The Breadth of IPO Marketing*

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Abstract

We introduce a novel measure of the breadth of underwriter marketing during initial public offering (IPO) roadshows that captures the number of preliminary prospectuses that underwriters distribute to investors, as reported in underwriter disclosures to the SEC. The measure is strongly related to the preexisting size of underwriters' networks and weakly related to preexisting investor demand. It is also negatively associated with contemporaneous industry returns and issuer quality, suggesting that underwriters market more aggressively when reputation risk and marginal value of information are high. After accounting for underwriter networks, preexisting demand, and market conditions, we find that underwriter marketing breadth positively predicts pre-IPO price revisions, post-IPO liquidity, and underwriter profits through fees and underpricing.

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1. Introduction

Initial public offering (IPO) issuers pay substantial fees to their underwriters to overcome the information frictions and price discounts faced by private firms (e.g., Chen and Ritter, 2000; Ritter, 2003; Corwin and Schultz, 2005). Merton (1987), along with subsequent research on the benefits of expanding investor recognition (see e.g., Bushee and Miller, 2012; Garcia and Norli, 2012), suggests that the visibility created by underwriter marketing may justify these costs. Yet, in contrast to the substantial literature documenting the importance of the amount and quality of information that IPO issuers provide,[1] there is little empirical evidence on the effects of IPO marketing breadth, i.e., how widely firms disseminate information about themselves during the IPO process.[2] We fill this void with evidence that IPO marketing breadth is costly, but allows issuers to obtain a higher offer price and more post-IPO liquidity and analyst coverage.[3]

We introduce a novel measure of IPO marketing breadth using underwriters' distribution of preliminary prospectuses to investors during the IPO roadshow, which underwriters disclose in filings that they submit to the Securities and Exchange Commission (SEC). Securities laws require that investors receive a prospectus copy before receiving an allocation of shares; underwriters' disclosure of total prospectus distribution documents their compliance with this requirement. The distribution total includes prospectuses (physical or electronic) sent to by the underwriters to institutional, as well as responses to underwriter invitations to view the prospectus on electronic roadshow platforms like

[1] See, e.g., Guo, Lev, and Zhou (2004), Leone, Rock, and Willenborg (2007), Hanley and Hoberg (2010), Loughran and McDonald (2013), Dambra, Field, and Gustafson (2015), Barth, Landsman, and Taylor (2017), Blankespoor, Hendricks, and Miller (2017, 2021), Chaplinsky, Hanley, and Moon (2017), Lowry, Michaely, and Volkova (2020), and Dambra, Schonberger, and Wasley (2021).

[2] For example, Zhang (2004) states that "it is controversial to assume that the price of a security can be affected by marketing tactics. Further research on marketing of IPOs is needed."

[3] From the underwriter's perspective, the net benefit of additional marketing depends on the cost of marketing effort, expected compensation (both direct and indirect), and the expected impact marketing will have on the bank's reputation, all of which may vary by issuer and market conditions. For instance, Zhang (2004) provides evidence that underwriters oversell IPO shares when demand is low as a marketing strategy to boost the offer price.

NetRoadshow. There is significant variation in distribution across underwriters and deals, and the distribution is primarily targeted at institutions (i.e., the IPO price setters).

Disclosed prospectus distribution does not merely proxy for ex ante investor demand for the deal, although the two are positively correlated. One proxy for preexisting demand — pre-roadshow online views of the prospectus on EDGAR (i.e., page requests for Forms S-1 and S-1/A) — is far exceeded by total prospectus distribution, suggesting that underwriters market the IPO widely. Similarly, prospectus distribution exceeds the number of post-IPO institutional owners, a measure of demand at the equilibrium price. Underwriters distribute an average of 71 prospectuses per subsequent institutional owner, again suggesting widespread marketing activity. Lastly, prospectus distribution is negatively associated with issuer quality and industry returns, indicating that underwriters market more aggressively when the marginal value of information is higher. This evidence also suggests that underwriters market more heavily when they expect reputation risk to be high, consistent with Zhang (2004). Because of the correlation between prospectus distribution and investor demand for the IPO, we control for the investor demand in tests of the effects of underwriter marketing by (1) including proxies for preexisting demand as control variables, and (2) isolating variation in prospectus distribution driven by industrial geographic concentration that is plausibly unrelated to preexisting demand and other IPO characteristics.

In addition to demand characteristics, the extent of underwriting market depends on the size of the underwriter's network and the extent of distribution inside and outside that network.[4] Prospectus distribution is positively related to underwriter network size. For instance, lead-left underwriter identity explains a significant part of abnormal prospectus distribution within industry-time groups. There is also significant variation after controlling for pre-roadshow demand and underwriter network

[4] Importantly, these are two distinct components of issuers' marketing decision: how large of a network to buy access to and how extensively to distribute inside and outside that network.

size. Larger deals and deals certified by more reputable underwriters have more prospectus distribution.

We next examine the costs and benefits of IPO marketing breadth in equilibrium. The costs of marketing breadth involve the effort of expanding the underwriter's network and, since investors prefer direct communication with managers (Blankespoor et al., 2021), an implicit commitment to host roadshow meetings. Theory suggests that the benefits include increased demand for the new shares.[5] Given the strong relation between prospectus distribution and both deal size and underwriter networks, in addition to industry fixed effects, we control for filing proceeds, total syndicate size, and underwriter-year fixed effects.

We find that IPO marketing breadth is positively related to the IPO offer price through more positive price revisions during the bookbuilding period; doubling prospectus distribution — roughly equal to a one standard deviation increase from the average distribution — predicts a 2.2 percentage point increase in price revisions. Marketing breadth is also a conduit for the partial adjustment phenomenon (Hanley, 1993), as it predicts greater underpricing. The magnitude of the underpricing increase is 62% larger than the price revision increase. This suggests that investors buying at the IPO price capture roughly 60% of the positive marketing breadth effect on the post-IPO price, while the firm (or any pre-IPO shareholders selling at the IPO offer price) captures the remaining 40%. We also find that marketing breadth positively predicts the dollars spent on underwriter fees. Thus, underwriters benefit from more extensive marketing both via more fees and higher post-IPO returns for their clients, which results in soft dollar payments to the underwriters (Loughran and Ritter, 2004).

[5] The idea of underwriter marketing expanding demand is a natural implication of the literature on downward sloping demand curves and the impact of investor attention on prices (see, e.g., Merton, 1987; Chung and Jo, 1996; Gao and Ritter, 2010; Huang and Zhang, 2011; Blankespoor, Miller, and White, 2014). For discussions and evidence relating to underwriter IPO marketing, see Kuhn (1990), Benveniste and Busaba (1997), Ritter (2003), Zhang (2004), and Cook, Kieschnick, and Van Ness (2006).

Turning to the aftermarket effects of IPO marketing breadth, we find that a doubling of prospectuses distribution is associated with an increase in elasticity of demand of 10%, an increase in liquidity of 20%, and increase in analyst coverage of 2% in the first six months of trading. This is consistent with evidence in the SEO market over the last two decades (Gao and Ritter, 2010), which indicates that underwriter marketing flattens the demand curve at the offer price and improves the quality of the market once the shares start trading.

The estimates presented thus far do not establish causality. Although prospectus distribution far exceeds measures of post-IPO institutional ownership and our findings are similar after we include pre-roadshow S-1 request decile-by-year fixed effects to limit comparisons to firms with similar pre-roadshow investor interest, it remains possible that demand for shares determines both prospectus distribution and IPO outcomes. To further address this possibility, we introduce industry geographic concentration — a proxy for the geographic clustering of financial capital[6] — as a source of variation in IPO marketing that is arguably unrelated to other IPO and outcomes. Highly clustered capital (1) facilitates more roadshow meetings without the time and cost of flying to a second roadshow city, and (2) can reduce underwriter search costs when conducting digital marketing. Furthermore, since an issuer has little control over its industry's geographic concentration, such concentration is unlikely to directly affect IPO outcomes for reasons other than its effect on marketing breadth.[7] Under this assumption, any observed relation between industry geographic concentration and prospectus distribution cannot be explained by investor demand for the IPO.

We find that industry concentration directly predicts IPO fees, pricing, post-IPO demand, and post-IPO liquidity. A one standard deviation increase in geographic concentration is associated with

[6] There is abundant evidence in banking and corporate finance literatures that physical distance between firms and investors makes monitoring and information exchange more difficult (e.g., Hauswald and Marquez, 2006; Giroud, 2013; Bernstein, Giroud, and Townsend, 2016; Hollander and Verriest, 2016). Giroud (2013) and Bernstein et al. (2016) use the introduction of new flight routes as an exogenous shock to information acquisition costs.

[7] Importantly, this measure is not a function of geographic proximity between issuers and investors, so it is immune from local investment bias effects.

approximately a 2.2 percentage point increase in pre-IPO price revisions and first-day returns. A similar increase in concentration also predicts an increase in demand elasticity, liquidity, and analyst coverage of 7.9%, 8.9%, and 4.8%. These reduced-form results are qualitatively similar to our baseline OLS estimates using prospectus distribution and we again provide evidence that these results persist after controlling for measures of preexisting demand. Importantly, variation in marketing breadth due to industry geographic concentration is arguably exogenous to post-IPO pricing and after-market outcomes. Interpreted in this way, these findings alleviate concerns that our baseline results are driven by a correlated omitted variable related to both prospectus distribution and IPO outcomes.[8]

The paper makes several contributions to the literature. There is a large literature on IPO marketing and bookbuilding, including theoretical and empirical evidence on how underwriters build the order book (see e.g., Sherman and Titman, 2002; Cornelli and Goldreich, 2003) and how issuers style their roadshow presentations (Blankespoor et al., 2017, 2021). We add to this literature with the first empirical analysis of IPO marketing breadth.[9] We also contribute to the literature examining the use of roadshow marketing and bookbuilding compared with other issuance methods (see e.g., Sherman, 2000, 2005; Derrien and Womack, 2003; Kutsuna and Smith, 2004; Bortolotti, Megginson, and Smart, 2008; Degeorge, Derrien, and Womack, 2007; Gao and Ritter, 2010; Gustafson, 2018). Furthermore, our evidence speaks to the ongoing discussion about capital raising alternatives to traditional bookbuilt IPOs, such as de-SPAC mergers, auctions, and direct listings.[10] We document a

[8] Our empirical design is important for substantiating this interpretation. We control for deal size and include (a) underwriter-by-year fixed effects, which force identification of the effect of marketing breadth to come from variation in deals managed by the same underwriter during the same calendar year; and (b) industry-sector fixed effects, which force identification to come from variation among sector peers. The identifying assumption is thus that differences in industry concentration affect IPO marketing breadth through differences in marketing costs, but are otherwise unrelated to variation in IPO outcomes after holding constant lead-left underwriter reputation and network size, deal size, and broad industry membership. Leaning on this assumption a bit more, we also estimate 2SLS regressions using industry geographic concentration as our IV. We find evidence consistent with our OLS and reduced form results.

[9] For further analysis of IPO bookbuilding, see, e.g., Benveniste and Spindt (1989); Benveniste and Busaba (1997); Cornelli and Goldreich (2001); Corwin and Schultz (2005) and Jenkinson and Jones (2004).

