(0.052)	(0.052)
Year Fixed Effects	Yes	Yes
Industry Fixed Effects	Yes	Yes
Observations	157	157
R^2	0.335	0.337
Adjusted R^2	0.215	0.211
Note:		*p<0.1; **p<0.05; ***p<0.01

VI. Additional Tests

A. Robustness tests

In this section we employ a selection of different tests to further control for the relationship of media coverage with first-day returns in order to assess the robustness of our results.

A potential concern in our baseline regression model could be the effect of individual years dominating the positive effect of the MEDIA_COVERAGE variable. To address this, we split our sample and run our baseline regression model (as presented in Equation (1)) with each year excluded in isolation.[7] Our findings are reported in Table V. The coefficient of the MEDIA_COVERAGE variable remains significant at a minimum 5% level in all outcomes. One important thing to note however is that by excluding observations from different years, the resulting sample size becomes smaller by comparison. The smaller sample size makes significant results harder to find (and as a result increases the risk for type II errors). Therefore, we cannot conclude that the lower significance level when excluding individual years is driven by the specific effects and circumstances for that year, or if it is due to the sample size reduction. Nevertheless, as the results remain significant at the minimum 5% level, we conclude that our findings are robust to individual years driving the aggregated effect.

Part of prior literature (e.g., Cook et al. 2006), excludes financial services companies, denoted as firms with two-digit SIC codes between 60 and 69. As an additional test of the validity of our results, we also perform this action by using our main regression model as presented in Equation 1. The results are reported in column 1 of Table VI. The exclusions result in a smaller sample size (222 compared to 266), and the impact of media coverage remains significant at the 10% level. Similar to the discussion in the previous paragraph, we conclude that our findings remain robust within this model.

As denoted in the data section, we only register news items prior to the listing day. Previous papers have taken different approaches to this issue. Chen et al. (2020) use the mentioned method above, whilst others include news stories from listing day (Bajo and Raimondo 2017; Cook et al. 2006). As such, we find it appropriate to conduct a robustness test using the latter method. We report the updated summary statistics for the MEDIA_COVERAGE variable in Table AIV in the appendix. When including news on the listing date, the mean of the log-transformed number increases to 3.791 from 3.478, indicating a considerable average increase in the number of news articles for each firm. Additionally, the upper 75th percentile and the lower 25th percentile see a similar increase in the absolute value of the log-transformed media coverage.[8] This implies that in the extended sample, firms that already had a high amount of news coverage before the listing date, on average, exhibit an increase in the absolute amount of news coverage. The standard deviation of the variable remains largely unchanged.[9]

[7] That is, we run the regression model 12 times, first excluding 2010, then 2011 and so on

[8] 75th percentile: 4.290 - 3.984 = 0.306. 25th percentile: 3.341 - 3.008 = 0.333,

[9] 0.676 for the original variable and 0.678 for the updated variable.

Table V

Media Coverage & First-Day Returns: Year-excluded regressions

Table V presents the regression as expressed in Equation (1), with observations from each individual year excluded per column. FIRST_DAY_RETURN is the percentage difference between the first-day closing price and its offer price. MEDIA_COVERAGE is the log-transformed version of the number of news articles for the IPO firm in a 30-day window prior to the IPO. FIRM_SIZE is defined as the natural logarithm of the firm's assets. PROFITABILITY is calculated as the firm's earnings before interest and taxes divided by its total assets. LEVERAGE is calculated as the firm's total debt divided by its assets. ASSET_TURNOVER is calculated as the revenue of the firm divided by the firm's total assets. All regressions include year and industry fixed effects. The regressions are performed using a pooled OLS model with heteroskedasticity-robust standard errors.

	Dependent Variable: FIRST_DAY_RETURN											
	Year excluded:											
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
MEDIA_COVERAGE	0.075**	0.101***	0.100***	0.100***	0.108***	0.077**	0.092**	0.116***	0.100***	0.103**	0.099***	0.112***
	(0.032)	(0.037)	(0.037)	(0.037)	(0.038)	(0.038)	(0.041)	(0.044)	(0.037)	(0.040)	(0.038)	(0.040)
FIRM_SIZE	-0.016	-0.013	-0.013	-0.013	-0.013	-0.004	-0.005	-0.017	-0.016	-0.011	-0.010	-0.031*
	(0.013)	(0.014)	(0.013)	(0.013)	(0.014)	(0.013)	(0.014)	(0.016)	(0.014)	(0.014)	(0.014)	(0.017)
PROFITABILITY	0.193***	0.142**	0.137**	0.137**	0.144**	0.121*	0.112	0.147*	0.144**	0.136**	0.143**	0.077
	(0.056)	(0.065)	(0.063)	(0.063)	(0.064)	(0.065)	(0.069)	(0.077)	(0.066)	(0.063)	(0.068)	(0.069)
LEVERAGE	-0.089	-0.138	-0.137	-0.137	-0.142	-0.139	-0.198*	-0.099	-0.142	-0.160	-0.137	-0.141
	(0.090)	(0.099)	(0.095)	(0.095)	(0.097)	(0.095)	(0.110)	(0.109)	(0.097)	(0.098)	(0.102)	(0.112)
ASSET_TURNOVER	0.058	0.064*	0.064*	0.064*	0.064*	0.061	0.073*	0.078*	0.053	0.064*	0.064*	0.048
	(0.041)	(0.038)	(0.037)	(0.037)	(0.038)	(0.039)	(0.038)	(0.041)	(0.039)	(0.037)	(0.038)	(0.040)
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	256	261	265	265	250	237	240	222	253	255	245	177
R^2	0.154	0.173	0.173	0.173	0.177	0.162	0.157	0.210	0.182	0.172	0.174	0.197
Adjusted R^2	0.105	0.089	0.090	0.090	0.089	0.068	0.067	0.114	0.096	0.085	0.084	0.070