[10] For instance, following the SEC's approval of the NYSE's request to allow firms to raise equity through direct listings, an article in the *Wall Street Journal* stated the following: "The new type of direct listing could appeal to Silicon Valley venture capitalists who have long complained about underwriting fees and other costs associated with

positive impact of marketing breadth on investor demand and post-IPO liquidity, which highlights the value of underwriters in disseminating information and expanding institutional demand during bookbuilt IPOs. The results also help clarify the importance of the decision about how widely to disseminate disclosure information, which is a choice that is separate from how to craft and present disclosure information.

We also contribute to the broader literature on IPOs. First, we contribute to studies that examine investor relation (IR), marketing, and disclosure decisions during the IPO process.[11] For example, Dambra, Schonberger, and Wasley (2021) find that firms' disclosure decisions prior to the filing of their preliminary prospectuses influences subsequent investor demand. Additionally, Chahine, Colak, Hasan, and Mazboudi (2020) find that hiring outside IR consultants helps create positive news coverage for the issuer and higher first day returns.[12] We contribute by focusing explicitly on underwriter actions to expand institutional investor interest during the IPO roadshow period.

Second, we contribute to studies that use novel data on the IPO process to study IPO fees, price revisions, underpricing, and aftermarket outcomes. Jenkinson and Jones (2004), Hanley and Hoberg (2010), and Lowry, Michaely, and Volkova (2020) leverage unique data to examine the IPO investor allocation process, the text of IPO prospectuses, and the pre-roadshow comment letter exchanges between IPO issuers and the SEC, respectively.[13] We contribute by using novel data on underwriter information dissemination to examine theories of investor recognition and visibility (e.g., Merton,

IPOs. Such critics say Wall Street banks shortchange startups during IPOs by buying their shares [and distributing to clients] and then turning around and selling them to the public at a higher price." https://www.wsj.com/articles/nyses-plan-for-new-ipo-alternative-wins-green-light-from-sec-11598479804.

[11] Our analysis also relates to research examining the effect of firm advertising decisions on investor demand outside the IPO process. See, e.g., Grullon, Kanatas, Weston (2004), Blankespoor et al. (2014), Lou (2014), Rogers, Skinner, and Zechman (2016), and Chemmanur and Yan (2019).

[12] Studies examining IPO underpricing (i.e., first day returns) more generally include Aggarwal, Krigman, and Womack (2002), Loughran and Ritter (2002, 2004), Lowry and Shu (2002), Ljungqvist (2005), Lowry, Officer, and Schwert (2010), and Liu and Ritter (2011).

[13] For additional evidence on how post-IPO outcomes are impacted by (a) pre-IPO analyst coverage, see Chahine, Ljungqvist, and Michaely (2008); (b) IPO proceeds, see Dambra, Gustafson, and Pisciotta (2020); (c) underpricing, see Booth and Chua (1996) and Cliff and Denis (2004); and (d) underwriter composition, see Jeon, Lee, Nasser, and Via (2015).

1987; Bushee and Miller, 2012) in the IPO market; we show that more extensive prospectus distribution increases investor demand, IPO pricing, and post-IPO liquidity and monitoring.

2. IPO Marketing: Background and Measurement

In this section, we introduce our measure of IPO marketing breadth. As context for our measure, we first provide a brief overview of the IPO process and the role of marketing.

2.1 IPO Marketing Background

In bookbuilt IPOs, issuers first choose one or more underwriters to lead the offering. The issuer, with the help of the underwriters, then submits an initial registration statement (Form S-1) to the SEC to indicate an interest in issuing new securities.[14] The SEC then takes several weeks or more to assess and comment on the issuer's securities issuance proposal, typically resulting in several rounds of issuer-produced amendments to the initial S-1. During this time, the issuer and underwriters decide on a preliminary price range for the offered shares by balancing the issuer's internal valuation and capital raising needs with the underwriters' initial assessment of investor demand. The result of the SEC review process and initial price assessment is a preliminary prospectus, sometimes called a "red herring" prospectus. Figure 1 shows the timeline of a typical IPO.

The preliminary prospectus is the key written element of the IPO marketing process that issuers and underwriters conduct to expand interest in the offer. The document must "disclose all relevant information pertaining to the issuer that a reasonable investor would require to accurately value the shares" (Draho, 2004). Accordingly, issuers and underwriters are legally required to provide a preliminary prospectus before soliciting investor orders for shares, and the underwriters are prohibited from disclosing material details about the firm to investors during the IPO process that are not explicitly disclosed in the preliminary prospectus (US IPO Guide, 2021). In sum, as Ellis, Michaely,

[14] Following passage of the Jumpstart Our Business Startups (JOBS) Act in April 2012, eligible issuers may submit Form S-1 confidentially and release an initial registration statement to the investing public later in the IPO process.

and O'Hara (2000) describe, "the preliminary prospectus is one of the primary tools in marketing the issue" (p. 1043).

Issuers usually file the preliminary prospectus with the SEC just before they start the roadshow, which is the formal bookbuilding and marketing phase of the IPO. During the roadshow, the issuer's executives and underwriters visit institutional investors across the country to market the offer via a well-rehearsed sales pitch (Ellis et al., 2000),[15] and anecdotal and empirical evidence supports the notion that institutional investors are the primary audience for roadshow marketing because they determine the price (Hanley and Wilhelm, 1995; Cornelli and Goldreich, 2001; Fidelity Learning Center, 2021; Levine, 2021). The goals of the roadshow are (1) to build an order book composed of institutional investor indications of interest at difference prices, and (2) to increase the market-clearing price through marketing to institutions.

2.2 Measuring IPO Marketing Breadth

Given that the preliminary prospectus is the primary tool issuers use to market themselves and institutional investors are the primary target of marketing, the ideal measure of IPO marketing breadth would be the number of distinct institutional investors to which underwriters effectively promote preliminary prospectus information during the formal marketing period. In the following discussion, we describe how our measure approximates this ideal, as well as previously-used measures of IPO marketing.

We measure IPO marketing breadth as the total number of preliminary prospectuses that underwriters distribute to investors and other IPO participants during the IPO roadshow period, as disclosed to the SEC. Lead underwriters report the total number of preliminary prospectuses distributed on behalf of the issuer, as well as the dates of prospectus distribution, in correspondence

[15] For example, prior to Redfin's IPO in 2017, the CEO held 56 investor meetings across seven cities over the course of nine days (Kelman, 2018).

with the SEC (Form CORRESP).[16] This information supports the SEC's evaluation of whether adequate issuer-related information is made available to the public.[17] In these filings, underwriters disclose total distribution of the final preliminary prospectus to various recipients including investors, other participating underwriters, and non-investors like lawyers and ratings agencies.[18]

Underwriter prospectus distribution has several appealing features as a measure of IPO marketing breadth. First, the preliminary prospectus — which contains the only information that issuers and underwriters can discuss during roadshow meetings — is a key element of the IPO marketing process and its distribution is a direct action taken by the underwriter.[19] Accordingly, the SEC considers prospectus distribution an important measure of the underwriter's dissemination of IPO-relevant information. Second, this disclosed prospectus distribution captures direct underwriter outreach during the IPO roadshow. The disclosed start of prospectus distribution closely matches the roadshow launch date from data sources such as Bloomberg and press releases (see Panel A of Table B1 in Appendix B). Thus, prospectus distribution measures marketing breadth when underwriters are formally selling the offer, just prior to the ultimate pricing of shares.

Lastly, prospectus distribution measures IPO marketing primarily to institutional investors. Among 831 issuers in our sample that specifically disclose whether they distribute prospectuses to institutional and/or retail investors, less than 7% disclose that they distribute prospectuses to retail

[16] The primary purpose of this correspondence is to request expedited pre-IPO approval of the issuer's registration statement (including the prospectus) by the SEC, known as acceleration of the registration statement's effective date. Although the most recently-amended registration statement becomes automatically effective after 21 days, issuers overwhelmingly request accelerated effectiveness. See 17 CFR § 230.461 - Acceleration of eff. date and 17 CFR § 230.459 - Calculation of eff. date.

[17] Specifically, the SEC considers whether participating underwriters and dealers received enough copies of the preliminary prospectus to "secure adequate distribution" as part of the offering. The SEC may request relevant prospectus distribution information from the issuer. See 17 CFR § 230.460 - Distribution of prelim. prospectus, 17 CFR § 230.461, and 17 CFR § 230.418(a)(7).

[18] Prospectus distribution has largely been digital since 2005, when Form CORRESP became widely available on EDGAR. Distribution is typically conducted via email attachment or link to the electronic version available on EDGAR. Practitioners indicate that the disclosed amount of prospectus distribution in Form CORRESP includes both paper and electronic copies.

[19] Investors can access the preliminary prospectus through other channels, e.g., the SEC's EDGAR repository, but these other channels are not intermediated by the underwriter.

investors. Further, in some deals underwriters disclose the number of prospectuses that they distribute to each recipient type, which we report in Panels B and C of Table B1. Among prospectuses not intermediated by other participating underwriters — which are plausibly distributed similarly — on average, 74% of prospectuses are distributed to institutional investors.[20] A comparison of Visa (2008) and Facebook's (2012) respective IPOs in Table B2 also suggests a focus on institutional prospectus distribution. Although the Visa and Facebook IPOs had similar offering proceeds, Facebook's IPO enjoyed much higher retail investor interest. However, underwriters in the Visa IPO distributed almost three times as many prospectuses as Facebook.

Thus, our measure captures marketing breadth to institutions, the price setters and dominant buyers in the IPO. Our measure contrasts with other proxies of IPO marketing, which do not capture the breadth of underwriters' direct actions toward the key marketing audience (i.e., institutions) during the formal bookbuilding period. For instance, Barondes et al. (2000) infer overall IPO marketing effort from the underwriter spread, which is problematic since almost all moderate-sized IPOs have a 7% spread, and Cook, Kieschnick, and Van Ness (2006) infer overall IPO marketing effort from news coverage, which is problematic because quiet period restrictions prevent underwriter marketing from spilling over into news coverage. [21] No existing measures of IPO marketing isolate underwriter information dissemination to institutions during the bookbuilding period.

2.3 Limitations of Prospectus Distribution as a Measure of IPO Marketing Breadth

Although our measure is a more direct measure of IPO marketing breadth compared with existing literature, it has limitations. First, for most of our sample, we only observe total distribution (i.e., including distribution to lawyers, rating agencies, retail and institutional investors, and dealers),

[20] Investors, both institutional and retail, receive upward of 90% of prospectuses not intermediated by other participating underwriters.

[21] Additional prior underwriter marketing proxies include the number of managing underwriters (Huang and Zhang, 2011), the product marketing portion of operating expenses (Luo, 2008), and IPO underpricing (Demers and Lewellen, 2003). Dambra, Schonberger, and Wasley (2021) use pre-IPO voluntary disclosure as a measure of issuer-led IPO marketing.

not distribution specifically to institutional investors. However, as discussed above, from both hand-collected per-group distribution statistics for 414 filings and conversations with industry professionals, almost all prospectuses are distributed to institutional investors.

Second, prospectus distribution does not capture all aspects of marketing breadth. For example, it does not capture pre-roadshow testing-the-waters (TTW) communication — which is available beginning in April 2012 after the passage of the JOBS Act — or retail-focused marketing like pre-recorded electronic roadshows. However, TTW communication precedes the formal solicitation of "buy" orders immediately prior to final pricing of the offer and retail investors typically play a limited role in the share allocation and pricing process. Thus, our measure arguably captures the breadth of marketing to price setters at the time when the IPO price is set.

Lastly, there are two additional considerations when interpreting prospectus distribution as a measure of underwriter marketing breadth. One, prospectus distribution is in part a passive response to preexisting investor demand for the offer, with the underwriter simply responding to investor requests as they arrive and forwarding prospectuses accordingly.[22] We formally address this challenge to the interpretation of our measure in Section 4. We provide evidence that prospectus distribution is positively related to investor demand for the offer (as indicated by pre-roadshow investor clicks on the issuer's S-1 filings), but there is also significant variation in distribution after accounting for investor demand. Also, distribution is higher when industry returns and issuer quality are weaker, which is consistent with evidence in Zhang (2004) and suggests that distribution is not purely a function of how many investors are interested before the marketing phase begins. Two, the remaining variation after accounting for investor demand is partially a function of (1) the size and composition of the underwriter's preexisting network of investor clients, and (2) the underwriter's

[22]Although underwriters switch from paper to electronic prospectus distribution — e.g. by email attachment or a link to the electronic version on EDGAR — around 2005, this switch does not affect the interpretation of our measure. Disclosed distribution regularly captures the total number of paper *and* electronic copies distributed to investors and distribution is mostly electronic throughout our sample period.

actions to reach client and non-client investors on a particular deal. In other words, as we discuss in Section 4.2, there is both a fixed and variable component to IPO marketing breadth.

In sum, although the number of preliminary prospectuses that underwriters distribute to institutional investors during the roadshow may be associated with preexisting demand and other underwriter-investor interactions during the IPO filing process, the measure captures a direct action by the underwriter to disseminate prospectus information widely to institutional investors during the period when these investors submit (soft) bids for IPO allocations and we provide several pieces of evidence to support this notion that distribution reflects active marketing rather a passive response to demand. Thus, this measure of marketing breadth can help us better understand the determinants and effects of underwriters' IPO information dissemination during the IPO marketing process.

3. Data and Sample Description

We start with a sample of all completed common stock IPOs issued between January 1, 2005 and December 31, 2019 from Thomson Reuters SDC New Issues Database. We begin our sample in 2005 because Form CORRESP, the source for our measure of IPO marketing breadth, becomes widely available in 2005. Our sample ends just prior to the COVID-19 pandemic, which led to sudden and unique changes in the IPO marketing process (see e.g., Tse, 2020). We exclude the following offers and issuers from our sample: offers not listed on NASDAQ, the Amex, or NYSE; foreign primary listings;[23] best efforts offers; IPOs with offer prices less than $5; Regulation A offers; real-estate investment trusts (REITs); unit offers; closed-end funds; non-financial limited partnerships; other nonstandard common stock offers; and American depositary shares (ADS).[24] We also drop issuers we cannot match to a Center for Research in Security Prices (CRSP) identifier within five

[23] As shown in Table A1 in Appendix A, we use multiple SDC variables describing where issuers list their shares to ensure our sample only includes shares listed on NASDAQ, Amex, or NYSE. Our foreign primary listings filter excludes eight additional deals that are listed on foreign exchanges.

[24] Using these filters, we exactly match the 1,806 offers reported in Table 8 on Jay Ritter's IPO Data webpage. See IPO Statistics for 2019 and Earlier Years, available at https://site.warrington.ufl.edu/ritter/ipo-data/.

days of the issue date provided by SDC. These filters, which we tabulate in Table A1 of Appendix A, produce a preliminary sample of 1,784 IPOs.

Our final sample includes 1,479 IPOs with hand-collected marketing information, which we plot by year in Figure B1. Attrition from the initial sample is due to (i) missing Central Index Keys (CIK) used to identify relevant EDGAR filings, (ii) a lack of relevant CORRESP filings available on EDGAR, or (iii) missing prospectus distribution information within a relevant CORRESP filing. In addition, we exclude 64 deals in which the IPO trades more than 30 days after the roadshow start date, indicating multiple bookbuilding periods, a postponed IPO, or some other unidentifiable delay.

Table 1 reports descriptive statistics for our sample; Table A2 in Appendix A defines the variables that we use in our analysis. Adjusting to 2019 dollars, the average (median) filing proceeds are $267 ($119) million, and the typical issuer is an eleven-year-old firm with $116 million in revenue. Almost half of issuers are backed by venture capital (VC) and 31% are backed by private equity (PE). We focus the rest of our discussion on the variables that we add to the literature.

Table 2 provides descriptive statistics for our measure of IPO marketing breadth. The average issuer distributes 6,590 prospectuses over the course of 10.6 roadshow days (Panel A). Excluding weekends, the average issuer distributes 861 prospectuses per roadshow day. Among issuers that revise their initial offer price, virtually all price revisions occur after the roadshow and prospectus distribution begin. Relative to the average filing period of 121.5 days, preliminary prospectus distribution occurs during a short but critical portion of the IPO process.

4. Prospectus Distribution: Investor Demand, Underwriter Networks, and Discretionary Underwriter Marketing Effort

In this section, we explore the determinants of preliminary prospectus distribution. We begin by addressing challenges to the interpretation of prospectus distribution as a measure of marketing breadth in the context of preexisting investor demand. We then estimate how much of the remaining

variation is explained by preexisting underwriter networks and discretionary deal-specific marketing. Lastly, we explore how a broad set of issuer and market characteristics relate to deal-specific marketing breadth.

4.1 Preexisting Investor Demand and Prospectus Distribution

Rather than capturing an underwriter's efforts to expand recognition of the issuer's prospectus information, preliminary prospectus distribution (and IPO marketing breadth more generally) may simply represent a passive response to preexisting investor demand. We evaluate this possibility by using investor information acquisition — specifically the total number of online requests for the most recent IPO prospectus amendment on EDGAR[25] — as a proxy for pre-roadshow demand, which draws from Bauguess, Cooney, and Hanley (2018) and others.[26] Drake, Roulstone, and Thornock (2015) find that these EDGAR requests are related to, yet distinct from, other measures of investor interest (e.g., trading volume, news coverage, and Google searches), and Drake, Johnson, Roulstone, and Thornock (2020) find that EDGAR requests are a leading indicator of sophisticated institutions' equity holdings.

If preexisting demand leads investors to indicate their interest in participating in the deal — which requires the underwriter to distribute a prospectus — and underwriters are passive distributors, then the level of demand should roughly match the underwriter's prospectus distribution. However, Table 2 shows that average and median pre-roadshow EDGAR requests account for only 42% and 22% of subsequent roadshow prospectus distribution. This disparity suggests that underwriters

[25] We measure total user requests of the firm's S-1 and S-1/A filings over the five trading days (-1,+3) surrounding the largest spike in requests during the (-60,-7) calendar day period preceding the roadshow start date, which overwhelmingly corresponds with a prior S-1/A filing date. We use this revealed preference approach over using the actual filing dates because filings could be posted outside normal business hours or right before a weekend, which adds noise to the number of requests immediately surrounding filing dates.

[26] The EDGAR Log File Data Set is available through June 30, 2017, which covers most of our 2005–2019 sample.

market the IPO far beyond the level of preexisting demand.[27] We reach a similar conclusion when using the number of post-IPO institutional owners as an alternate proxy for investor demand. We find that underwriters distribute 71 prospectuses for each subsequent institutional owner, on average (Table 2).

We next estimate a simple determinants model in Panel A of Table 3 of prospectus distribution using our investor demand proxy.[28] We control for filing proceeds and issuer pre-IPO revenue, in addition to including year, industry, and lead underwriter fixed effects. If prospectus distribution is a purely passive response to preexisting demand and EDGAR is a reasonable proxy for institutional demand as suggested by existing literature, then we would expect a strong relationship between our demand proxy and prospectus distribution. Instead, the estimated relationship between pre-roadshow S-1 requests and prospectus distribution is weak both economically and statistically.

Columns 1 and 2 show that after controlling for deal and issuer size, a 10% increase in pre-roadshow clicks corresponds to a 1.1–2.9% increase in preliminary prospectus distribution. Columns 3 and 4 show that after adjusting for the lead underwriter's identity, the increase in preliminary prospectus distribution is extremely small in magnitude and not highly significant. These results are inconsistent with a model of passive prospectus distribution purely in response to investor demand. Overall, preexisting investor demand appears unlikely to be a primary determinant of underwriter marketing breadth. Our subsequent results are robust to controlling for pre-roadshow EDGAR clicks.[29]

[27] Although EDGAR activity is likely to omit some interested investors, it is also likely to convert on less than a 1:1 basis to subsequent investor indications of interest, thus leaving a wide gap between investor interest and underwriter prospectus distribution.

[28] Results are similar if we instead measure total S-1 and S-1/A requests over the five or ten trading days preceding the release of the preliminary prospectus distributed during the roadshow.

[29] Specifically, we include pre-roadshow S-1/A EDGAR request decile-by-year fixed effects, where EDGAR requests are annually sorted. Approximately 25% of our sample does not have available EDGAR request data, which is why we do not use these tests as our main specification.

4.2 Underwriter-Investor Networks and Marketing Breadth

A portion of preliminary prospectus distribution represents marketing to a network of investors previously cultivated by the underwriter, rather than a tailored marketing campaign for each issuer. By hiring an underwriter, the issuer effectively rents access to the underwriter's preexisting investor network, which the underwriter has developed through repeated capital markets interactions.

We evaluate the importance of underwriters' preexisting investor networks for equilibrium marketing breadth in several ways. First, in Panel B of Table 3 we estimate a simple determinants model of prospectus distribution using the size of the underwriting syndicate and controls for issuer and deal size. Columns 1 and 2 show that a 10% increase in the number of underwriters is associated with a 6.0–9.6% increase in prospectus distribution.

In Column 3, we add lead-left underwriter fixed effects, which proxy for the fixed component of each lead underwriter's investor network, and in Column 4 we include lead-left underwriter-by-year fixed effects, which proxy for the time-varying component of each lead underwriter's network. The underwriter indicators in Column 3 explain 48% of the variation in prospectus distribution (untabulated) with a joint F-statistic of 6.6 (p-value < 0.001). The joint underwriter-by-year fixed effects in Column 4, which absorb time trends and underwriter-specific effects, explain 76% of the variation with a joint F-statistic of 10 (p-value < 0.001). Across these two columns, a 10% increase in the number of underwriters is associated with a 4.0–4.1% increase in prospectus distribution. The fact that syndicate size remains statistically and economically significant when including underwriter-by-year fixed effects suggests that lead underwriter identity and syndicate size both determine the breadth of marketing to institutional investors. Results are similar in Panel C after including a control for pre-roadshow EDGAR prospectus requests, which is insignificant in models with underwriter and underwriter-year fixed effects.