Note: *p<0.1; **p<0.05; ***p<0.01

The results of the model incorporating the alternative news sample are reported in column 2 of Table VI, following the same regression model as presented in Equation 1. We find that this test returns qualitatively similar results as our main regression, with the MEDIA_COVERAGE variable remaining positive at the 1% significance level. We also see an increase in the coefficient of the variable, from 0.100 in the smaller news sample to 0.139 in the extended sample. This effect can potentially be driven by a change in the structure of the mean and standard deviation of the two samples. However, as the standard deviation of the variable is mostly unaffected, the standardized coefficient (or Beta) likewise sees an increase, suggesting a higher average association of media coverage on the first-day returns when including news on the listing date.

Finally, we conduct a robustness test to control for firm listings on different stock exchanges within our sample. Ellul and Pagano (2006) study the relationship between after-market liquidity and IPO underpricing and find that a lower after-market liquidity is associated with higher levels of underpricing. To control for this effect, we include the categorical variable EXCHANGE in Equation 1. This variable represents each exchange independently. Results of the regression are listed in column 3 of Table VI. Our results remain robust at the 1% significance level. As such, we do not observe any qualitative differences in the extended model compared to the original.

B. Interaction tests

In addition to the robustness tests presented in the prior section, we additionally conduct a set of interaction tests. Based on contemporary literature, we select additional variables that have empirical support for being associated with first-day returns. These variables include VC-backed firms, PE-backed firms as well as prestigious underwriters.

Following Chen et al. (2020), we conduct a test based on the presence of a prestigious underwriter. Literature on this topic finds that prestigious underwriters have been associated with a lower degree of underpricing. We manually check for underwriters in each issuer's prospectus and classify underwriters based on their current market share in Sweden and presence on global markets. Issuers backed by Venture Capital (VC) or Private Equity (PE) firms have empirically served a signaling purpose in the pricing of IPOs. For VC-backed firms, empirical findings suggest a lower degree of underpricing (Megginson and Weiss, 1991). The authors argue that VC firms signal to investors that the issuer is of higher quality, thus reducing information asymmetry and overall risk. On a similar note, for PE-backed firms, empirical findings propose lower levels of underpricing as well (Mogilevsky and Murgulov, 2012). They attribute this result to the underwriters' interest in retaining lucrative PE-firms as clients in the future. We register whether issuers are backed by VC or PE firms by manually searching through individual firms' prospectus or memorandum. We then take the data and consult the membership list of the "Swedish Private Equity & Venture Capital Association" or (SVCA).

Table VI

Media Coverage & First-Day Returns: Robustness Tests

Table VI presents the results from different robustness tests performed on the independent variable MEDIA_COVERAGE. FIRST_DAY_RETURN is the percentage difference between the first-day closing price and its offer price. MEDIA_COVERAGE is the log-transformed version of the number of news articles for the IPO firm in a 30-day window prior to the IPO. FIRM_SIZE is defined as the natural logarithm of the firm's assets. PROFITABILITY is calculated as the firm's earnings before interest and taxes divided by its total assets. LEVERAGE is calculated as the firm's total debt divided by its assets. ASSET_TURNOVER is calculated as the revenue of the firm divided by the firm's total assets. The regressions are performed using a pooled OLS model with heteroskedasticity-robust standard errors. Column (1) reports the results of the regression when excluding firms with SIC codes between 60xx-69xx. Column (2) reports the results for news items collected 30 days prior to the IPO, while including news items for the day of listing. Column (3) reports the results when accounting for the potential effect of the exchange the IPO firm is listing on.