To more directly quantify the effect of underwriter networks on preliminary prospectus distribution, we next estimate a within industry-year IPO-pairs analysis similar to the CEO-pairs

analysis in Shue (2013).[30] We (1) estimate the amount of prospectus distribution unexplained by IPO and issuer size by capturing the residuals from regressions that include controls for syndicate size, filing proceeds, issuer pre-IPO revenue, and year fixed effects (results reported in Table B3), (2) form pairs of all IPO issuers in the same industry-year, and (3) estimate the impact of shared lead-left underwriters on each pair's absolute difference in unexplained prospectus distribution (i.e., regression residuals from Step (1)). Table 4 reports regression estimates of the absolute difference in unexplained prospectus distribution as a function of the IPO pair's commonality in lead underwriters (Step (3)). Standard errors are alternatively two-way clustered by each IPO, or bootstrapped across 10,000 iterations with randomly assigned IPO pairs. Compared with other IPO pairs in the same industry and year, IPOs with the same lead-left underwriter have prospectus distribution that is approximately 19% more similar (Column 1).[31] Consistent with additional managing underwriters expanding the network of client investors, similarity increases by 23% when IPO pairs in the same industry and year have the same first two lead underwriters, and 31% when they have the same first three lead underwriters.[32]

Tables 3 and 4 suggest that issuers likely "buy" a minimum level of marketing when hiring a particular set of underwriters, which is consistent with anecdotal and survey evidence of the perceived importance of underwriter selection for IPO outcomes (e.g., Brau and Fawcett, 2006). However, considerable variation remains in how extensively underwriters market each offer, suggesting that marketing breadth has a discretionary component. Going forward, we account for marketing to the

[30] Shue (2013) forms pairs of all CEOs that attended Harvard Business School (HBS) in the same class-year to examine the impact of being in the same class section on commonalities in corporate decisions.

[31] From Equation (3) in Shue (2013), we compute the increase in similarity using the distance ratio, measured as the ratio of the coefficients on the same-underwriter indicator and the intercept. Our estimate of 19% compares with increases in compensation and acquisition activity similarity among CEO section peers of 7.4% and 11% in Shue (2013). Additionally, using Equation (6) in Shue (2013), we estimate that the ratio of between- and within-underwriter group variances is 44% higher than would be expected under the null. This compares with roughly 50% and 35% for compensation and acquisition activity in Shue (2013).

[32] The ratio of between- and within-group variances increases by 48% and 55%.

underwriters' preexisting investor networks by including (lead-left) underwriter or underwriter-by-year fixed effects and a measure of syndicate size.[33]

4.3 Discretionary Underwriter Marketing Breadth

In this section, we examine the determinants of discretionary IPO marketing breadth. Specifically, we conduct multiple regressions with the natural log of prospectuses distributed as the dependent variable to examine how issuer and market characteristics relate to equilibrium preliminary prospectus distribution, after controlling for underwriter network effects and pre-roadshow demand (using pre-roadshow S-1/A EDGAR request fixed effects). In addition to the underwriter-by-year fixed effects mentioned above, the main regressions include 2-digit NAICS fixed effects, which control for static differences in information demand across product markets.[34]

For issuer characteristics, we consider issuer revenue, an indicator for negative earnings before interest and taxes (EBIT), whether the issuer was previously funded by venture capital (VC) or private equity (PE) firms, and the offer's filing proceeds. To capture relevant market conditions, we include lagged IPO volume, the Fama-French 49-industry return during the month preceding the start of the roadshow, the percentage of IPOs priced above their range in the preceding three months (IPO market "hotness" from Jay Ritter's webpage), and whether the firm is the first to file an IPO in its industry in at least six months (*Pioneer*), which Alti (2005) shows tend to be lower quality issuers.

From Panel A of Table 5, deals marketed in colder IPO markets (measured by lagged IPO volume and industry returns) have greater prospectus distribution. The coefficient on *Pioneers* indicates that marginal prospectus distribution is also negatively related to issuer quality. These results are consistent with Zhang (2004) and suggest that underwriters market more aggressively when they expect the IPO to be less well-received.[35] This suggests a more complex relation between

[33] Lead-left underwriter-by-year fixed effects result in the loss of low-frequency underwriters from our sample.
[34] Results are similar when using industry-by-year fixed effects.
[35] The underwriter's expectation of how well the IPO will be received is of course conditional on the filing price range, which the underwriters to some extent control, but (a) issuers also have some say in setting the filing price, and

demand and prospectus distribution than a simple story whereby disclosed distribution simply reflects how many investors indicate an interest in participating in the deal. We also find evidence that larger deals tend to have greater prospectus distribution. In Table B4 in the Appendix B, we show that the removal of underwriter fixed effects reveals a highly significant positive relation between underwriter reputation and prospectus distribution.

In Panel B of Table 5, we control for initial investor demand using pre-roadshow S-1/A requests decile-by-year fixed effects. As mentioned above, this reduces our sample size because the SEC stopped publishing its access logs in June of 2017. Our previous determinants of prospectus distribution remain important after controlling for initial investor demand through pre-roadshow prospectus views. In sum, we provide evidence that for larger deals, deals with larger syndicates, and deals conducted during periods with potentially weaker demand and/or when investors are more price sensitive (i.e., colder market periods), underwriters tend to market more extensively.

4.3.1 Geographic concentration as a predictor of marketing breadth

In Table 5, we also consider how the geographic concentration of prospective investors relates to marketing breadth. This determinant is of particular interest because it can identify a component of prospectus distribution that is plausibly unrelated to preexisting demand or underwriter networks. Prior research in economics, banking, and corporate finance shows that physical distance hinders information exchange (e.g., Giroud, 2013; Bernstein et al. 2016). In the context of IPO bookbuilding, a geographically-clustered investor base lowers the cost of discretionary underwriter marketing via reduced plane travel, increased in-person meeting volume, and reduced search costs of identifying new investors.

(b) underwriters may set an optimistic filing range to be consistent with their initial bid during the pitch phase and hope that their marketing efforts can move the market clearing price up to the filing range.

We proxy for the geographic concentration of prospective investors using the geographic concentration of industrial activity. The geographic concentration of industrial activity equals the sum of squared annual county-level wages in the IPO issuer's 4-digit NAICS industry in the year of the IPO (i.e., industry Herfindahl index using aggregate county wages in each industry). We interpret higher industry geographic concentration as an indication of a more concentrated prospective investor base. Some examples of industries with high concentration are the Securities and Commodity Exchanges industry — which is concentrated in Cook County (Chicago), Illinois — and the Auto Manufacturing industry — which is concentrated in Macomb County and Wayne County (Detroit), Michigan. By abstracting away from the firm's own location, industry geographic concentration is not conditional on geographic proximity between investors and issuers and thus it is unrelated to local investor preferences (see, e.g., Coval and Moskowitz, 1999, Grinblatt and Keloharju, 2001, and Huberman, 2001). This measure arguably offers variation in prospectus distribution that is unrelated to investor demand except through its effect on IPO marketing. We use this idea in Section 5 to provide evidence on the drivers behind the relation between prospectus distribution and IPO and post-IPO outcomes.

Panel A of Table 5 shows that, even with the inclusion of our 2-digit NAICS and underwriter-by-year fixed effects, the geographic concentration of prospective investors is a strong predictor of prospectus distribution. A one standard deviation increase in industry geographic concentration is associated with approximately 6.5% higher prospectus distribution. Panel B corroborates this result in the smaller sample and after controlling for preexisting demand in the form of EDGAR S-1 views. This result, combined with our previous evidence on syndicate size, suggests that issuers with greater access to investors distribute more IPO prospectuses during the roadshow.

5. Cost-Benefit Tradeoff of IPO Marketing Breadth

The choice of how broadly to market an issue during the IPO bookbuilding process is a balance between the costs and benefits of underwriter services. The costs for the issuer involve (1) the financial cost of renting the underwriter's network and the cost of the underwriter's efforts to market the offer to investors during and outside the roadshow, (2) the opportunity cost of managers' time spent participating in the roadshow, and (3) the risk of potential changes in market demand during an extended roadshow. The benefits of extensive marketing for the issuer involve the prospect of reduced information asymmetry, increased demand, and a higher offering price, as theoretical and empirical analysis of firm visibility and investor demand (e.g., Merton, 1987; Gao and Ritter, 2010) suggest that direct actions to expand investor awareness of a firm should increase investor demand for the firm's shares and the price at which new shares are sold.

Empirical estimates of these tradeoffs are scarce due to a lack of direct measures of IPO marketing breadth. Our measure of preliminary prospectus distribution during the roadshow fills this void in the literature and allows us to directly study the costs and benefits of equilibrium IPO marketing breadth. In particular, we examine how prospectus distribution relates to various IPO and post-IPO outcomes by employing several empirical approaches that isolate variation in prospectus distribution that is unlikely to be driven by preexisting demand or other correlated omitted variables.

5.1 OLS Analysis

We first examine the relation between prospectus distribution and IPO fees and pricing, specifically percentage fees, dollar fees, underpricing (i.e., first-day returns), and price revisions, with results shown in Table 6. Although we do not observe a significant link between IPO marketing and percentage fees, Column 2 shows that dollar fees are positively related to IPO marketing, consistent with marketing expanding the size of the IPO. A 100% increase in distribution predicts a 6.4% increase in dollar fees, or $1 million for the average offer. Underwriters and their institutional clients

also benefit from increased marketing via greater underpricing. Column 3 shows that a 100% increase in prospectus distribution is associated with a 3.6 percentage point increase in IPO underpricing.

To understand whether issuers also benefit from this apparent marketing-induced increase in demand, we next investigate the relation between IPO marketing breadth and pre-offering price revisions. Column 4 of Table 6 suggests that one benefit to issuers from more extensive marketing is higher price revisions (measured after the start of the roadshow). The magnitude of the marketing-price revision relation is approximately 62% of the marketing-underpricing relation, suggesting that the rewards from marketing-based increases in the market-clearing price are split roughly 60-40 between investors buying shares at the IPO offer price and investors (or the issuing firm) selling at the IPO. In Panel A of Table B5 in Appendix B, we show that results are nearly identical when including filing proceeds-by-year fixed effects. In Panel A of Table B6, we include pre-roadshow S-1/A EDGAR requests decile-by-year fixed effects to control for pre-roadshow investor demand. We continue to find a significant positive relation between prospectus distribution and dollar fees, underpricing, and pre-IPO price revisions.

In Table 7, we examine the relation between marketing breadth and post-IPO investor demand and liquidity. To assess post-IPO investor demand, we use a measure of demand elasticity from Gao and Ritter (2010). The measure is computed as (the negative of) the absolute stock return scaled by turnover averaged throughout the first 180 days of trading, and represents a measure of market depth. To assess liquidity, we use (the negative of) the average daily Amihud (2002) illiquidity over the first 180 days. We further assess visibility and demand using the log of analyst coverage over the first 180 days. All three measures are increasing in market quality; hence, we predict positive relations between these aftermarket outcomes and IPO marketing breadth.

Across the three columns of Table 7, underwriter marketing breadth has a strong positive relation with post-IPO demand and liquidity. A 100% increase in prospectus distribution is associated

with an increase in demand elasticity of 1.16, or approximately 9.7% relative to the mean elasticity value. Similarly, Amihud liquidity increases by 0.012 (approximately 20% of the mean value), and analyst coverage increases by 1.6%. Analyst coverage is also strongly predicted by syndicate size, indicating that the number of underwriters is positively associated with post-offer market quality and that marketing breadth is a joint decision between syndicate formation and subsequent underwriter marketing effort.

In Panel B of Table B5 in Appendix B, we again find that our results are similar when including lead-left underwriter and proceeds decile-by-year fixed effects.[36] In Panel B of Table B6, we show that our post-IPO market quality results are similar after controlling for pre-roadshow investor demand. These results suggest that the effect of prospectus distribution on post-IPO market quality is unlikely to be driven solely by preexisting demand. We caution, however, that these estimates do not warrant a causal interpretation. The breadth of marketing is a choice, and issuers likely condition this choice on unobservable aspects of initial investor interest and post-IPO demand expectations. In the next section, we account for endogenous marketing decisions to better estimate the effects of underwriter marketing breadth.

5.2 Geography-Induced Marketing Breadth and IPO Outcomes

To address endogeneity in the IPO marketing-breadth decision, we exploit the strong positive relation between industry geographic concentration — which serves as a proxy for the cost to access institutional investors— and prospectus distribution.[37] Importantly, issuers cannot select into varying levels of industrial geographic clustering, their industry geographic concentration is unlikely to affect

[36] Further supporting our interpretation of marketing breadth as a joint decision between syndicate formation and subsequent marketing effort, syndicate size is a statistically significant predictor of greater post-IPO demand elasticity within groups of similarly sized deals by year. Huang and Zhang (2011) find similar evidence of greater post-SEO market quality when more underwriters participate.

[37] The effect of investor location on marketing breadth has likely evolved over time as new technologies make physical distance less of an obstacle to marketing. However, we can still use geographic concentration to better understand how marketing breadth relates to IPO and post-IPO outcomes as long as the relation between marketing breadth and these outcomes has not fundamentally changed.

how many investors request prospectuses independent of underwriters' marketing efforts, and there is little reason to believe such concentration would directly affect IPO outcomes for reasons other than its effect on marketing breadth. Thus, we can reasonably interpret the effect of industry geographic concentration on IPO outcomes as operating through variation in marketing breadth that is unrelated to issuer quality or investor demand.

In Panels A and B of Table 8, we find that industry geographic concentration consistently predicts our IPO and post-IPO outcomes, providing corroborating evidence that underwriter marketing breadth affects these IPO outcomes after accounting for endogenous marketing selection. A one standard deviation increase in geographic concentration is associated with an approximate 1.7% increase in underwriter fees (or $270,000 for the average offer) and 2.2 percentage point increase in first day returns and IPO filing price revisions. This same increase in concentration also predicts an 8.6% increase in demand elasticity (relative to the mean), 10.7% increase in liquidity, and a 3.2% increase in analyst coverage. In Table B7 in Appendix B, we show that industry geographic concentration continues to affect IPO price revisions, demand, and liquidity after controlling for pre-roadshow demand by again including pre-roadshow S-1/A requests decile-by-year fixed effects. In Table B8, we show that no predictor from our determinants model of equilibrium marketing breadth, other than pre-IPO earnings, significantly predicts differences in industry geographic concentration. This result supports the interpretation that industry geographic concentration affects IPO outcomes through its effect on underwriter marketing breadth.

Interpreted literally, our identifying assumptions suggest that we can estimate the causal effects of marketing breadth on IPO outcomes using geographic industrial concentration as an instrumental variable in a two-stage least squares (2SLS) estimation. An appropriate instrument must be (1) a strong predictor of prospectus distribution ("relevance"), and (2) otherwise unrelated to short-term post-IPO outcomes ("exclusion"). Our measure of industry geographic concentration plausibly

satisfies these criteria. Column 3 of Table 5 shows that this variable is a strong predictor of prospectus distribution, satisfying the relevance condition with an F-statistic above 16.[38] The exclusion condition requires industry geographic concentration to be unrelated to IPO fees, price revisions, post-IPO demand, and post-IPO liquidity except through its effect on prospectus distribution. Although formally untestable, the exclusion condition is plausibly satisfied because, as mentioned above, (1) issuers cannot select into specific levels of industrial geographic clustering, (2) the measure is independent of the geographic proximity of issuers to investors, and (3) the measure is uncorrelated with nearly all of the issuer and deal characteristics we control for.

In Table 9, we present second stage estimates of the effect of IPO marketing breadth on IPO fees, pricing, and post-IPO benefits. In Panel A, we estimate the effect of instrumented underwriter prospectus distribution on IPO percentage fees, dollar fees, underpricing, and pre-IPO pricing revisions. Underwriter marketing breadth continues to have an insignificant effect on percentage fees and a significant, positive effect on dollar fees, first day returns and pre-IPO price revisions. A 10% increase in prospectus distribution increases dollar fees by 4.2% (approximately $660,000 for the average offer), first-day returns by 3.3 percentage points (approximately 14% of a standard deviation), and pre-IPO price revisions by 3.2 percentage points (approximately 17% of a standard deviation). These effects substantially exceeds the magnitude of the effect estimated from the OLS analysis. This is perhaps unsurprising given that the OLS point estimates are likely attenuated due to the fact that issuers with unobservably weak expected demand are likely to invest in more extensive marketing (consistent with our evidence suggesting that marketing is more extensive during colder IPO markets). Taken together, increased underwriter marketing breadth raises the price at which issuers raise capital (and thus the size of the deals), but these higher prices reflect at most 50% of the

[38]Our F-statistics of between 16.5 and 17.1 consistently clear the Stock and Yogo (2005) critical thresholds. Furthermore, both the Anderson-Rubin Wald test and the Stock-Wright LM test reject the null of weak instruments in each of our regressions at the 5% level.

potential price increases that more extensive marketing generates. Underwriter clients — and thus also underwriters, as they share rents — benefit from the other 50–60% of the benefits to extensive marketing via higher first day returns.

From Panel B, we find that a 10% increase in prospectus distribution increases demand elasticity by approximately 12.7% relative to the mean value, increases liquidity by 15.8% relative to the mean, and increases analyst coverage by 4.7%. These results support the idea that investment in more extensive pre-IPO marketing enhances many of the benefits associated with going public. Part of the goal of going public is to establish a liquid market with healthy demand and monitoring. Our results show that bookbuilt IPOs offer these benefits on a continuum, which is conditional on the breadth of underwriter marketing.

It is important to reiterate, this is the first direct empirical evidence of the costs and benefits of underwriter IPO marketing breadth. Underwriters seem to charge for marketing services through increases in underpricing which generates rents that they share with clients, and issuers recoup some of the costs through higher issuance prices and stronger aftermarket demand and liquidity. Although the 2SLS point estimates of the effects of marketing breadth on IPO pricing and post-IPO demand are significantly larger than our OLS estimates, the preponderance of evidence indicates that more extensive IPO marketing (1) increases the offer price and initial investor returns by roughly equal magnitude, and (2) improves post-IPO market quality. These results are insensitive to our identifying assumptions and are economically intuitive.

6. Conclusion

Bookbuilt IPOs have been the dominant offer method used to raise initial public equity in the U.S. in recent decades and are uniquely characterized by the marketing process that occurs during the IPO roadshow. During this process, underwriters promote the offering to prospective investors and gauge investor demand. Despite the theoretical and practical importance of the roadshow period for

efficiently raising initial public equity and recent evidence on the importance of issuer disclosure and presentation style choices during this period, there is little empirical evidence on how widely underwriters market to investors, or the costs and benefits of more extensive marketing. We introduce a novel measure of underwriter marketing breadth using the number of preliminary prospectuses that underwriters distribute during the roadshow. Using this measure, we characterize equilibrium marketing decisions and estimate the costs and benefits of marketing breadth.

We find evidence that more extensive underwriter marketing increases capital raising costs through greater underpricing — which transfers wealth to underwriters and their clients — but also leads to high offer prices, greater post-IPO demand, and greater post-IPO liquidity. We also find evidence that underwriters distribute more prospectuses for certain deals in equilibrium — e.g., deals with greater geographic concentration in the issuer's industry, larger deals, and deals facing weaker demand.

Our results speak directly to the ongoing debate about the costs and benefits of traditional bookbuilt IPOs relative to alternative initial offer methods such as auctions, direct listings, and de-SPAC mergers. One common criticism of bookbuilt IPOs is that they siphon money from issuers to underwriters and their clients. We provide direct evidence of some of the benefits of bookbuilding and the valuable information dissemination function that underwriters perform in bookbuilt offers.

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Figure 1: Timeline of IPO Filing Period and Roadshow

This figure illustrates the ordering and labeling of key events during the IPO filing period, starting with the firm's declaration to the SEC that they are interested in registering a sale of new equity securities in connection with an IPO and ending when the firm completes the IPO. The "confidential filing period" refers to the period during which JOBS Act-qualified issuers (i.e., emerging growth companies (EGC) after April 4, 2012) submit a draft registration statement (DRS) and enter into a confidential review period with the SEC before their interest in an IPO is publicly announced. The initial (pre-roadshow) price revision period refers to the period between the initial S-1 filing and the start of the roadshow (determined by underwriter correspondences with the SEC), when the issuer and underwriters determine an initial price range, and possibly (but not often) update the filing range. The "bookbuilding period" refers to the IPO roadshow, plus three or more days after the roadshow but before the firm begins trading. Following the roadshow, the typical issuer must wait a minimum of 48 hours for the SEC to declare the registration statement effective before the issue can begin trading (see Section 3.1). The representative length of each period is based on the median value for our sample of IPOs from January 2005 to December 2019.

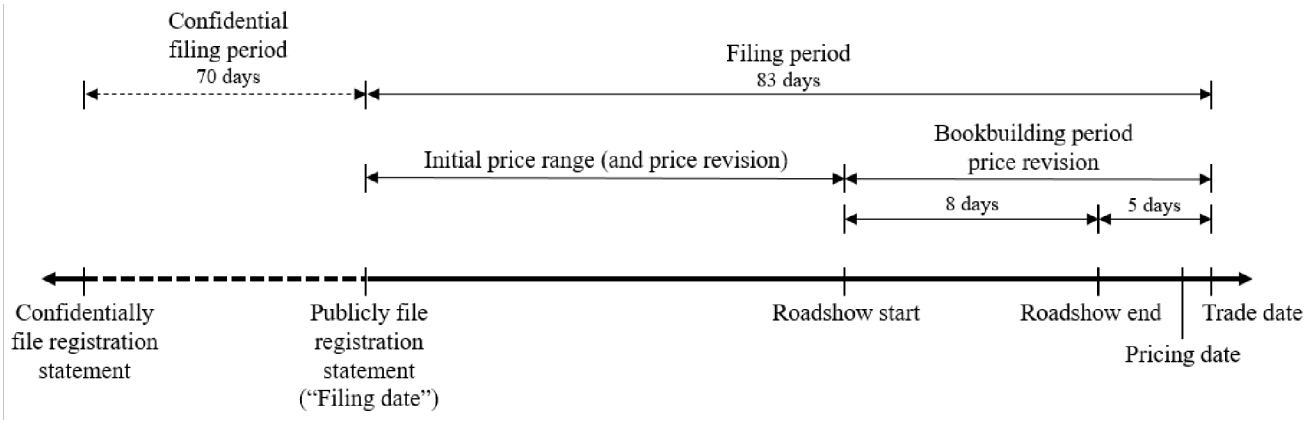

Table 1: Sample Description

This table reports sample statistics for our regression sample (Column 2, Table 5) of 1,403 common stock IPOs listed on US exchanges between January 2005 and December 2019 with available roadshow dates, prospectus distribution information, issuer & IPO characteristics, and IPO-related outcomes. Each panel reports means, standard deviations, medians, and inner quartile statistics for issuer characteristics of our sample of issuers and IPOs. Table A2 in Appendix A provides variable definitions.