	Dependent variable: FIRST_DAY_RETURN		
	Excluding SIC Codes 60xx-69xx	News Including Day of Listing	Control Variable: Exchange
	(1)	(2)	(3)
MEDIA_COVERAGE	0.065*	0.139***	0.110***
	(0.040)	(0.039)	(0.037)
FIRM_SIZE	-0.007	-0.022	-0.010
	(0.013)	(0.014)	(0.015)
PROFITABILITY	0.146**	0.145**	0.135*
	(0.059)	(0.063)	(0.069)
LEVERAGE	-0.173*	-0.124	-0.113
	(0.090)	(0.096)	(0.092)
ASSET_TURNOVER	0.039	0.061	0.065*
	(0.032)	(0.038)	(0.038)
Year Fixed Effects	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes
Observations	222	266	266
R^2	0.164	0.186	0.197
Adjusted R^2	0.063	0.101	0.095
Note:			*p<0.1; **p<0.05; ***p<0.01

Following the methodology of Chen et al. (2020), we create the three dummy variables PREST_UNDERWRITER, PE_BACKED and VC_BACKED, and include them separately as interaction terms against MEDIA_COVERAGE in Equation (1). The value of the variables is denoted as 1 if the firm has a prestigious underwriter, is PE-backed, or is VC-backed, respectively, and 0 otherwise. The results from the three interaction tests are shown in Table AV. Contrary to Chen, Goyal, et al. (2020), we do not find evidence that either of the variables are significantly correlated with the impact of media coverage on first-day returns. [10]

[10] To follow up, in untabulated tests, we run the regressions excluding the interaction terms, and find MEDIA_COVERAGE to continue to be significant at the 1% level in all three cases, suggesting that our results remain robust provided the reported absence of an interaction effect.

VII. Limitations

Data adhering to media coverage is fundamental to discuss. In its most general sense, media coverage includes media channels of all types. This implies that some channels may be more informative than others. Media coverage surrounding an IPO is not an exception. News items about issuers vary substantially in length and detail. Due to database restrictions, we are unable to accurately separate news items based on relevance to the issuer. This stands in contrast to Chen et al. (2020), who use sophisticated in-built programs for categorizing news items. While we acknowledge this as a limitation in our thesis, we stress that our main research question about media coverage and first-day underpricing is not primarily concerned with the content of the news items. Instead, our main research question explores how the intensity of media coverage could be associated with first-day underpricing. As such, counting the number of mentions an issuer generates in the media is one method of measuring the intensity of media coverage. Similar to Ahern and Sosyura. (2014), we argue that by allowing for a broader spectrum of news items, we capture the full breadth of how an issuer is being reported in the media.

The yearly distribution of our sample indicates a risk of a potential sampling bias within our database (see Table II). As a result, this constitutes a threat to the external validity of our findings as it may make them more difficult to generalize. To partially mitigate this concern, we attempt to minimize the effects of individual years on our results. This is done both through the fixed effects regression as well as by excluding each year individually. Furthermore, we fail to incorporate the empirically supported effect of cyclicality within the IPO market. The idea that IPOs exhibit volatile business cycles is well supported in the literature (Ritter, 1984). Although we attempt to control for cyclicality on a yearly basis, we acknowledge that there are more sophisticated methods of estimating ongoing business cycles in an IPO market.

VIII. Conclusion

In this study, we examine the relationship between media coverage and IPO first-day returns. We limit our study to the Swedish IPO market and perform multiple regression analysis on a sample of up to 266 issuers for a twelve-year period. We find that pre-IPO media coverage, on average, has a positive association with the first-day return. Our findings are qualitatively consistent and robust to multiple different scenarios and assessments. We also show support that pre-IPO purchase recommendations from Swedish business journals are positively associated with the first-day return.

We provide useful contributions to the literature on media in financial markets. We generate new insights into how media coverage is associated with first-day underpricing in an IPO market with less strict regulation. Proceeding from these findings, we encourage future researchers to try to disentangle the drivers of publicity. This is especially relevant for a market such as Sweden where all actors, including issuers and affiliated underwriters, can generate publicity on their own.

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Appendix

Figure AI

Boolean commands

Figure AI presents boolean commands that were used in obtaining news items from the media archive Retriever. Note that the word "Intro" is not a boolean command, but an in-built feature from Retriever

Intros:(*company name*) AND (börs* OR noter* OR list* OR teck* OR fullteck* OR överteck* OR aktie* OR nyemission* OR exchange* OR stock* OR IPO* OR köp* OR sälj* OR förvärv* OR avtal*)

Table AI

Quantile Statistics

Table AI presents statistics for the groups divided by quantiles for figure I. FIRST_DAY_RETURN denotes the average first-day return for the group.