Panel A: Issuer and IPO Characteristics

	Mean	SD	Pctl(25)	Median	Pctl(75)
Industry Geographic Concentration	0.062	0.066	0.017	0.040	0.082
Syndicate Size	6.197	3.947	4	5	7
PE-Backed	0.305	0.461	0	0	1
VC-Backed	0.499	0.500	0	0	1
Proceeds Filed ($Mil)	268.6	616.1	82.3	119.1	254.7
Revenue ($Mil)	757.1	3,692.8	25.4	115.9	437.2
Loss	0.480	0.500	0	0	1
IPO Pioneer	0.136	0.343	0	0	0
IPO Hotness	38.792	13.739	30	39	48.3
Lagged IPO Volume	11.184	4.461	8	11	15
Prior Month FF49 Ret.	0.026	0.057	-0.007	0.026	0.056

Panel B: Pre- and Post-IPO Outcomes

	Mean	SD	Pctl(25)	Median	Pctl(75)
Gross Spread (%)	6.65	0.846	6.500	7.000	7.000
Gross Spread ($Mil)	15.85	16.84	5.931	9.413	18.568
Underpricing	15.731	23.051	0.000	9.000	26.667
Price Revisions	-3.445	19.020	-16.667	0.000	8.333
Demand Elasticity	-11.976	14.843	-12.720	-6.835	-3.980
Amihud Liquidity	-0.064	0.153	-0.038	-0.012	-0.004
Analyst Coverage	6.020	4.023	4.000	5.000	7.000

Table 2: Description of IPO Roadshow Activity

This table presents IPO filing period, bookbuilding, and roadshow statistics based on underwriters' correspondence with the SEC (described in Section 3) for IPOs from January 2005 to December 2019. *Filing Period* is the number of days between the initial IPO registration (S-1) date and the trade date. *Roadshow-to-Trade* is the number of days between the start of prospectus distribution and the IPO trade date. *Roadshow Length* is the number of calendar days between the start and end dates of prospectus distribution. *Prospectuses Distributed* measures prospectus distribution to various IPO participants (e.g., investors, lawyers, other underwriters), as reported in *CORRESP* filings submitted by underwriters to the SEC. *Prospectuses per Weekday* divides *Prospectus Total* by the roadshow length (excluding weekends). *Pre-Roadshow S-1 EDGAR Requests* is computed as the total number of user "clicks" of the issuer's S-1 and S-1/A filings on EDGAR during the (-1,+3) five trading days surrounding the day with the largest number of user clicks during the (-60,-7) calendar day period preceding the roadshow start date. *(EDGAR Requests / Prospectuses Dist.)* is computed as *Pre-Roadshow S-1 EDGAR Requests* divided by *Prospectuses Distributed*. *Post-IPO Institutional Owners* is the number of institutions holding the issuer's stock as of the first Sunday at least 48 days after the end of the calendar quarter during which the IPO is completed, as reported by Bloomberg. *(Prospectuses Distributed / Inst. Owners)* is computed as *Prospectuses Distributed* divided by *Post-IPO Institutional Owners* (this ratio is only available for 925 IPOs in our sample). *Roadshow S-1 EDGAR Requests* is the total number of user clicks of the issuer's S-1 and S-1/A filings on EDGAR during the (-1,+3) five trading-day window surrounding the trading day with the highest daily clicks within four calendar days before and after the start of the roadshow. *Price Revision after RS Launch* equals one if the issuer revises the offer price (from the midpoint of the initial price range) after the roadshow launch date, and zero if the offer price is revised only prior to the roadshow. All variables are defined in Table A2 in Appendix A.

	Mean	SD	Pctl(25)	Median	Pctl(75)
Filing Period (days)	121.5	263.7	36	84	125
Roadshow Length (days)	10.6	3.9	8	9	13
Prospectuses Distributed	6,590	7,543	2,020	4,179	8,512
Prospectuses per Weekday	861	1,021	296	582	1,059
Pre-Roadshow S-1 EDGAR Requests	1,343	1,768	382	866	1,420
(EDGAR Requests / Prospectuses Dist.)	0.419	0.558	0.047	0.217	0.526
Post-IPO Institutional Owners	97.0	27.1	42	65	91
(Prospectuses Distributed / Inst. Owners)	71.1	72.1	29.3	49.0	86.1
Roadshow S-1 EDGAR Requests	947	870	326	866	1,175
Price Revision after RS Launch	0.996	0.064	1	1	1

Table 3: Preexisting Demand and Underwriter Networks

This table reports results from OLS regressions explaining cross-sectional variation in preliminary prospectus distribution during IPO roadshows. The dependent variable in Columns 1-4 is the natural logarithm of *Prospectuses*, the total number of prospectuses distributed by underwriters to various IPO participants (e.g., investors, lawyers, other underwriters) during the IPO roadshow, as reported in *CORRESP* filings submitted by underwriters to the SEC. *Ln(Pre-Roadshow S-1 Requests)* is computed as the natural log of the total number of user "clicks" of the issuer's S-1 and S-1/A filings on EDGAR during the (-1,+3) five trading days surrounding the trading day with the largest number of user clicks occurring at least seven calendar days before the start of the roadshow. *Ln(Syndicate Size)* is the natural log of one plus the number of lead and co-managers underwriting the offer. *F-Statistic* is the F-statistic value of a test of the joint significance of the lead-left underwriter or lead-left underwriter-by-year fixed effects. *Within R-squared* is the percent of variation explained by the continuous explanatory variable(s) within the fixed effect groups. All variables are defined in Table A2 in Appendix A. The sample includes common stock IPOs listed on US exchanges between January 2005 and December 2019 with available marketing data. Standard errors are clustered at the lead-left underwriter level. t-statistics are reported in parentheses, and *, **, and *** represent statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel A: Pre-Roadshow Investor Demand

	(1) Ln(Prospectuses)	(2) Ln(Prospectuses)	(3) Ln(Prospectuses)	(4) Ln(Prospectuses)
Ln(Pre-Roadshow S-1 Requests)	**0.289*** (5.75)**	**0.112*** (3.50)**	**0.037* (1.75)**	**0.023 (1.07)**
Ln(Proceeds Filed)		0.395*** (10.01)	0.265*** (6.45)	0.249*** (5.15)
Ln(Revenue)		0.046*** (2.94)	0.035*** (2.81)	0.036** (2.59)
Constant	6.566*** (16.30)	5.549*** (16.60)	6.749*** (37.02)	6.957*** (44.82)
Year FE	Yes	Yes	Yes	No
Industry FE	Yes	Yes	Yes	Yes
Underwriter FE	No	No	Yes	No
Underwriter-Year FE	No	No	No	Yes
F-Statistic	N/A	N/A	7.57	7.03
Within R-squared	0.106	0.390	0.202	0.215
Adj. R-squared	0.471	0.635	0.722	0.752
Observations	1,116	1,093	1,074	998

Panel B: Underwriter Network Size

	(1) Ln(Prospectuses)	(2) Ln(Prospectuses)	(3) Ln(Prospectuses)	(4) Ln(Prospectuses)
Ln(Syndicate Size)	**0.918*** **	**0.578*** **	**0.405*** **	**0.395*** **
	(18.27)	**(10.02)**	**(9.16)**	**(8.05)**
Ln(Proceeds Filed)		0.216***	0.135***	0.117***
		(6.46)	(3.82)	(2.93)
Ln(Revenue)		0.012	0.011	0.012
		(1.09)	(1.34)	(1.22)
Constant	6.767***	6.201***	6.893***	7.031***
	(51.79)	(35.25)	(41.32)	(38.46)
Year FE	Yes	Yes	Yes	No
Industry FE	Yes	Yes	Yes	Yes
Underwriter FE	No	No	Yes	No
Underwriter-Year FE	No	No	No	Yes
F-Statistic	N/A	N/A	6.56	10.01
Within R-squared	0.389	0.419	0.211	0.212
Adj. R-squared	0.656	0.673	0.739	0.756
Observations	1,536	1,506	1,481	1,373

Panel C: Investor Demand and Underwriter Syndicate Size

	(1) Ln(Prospectuses)	(2) Ln(Prospectuses)	(3) Ln(Prospectuses)	(4) Ln(Prospectuses)
Ln(Pre-Roadshow S-1 Requests)	**0.101*** **	**0.084*** **	**0.028**	**0.014**
	(3.90)	**(3.07)**	**(1.42)**	**(0.61)**
Ln(Syndicate Size)	**0.943*** **	**0.674*** **	**0.477*** **	**0.468*** **
	(19.58)	**(9.69)**	**(7.35)**	**(7.29)**
Ln(Proceeds Filed)		0.169***	0.121**	0.105*
		(3.55)	(2.43)	(1.85)
Ln(Revenue)		0.012	0.016	0.018
		(1.01)	(1.57)	(1.60)
Constant	6.235***	5.893***	6.821***	7.036***
	(26.57)	(22.72)	(43.06)	(53.76)
Year FE	Yes	Yes	Yes	No
Industry FE	Yes	Yes	Yes	Yes
Underwriter FE	No	No	Yes	No
Underwriter-Year FE	No	No	No	Yes
F-Statistic	N/A	N/A	6.48	7.56
Within R-squared	0.447	0.462	0.256	0.272
Adj. R-squared	0.672	0.678	0.741	0.769
Observations	1,093	1,093	1,074	998

Table 4: IPO Pairs Analysis of the Role of Underwriter Networks

This table reports results from OLS IPO-pairs regressions explaining residual preliminary prospectus distribution. Specifically, the dependent variable is the absolute difference in residuals estimated from regressions of the natural log of preliminary prospectus distribution as a function of inflation-adjusted filing proceeds decile-by-year fixed effects, and IPO pairs are formed by creating a unique observation for each set of IPOs completed in the same 2-digit NAICS industry and year. Preliminary prospectus distribution is the number of preliminary prospectuses distributed by underwriters to various IPO participants (e.g., investors, lawyers, other underwriters), as reported in *CORRESP* filings submitted by underwriters to the SEC. *Same Lead-Left* is an indicator equaling one when both IPOs in the pair share the same lead-left underwriter (taken from the first-listed lead manager provided by SDC). *Same First Two Leads* is an indicator equaling one when both IPOs in the pair share the same first two lead underwriters (taken from the first two listed lead managers provided by SDC). *Same First Three Leads* is an indicator equaling one when both IPOs in the pair share the same first three lead underwriters (taken from the first three listed lead managers provided by SDC). t-statistics based on two-way clustered standard errors by each IPO in the pair are reported in parentheses. t-statistics based on bootstrapped standard errors using 10,000 regression simulations with randomly selected IPO pairs are reported in brackets. *, **, and *** represent statistical significance at the 10%, 5%, and 1% levels, respectively. The sample of IPOs includes common stock IPOs listed on US exchanges between January 2005 and December 2019 for which we were able to collect roadshow date and prospectus distribution information. Table A2 in Appendix A provides variable definitions.

	(1) Abs Diff in Residuals	(2) Abs Diff in Residuals	(3) Abs Diff in Residuals
Same Lead-Left	**-0.118** (-8.04)*** [-12.74]***		
Same First Two Leads		**-0.145** (-6.28)*** [-7.10]***	
Same First Three Leads			**-0.192** (-4.96)*** [-5.57]***
Constant	**0.634** (56.46)*** [200.98]***	**0.601** (57.12)*** [206.86]***	**0.599** (57.30)*** [206.01]***
Observations	26,590	26,590	26,590

Table 5: Equilibrium Determinants of Discretionary Prospectus Distribution

This table reports results from OLS regressions explaining cross-sectional variation in preliminary prospectus distribution during IPO roadshows. The dependent variable is the natural logarithm of *Prospectuses*, which is the total number of prospectuses distributed by underwriters to various IPO participants (e.g., investors, lawyers, other underwriters) during the IPO roadshow, as reported in *CORRESP* filings submitted by underwriters to the SEC. *Industry Geographic Concentration* is the sum of squared county-level wages (from QCEW public-use files) in the 4-digit NAICS industry of the IPO issuer in the year of the IPO. Panel A includes the full sample of common stock IPOs listed on US exchanges between January 2005 and December 2019 with available marketing data. Panel B includes the subsample of IPOs between January 2005 and June 2017 with non-missing S-1 EDGAR user request information, and the regressions include requests decile-by-year fixed effects. Requests are computed as the total number of "clicks" of the issuer's S-1 and S-1/A filings on EDGAR during the (-1,+3) five trading days starting on the day with the largest number of clicks occurring at least seven calendar days before the start of the roadshow. Deciles are annually sorted. All variables are defined in Table A2 in Appendix A. Standard errors are clustered at lead-left underwriter level. t-statistics are reported in parentheses, and *, **, and *** represent statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel A: Full Sample

	(1) Ln(Prospectuses)	(2) Ln(Prospectuses)	(3) Ln(Prospectuses)
Industry Geographic Concentration	**0.959*** (3.25)**	**0.976*** (3.97)**	**1.020*** (4.55)**
Ln(Syndicate Size)	**0.608*** (10.75)**	**0.403*** (7.58)**	**0.384*** (6.60)**
Prior Month FF49 Ret.		-0.729*** (-2.83)	-0.805*** (-3.14)
PE-Backed		0.058 (1.33)	0.146*** (4.00)
VC-Backed		0.029 (0.63)	0.080 (1.69)
Ln(Proceeds Filed)		0.134*** (3.72)	0.121*** (3.13)
Ln(Revenue)		0.015 (1.60)	0.013 (1.41)
Loss		0.013 (0.39)	0.003 (0.09)
IPO Pioneer		-0.069** (-2.02)	-0.070** (-2.53)
IPO Hotness		-0.022 (-0.58)	-0.005 (-0.12)
Ln(Lagged IPO Volume)		-0.107** (-2.14)	-0.090* (-1.97)
Constant	7.221*** (81.05)	7.161*** (41.92)	7.141*** (44.70)
Industry FE	Yes	Yes	Yes
Year FE	Yes	Yes	No
Underwriter FE	Yes	Yes	No
Underwriter-Year FE	No	No	Yes
Adj. R-squared	0.734	0.749	0.769
Observations	1,509	1,408	1,312

Panel B: Controlling for Pre-Roadshow EDGAR S-1 Requests

	(1) Ln(Prospectuses)	(2) Ln(Prospectuses)
Industry Geographic Concentration	**0.725****	**0.916*****
	(2.43)	**(3.80)**
Ln(Syndicate Size)	**0.667*****	**0.454*****
	(13.02)	**(7.55)**
Prior Month FF49 Ret.		**-0.588***
		(-1.80)
PE-Backed		0.019
		(0.32)
VC-Backed		-0.016
		(-0.26)
Ln(Proceeds Filed)		0.148***
		(2.94)
Ln(Revenue)		-0.003
		(-0.26)
Loss		-0.053
		(-1.23)
IPO Pioneer		-0.047
		(-1.14)
IPO Hotness		0.009
		(0.31)
Ln(Lagged IPO Volume)		-0.157***
		(-4.15)
Constant	7.319***	7.334***
	(90.02)	(45.18)
Industry FE	Yes	Yes
S-1 Requests-Year FE	Yes	Yes
Underwriter FE	No	No
Adj. R-squared	0.749	0.756
Observations	1,090	1,063

Table 6: OLS Estimates of Effect of IPO Marketing on IPO Fees & Pricing

This table reports OLS regression results estimating the relation between IPO marketing breadth and IPO fees and pricing. *Ln(Prospectuses)* is the natural log of the number of prospectuses distributed by underwriters during the IPO roadshow period, as reported in CORRESP filings submitted by underwriters to the SEC. The dependent variable in Column 1 is the sum of the underwriter spread fee, scaled by post-overallotment total proceeds raised. The dependent variable in Column 2 is the natural log of the dollar value the underwriter spread fee (in 2019 dollars). The dependent variable in Column 3 is the issuer's stock return on the initial day of trading, computed as the closing price on the first day of trading, scaled by the offer price, minus 1 (multiplied by 100). The dependent variable in Column 4 is the percentage change from the midpoint of the initial filing range as of the beginning of the roadshow period and the offer price (multiplied by 100). All variables are defined in Table A2 in Appendix A. The sample includes common stock IPOs listed on US exchanges between January 2005 and December 2019 for which we are able to identify roadshow prospectus distribution information. Standard errors are clustered at the lead-left underwriter level. t-statistics are reported in parentheses, and *, **, and *** represent statistical significance at the 10%, 5%, and 1% levels, respectively.

	(1) Spread+ Expenses (%)	(2) Spread+ Expenses ($ Mil)	(3) Underpricing	(4) Price Revisions
Ln(Prospectuses)	**0.052**	**0.089*** **	**5.115*** **	**3.151*** **
	(1.20)	**(4.19)**	**(5.32)**	**(2.92)**
Ln(Syndicate Size)	**-0.169** **	**0.049**	**1.600**	**1.247**
	(-2.12)	**(0.84)**	**(0.63)**	**(0.74)**
Prior Month FF49 Ret.	0.246	0.536***	44.313***	42.968***
	(1.10)	(2.77)	(5.23)	(4.10)
PE-Backed	0.124***	-0.008	0.147	-1.056
	(3.76)	(-0.44)	(0.10)	(-0.98)
VC-Backed	-0.007	0.037	12.360***	5.818***
	(-0.13)	(1.29)	(6.19)	(4.04)
Ln(Proceeds Filed)	-0.741***	0.767***	-5.400***	-0.554
	(-14.74)	(17.56)	(-2.94)	(-0.75)
Ln(Revenue)	-0.034***	0.000	0.771	0.180
	(-3.78)	(0.06)	(1.31)	(0.54)
Loss	-0.042	-0.003	0.253	0.447
	(-1.62)	(-0.13)	(0.17)	(0.31)
IPO Pioneer	0.025	-0.028	-1.239	-1.707
	(0.59)	(-1.53)	(-1.15)	(-1.59)
IPO Hotness	-0.004	-0.019	-1.357	-1.333
	(-0.20)	(-1.02)	(-1.29)	(-1.19)
Ln(Lagged IPO Volume)	0.028	0.025	6.944***	3.347**
	(0.76)	(0.74)	(3.03)	(2.05)
Constant	10.310***	11.498***	-24.702*	-36.544***
	(19.51)	(70.67)	(-2.00)	(-3.06)
Industry FE	Yes	Yes	Yes	Yes
Underwriter-Year FE	Yes	Yes	Yes	Yes
Adj. R-squared	0.626	0.868	0.168	0.219
Observations	1,305	1,305	1,313	1,313

Table 7: OLS Estimates of Effect of IPO Marketing on Post-IPO Demand & Liquidity

This table reports OLS regression results estimating the relation between IPO marketing breadth and post-IPO demand and liquidity. *Ln(Prospectuses)* is the natural log of one plus the number of prospectuses distributed by underwriters during the IPO roadshow period, as described in CORRESP filings submitted by underwriters to the SEC. The dependent variable in Column 1 is (the negative of) the daily average demand inelasticity during the first 180 calendar days of trading, where demand inelasticity is computed as the absolute value of the daily stock return, scaled by the ratio of the daily trading volume and the number of shares outstanding. The dependent variable in Column 2 is (the negative of) the daily average Amihud (2002) illiquidity measure during the first 180 calendar days of trading, where Amihud (2002) illiquidity is computed as the ratio of the absolute value of the daily stock return to the daily dollar trading volume, multiplied by 1,000,000. The dependent variable in Column 3 is (the natural log of one plus) the number of distinct analysts covering the firm during the first 180 calendar days of trading. All variables are defined in Table A2 in Appendix A. The sample includes common stock IPOs listed on US exchanges between January 2005 and December 2019 for which we are able to identify roadshow prospectus distribution information. Standard errors are clustered at the lead-left underwriter level. t-statistics are reported in parentheses, and *, **, and *** represent statistical significance at the 10%, 5%, and 1% levels, respectively.

	(1) Demand Elasticity	(2) Amihud Liquidity	(3) Ln(Analyst Coverage
Ln(Prospectuses)	**1.670*** **	**0.018*** **	**0.023**
	(2.90)	**(3.73)**	**(1.46)**
Ln(Syndicate Size)	**2.490**	**0.015**	**0.579*** **
	(1.39)	**(0.78)**	**(27.87)**
Prior Month FF49 Ret.	27.837***	0.236***	-0.135
	(3.42)	(3.00)	(-0.75)
PE-Backed	0.737	0.016	0.032
	(0.58)	(1.15)	(1.04)
VC-Backed	3.019	0.036	0.142***
	(1.41)	(1.32)	(4.17)
Ln(Proceeds Filed)	0.382	0.004	0.083***
	(0.73)	(0.58)	(3.67)
Ln(Revenue)	1.186***	0.011***	0.014
	(3.47)	(2.99)	(1.22)
Loss	-0.656	-0.003	0.065**
	(-0.67)	(-0.36)	(2.11)
IPO Pioneer	0.399	-0.001	-0.032
	(0.42)	(-0.06)	(-0.90)
IPO Hotness	0.649	0.011	0.015
	(0.94)	(1.63)	(0.79)
Ln(Lagged IPO Volume)	0.951	-0.002	0.013
	(0.98)	(-0.15)	(0.28)
Constant	-44.123***	-0.357***	-0.010
	(-7.44)	(-5.12)	(-0.04)
Industry FE	Yes	Yes	Yes
Underwriter-Year FE	Yes	Yes	Yes
Adj. R-squared	0.275	0.318	0.661
Observations	1,310	1,310	1,313