	FIRST_DAY_RETURN	Group	N
1	0.074	1	89
2	0.095	2	88
3	0.143	3	89

Table AII

Welch Two Sample T-Test

Table AI presents the two-sided T-test on the 5% confidence level issued on the first and third group as presented in Figure 1.

	estimate	group 3 mean	group 1 mean	statistic	p.value	parameter	conf.low	conf.high	method	alternative
1	0.069	0.143	0.074	1.301	0.195	170.159	-0.036	0.173	Welch Two Sample t-test	two.sided

Table AIII

VIF-test

Table AIII presents the VIF-test addressing potential multicollinearity between the variables included in the main regression model. As no value exceeds a commonly accepted thumb rule of 5, we conclude that multicollinearity is not a big concern in our model.

	GVIF	Df	GVIF^(1/(2*Df)
FIRM_SIZE	3.293	1	1.815
PROFITABILITY	1.840	1	1.357
LEVERAGE	1.463	1	1.209
ASSET_TURNOVER	1.390	1	1.179
MEDIA_COVERAGE	2.023	1	1.422
factor(year)	3.040	11	1.052
factor(Industry)	2.820	9	1.059

Table AIV

Summary Statistics Including Media Coverage at Listing Date

Table AIV presents summary statistics for the variables used in our research, including news released on the listing date. FIRST_DAY_RETURN is the percentage difference between the first-day closing price and its offer price. MEDIA_COVERAGE is the log-transformed version of the number of news articles for the IPO firm in a 30-day window prior to the IPO (including the listing date). FIRM_SIZE is defined as the natural logarithm of the firm's assets. PROFITABILITY is calculated as the firm's earnings before interest and taxes divided by its total assets. LEVERAGE is calculated as the firm's total debt divided by its assets. ASSET_TURNOVER is calculated as the revenue of the firm divided by the firm's total assets. Prior to the computations, the sample is winsorized at the 1st and 99th percentile.

Statistic	N	Mean	St. Dev.	Pctl(75)	Pctl(25)	Median
FIRST_DAY_RETURN	266	0.104	0.364	0.201	-0.034	0.054
MEDIA_COVERAGE	**266**	**3.791**	**0.678**	**4.290**	**3.341**	**3.749**
FIRM_SIZE	266	3.431	2.470	5.420	1.574	3.263
PROFITABILITY	266	-0.149	0.490	0.101	-0.218	0.036
LEVERAGE	266	0.235	0.234	0.370	0.021	0.190
ASSET_TURNOVER	266	0.949	1.068	1.325	0.112	0.733

Table AV

Media Coverage & First-Day Returns: Interaction Tests

Table AV presents the results from additional tests on the interaction of MEDIA_COVERAGE with different variables. FIRST_DAY_RETURN is the percentage difference between the first-day closing price and its offer price. MEDIA_COVERAGE is the log-transformed version of the number of news articles for the IPO firm in a 30-day window prior to the IPO. FIRM_SIZE is defined as the natural logarithm of the firm's assets. PROFITABILITY is calculated as the firm's earnings before interest and taxes divided by its total assets. LEVERAGE is calculated as the firm's total debt divided by its assets. ASSET_TURNOVER is calculated as the revenue of the firm divided by the firm's total assets. The regressions are performed using a pooled OLS model with heteroskedasticity-robust standard errors. All columns include MEDIA_COVERAGE as one interaction term. Column (1) reports the interaction with the dummy variable VC_BACKED. Column (2) reports the interaction with the dummy variable PE_BACKED. Column (3) reports the interaction with the dummy variable PREST_UNDERWRITER.

	Dependent variable: FIRST_DAY_RETURN		
	VC-Backed	PE-Backed	Prestigious Underwriter
	(1)	(2)	(3)
MEDIA_COVERAGE	0.106***	0.115***	0.108
	(0.040)	(0.040)	(0.074)
MEDIA_COVERAGE * VC_BACKED	-0.055		
	(0.071)		
VC_BACKED	0.204		
	(0.260)		
MEDIA_COVERAGE * PE_BACKED		-0.067	
		(0.055)	
PE_BACKED		0.198	
		(0.200)	
MEDIA_COVERAGE * PREST_UNDERWRITER			-0.012
			(0.082)
PREST_UNDERWRITER			0.038
			(0.259)
FIRM_SIZE	-0.013	-0.008	-0.012
	(0.014)	(0.014)	(0.017)
PROFITABILITY	0.144**	0.131**	0.136**
	(0.058)	(0.063)	(0.064)
LEVERAGE	-0.134	-0.139	-0.136
	(0.094)	(0.096)	(0.094)
ASSET_TURNOVER	0.064*	0.065*	0.063*
	(0.037)	(0.037)	(0.037)
Year Fixed Effects	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes
Observations	266	266	266
R^2	0.174	0.177	0.173
Adjusted R^2	0.080	0.084	0.079
Note:			*p<0.1; **p<0.05; ***p<0.01