Table 8: Industry Geographic Concentration and IPO/Post-IPO Outcomes

This table reports OLS estimates of reduced-form regressions examining the relation between issuers' industry geographic concentration – which captures variation in IPO marketing breadth – and IPO fees, pricing, and post-IPO outcomes. The four dependent variables in Panel A are (1) the underwriter spread fee, scaled by post-overallotment total proceeds raised; (2) the natural log of the dollar value the underwriter spread fee (in 2019 dollars); (3) the issuer's stock return on the initial day of trading, computed as the close on the first day of trading, scaled by the offer price, minus 1 (multiplied by 100); and (4) the percentage change from the midpoint of the initial filing range as of the beginning of the roadshow period and the offer price (multiplied by 100). The three dependent variables in Panel B are (1) (the negative of) the daily average demand inelasticity during the first 180 calendar days of trading, where demand inelasticity is computed as the absolute value of the daily stock return, scaled by the ratio of the daily trading volume and the number of shares outstanding; (2) (the negative of) the daily average Amihud (2002) illiquidity measure during the first 180 calendar days of trading, where Amihud (2002) illiquidity is computed as the ratio of the absolute value of the daily stock return to the daily dollar trading volume, multiplied by 1,000,000; and (3) (the log of one plus) the number of distinct analysts covering the firm during the first 180 calendar days of trading. The regression models in Panels A and B include all control variables from Tables 6 and 7; coefficient estimates are suppressed to conserve space. The main variables of interest in each panel are *Industry Geographic Concentration* – the sum of squared county-level wages (from QCEW public-use files) in the 4-digit NAICS industry of the IPO issuer in the year of the IPO – and *Ln(Syndicate Size)* – the natural log of one plus the number of lead and co-managers underwriting the offer. All variables are defined in Table A2 in Appendix A. The sample includes common stock IPOs listed on US exchanges between January 2005 and December 2019 with available marketing data. Standard errors are clustered at the lead-left underwriter level. t-statistics are reported in parentheses, and *, **, and *** represent statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel A: IPO Fees and Pricing

	(1) Spread+ Expenses (%)	(2) Spread+ Expenses ($ Mil)	(3) Underpricing	(4) Price Revisions
Industry Geographic Concentration	**0.311**	**0.423*** **	**33.556*** **	**32.821*** **
	(1.14)	**(3.86)**	**(5.07)**	**(3.17)**
Ln(Syndicate Size)	**-0.155** **	**0.074**	**3.003**	**1.836**
	(-2.11)	**(1.12)**	**(1.20)**	**(1.04)**
Controls	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Underwriter-Year FE	Yes	Yes	Yes	Yes
Adj. R-squared	0.626	0.866	0.165	0.222
Observations	1,305	1,305	1,313	1,313

Panel B: Post-IPO Demand and Liquidity

	(1) Demand Elasticity	(2) Amihud Liquidity	(3) Ln(Analyst Coverage
Industry Geographic Concentration	**15.151*** **	**0.099** **	**0.473*** **
	(4.44)	**(2.49)**	**(5.07)**
Ln(Syndicate Size)	**2.893**	**0.020**	**0.579*** **
	(1.58)	**(1.01)**	**(26.29)**
Controls	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Underwriter-Year FE	Yes	Yes	Yes
Adj. R-squared	0.275	0.316	0.663
Observations	1,310	1,310	1,313

Table 9: 2SLS Second-Stage Estimates of Effect of IPO Marketing on IPO Costs & Pricing

This table reports second-stage 2SLS regression results estimating the relation between IPO marketing breadth and IPO fees, pricing, and post-IPO outcomes. Our instrument (*Industry Geographic Concentration*) is the sum of squared county-level wages (from QCEW public-use files) in the 4-digit NAICS industry of the IPO issuer in the year of the IPO. *Instrumented Ln(Prospectuses)* is the predicted values from Column 3 of Panel A of Table 5. The four dependent variables in Panel A are (1) the underwriter spread fee, scaled by post-overallotment total proceeds raised; (2) the natural log of the dollar value the underwriter spread fee (in 2019 dollars); (3) the issuer's stock return on the initial day of trading, computed as the close on the first day of trading, scaled by the offer price, minus 1 (multiplied by 100); and (4) the percentage change from the midpoint of the initial filing range as of the beginning of the roadshow period and the offer price (multiplied by 100). The three dependent variables in Panel B are (1) (the negative of) the daily average demand inelasticity during the first 180 calendar days of trading, where demand inelasticity is computed as the absolute value of the daily stock return, scaled by the ratio of the daily trading volume and the number of shares outstanding; (2) (the negative of) the daily average Amihud (2002) illiquidity measure during the first 180 calendar days of trading, where Amihud (2002) illiquidity is computed as the ratio of the absolute value of the daily stock return to the daily dollar trading volume, multiplied by 1,000,000; and (3) (the log of one plus) the number of distinct analysts covering the firm during the first 180 calendar days of trading. *F-Statistic* reports the first-stage F-statistic of the IV. All variables are defined in Table A2 Appendix A. The sample includes common stock IPOs listed on US exchanges between January 2005 and December 2019 with available marketing data. Standard errors are clustered at the lead-left underwriter level. t-statistics are reported in parentheses, and *, **, and *** represent statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel A: IPO Costs and Pricing

	(1) Spread+ Expenses (%)	(2) Spread+ Expenses ($ Mil)	(3) Underpricing	(4) Price Revisions
Instrumented Ln(Prospectuses)	**0.304**	**0.410*** **	**32.842*** **	**31.968*** **
	(1.03)	**(4.20)**	**(4.75)**	**(4.31)**
Ln(Syndicate Size)	**-0.270***	**-0.080**	**-9.601*** **	**-10.376*** **
	(-1.92)	**(-1.17)**	**(-3.89)**	**(-2.87)**
Controls	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Underwriter-Year FE	Yes	Yes	Yes	Yes
F-Statistic	19.9	19.9	20.7	20.7
Adj. R-squared	1,304	1,304	1,312	1,312

Panel B: Post-IPO Demand and Liquidity

	(1) Demand Elasticity	(2) Amihud Liquidity	(3) Ln(Analyst Coverage
Instrumented Ln(Prospectuses)	**14.862*** **	**0.097** **	**0.461*** **
	(3.77)	**(2.38)**	**(2.95)**
Ln(Syndicate Size)	**-2.791**	**-0.017**	**0.402*** **
	(-1.36)	**(-0.72)**	**(7.08)**
Controls	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Underwriter-Year FE	Yes	Yes	Yes
F-Statistic	19.9	19.9	20.7
Observations	1,309	1,309	1,312

Appendix A.

Table A1: Initial Sample Filters – Thomson Reuters SDC New Issues Database

This table reports the initial filters for our sample of IPOs from the Thomson Reuters SDC New Issues Database. All filters are based on SDC variables (in parentheses) with the exception of Row 13, which merges our sample with daily stock price data from The Center for Research in Security Prices (CRSP). We exactly match the 1,806 offerings from 2005 to 2019 reported in Table 8 of the IPO Statistics for 2020 and Earlier Years report on Jay Ritter's IPO data page. After excluding offerings with no CRSP data (Row 13), our initial sample includes 1,784 completed IPOs from January 2005 through December 2019.

Sample Filter	N Obs
1 Completed initial public offerings (IPO = Y, MASTER_DEAL_TYPE ≠ WC) with Issue Date between 1/1/2005 and 12/31/2019	40,582
2 Exchange (LIST): Include American, New York, Nasdaq, NYSE Alternext US LLC, NYSE Amex, NYSE Arca, NYSE MKT LLC	3,834
3 Exclude foreign listings (LISTIPO ≠ KOREA, LUXBG, TORON, BERMU)	3,826
4 Exclude Best Efforts offers (OFFERING_TECH ≠ BESTEFFORTS)	3,725
5 Exclude penny stocks (USPR ≥ 5.00)	3,077
6 Exclude small Regluation A offers (R_TOTDOLAMTPRO<5 and Issue Year<2012)	3,075
7 Exclude REITs (SICP ≠ 6798, REIT_TYPE missing, Issuer name does not contain "REIT")	2,935
8 Exclude unit offers (UNITS = N, SECUR ≠ Units, UIT ≠ Y)	2,275
9 Exclude closed end fund offers (CLOSED_END_FUND_TRUST ≠ Y)	2,268
10 Exclude non-financial limited partnership offers (Exclude if LP = Y and SICP not in 6000-6999)	2,226
11 Exclude other nonstandard common stock offers (STD_COMMON_STOCK_ELIG_FLAG = Y)	2,222
12 Exclude ADS (SECUR ≠ ADS, SECUR ≠ ADR; EXCH ≠ American, NYSE Alter, NYSE Amex, NYSE MKT, Nasdaq, Nasdaq-Boston, New York and LISTIPO ≠ OTC)	1,806
13 Non-missing CRSP daily stock data within 5 days of Issue Date	1,784

Table A2: Variable Definitions

Variable	Definition
Industry Geographic Concentration	The sum of squared county-level wages (from QCEW public-use files) for the 4-digit NAICS industry of the IPO issuer in the year of the IPO.
Ln(Syndicate Size)	The natural log of the number of lead and co-managers underwriting the offer (SDC: LEADMANAGERS_PRINT, COMANAGERS)
PE-Backed	Indicator variable equals one when the IPO issuer has pre-IPO funding from a private equity buyout firm. (SDC: PE_BACKED_IPO_FLAG)
VC-Backed	Indicator variable equals one when the IPO issuer has pre-IPO funding from a venture capital firm. (SDC: VE)
Ln(Proceeds Filed)	Log of the dollar value of IPO proceeds filing amount (SDC: product of TOTSHSFILED and MFILE, or the first available value from AH TOTSHSFIL and (AH_LFILE+AH_HFILE)/2 if unavailable). Inflation-adjusted to 2019 dollars.
Ln(Revenue)	Pre-IPO revenue, collected from SDC when available (REVENUESBEF), and Compustat when not available in SDC (REVT). Inflation-adjusted to 2019 dollars.
Loss	Indicator variable taking a value of one if the IPO firm's earnings before interest and taxes of the IPO issuer during the fiscal year completed prior to the IPO is less than 0, and zero otherwise.
IPO Pioneer	An indicator variable taking a value of one if the firm is the first to file an IPO in its industry in at least six months, as defined by Altı, 2005.
IPO Hotness	The proportion of all of IPOs completed over the three calendar months preceding the IPO filing date that have offer prices above the initial midpoint (from Jay Ritter's webpage).
Lagged IPO Volume	Net IPO volume over the three months preceding the IPO filing date (from Jay Ritter's webpage).
Prior Month FF49 Ret.	Compounded (equal-weighted) return of the Fama-French 49 industries portfolio over the 21 trading days preceding the IPO filing date.
Price Revision	Percentage change of the offer price from the midpoint of the earliest filing price range, multiplied by 100 (winsorized at the extreme 1%).
Initial Return	Percentage return from the offer price to the close on the first day of trading, multiplied by 100 (winsorized at the extreme 5%).
Roadshow Length	Number of calendar days between the start and end dates of prospectus distribution, as reported in *CORRESP* filings submitted by underwriters to the SEC. When distribution dates are unavailable, we use the filing date of the prospectus being distributed to mark the roadshow's start and the date of the underwriter's CORRESP letter to mark the roadshow's end. When multiple prospectus distribution dates are reported, we use the earliest reported date to mark the start of the roadshow. We drop all cases in which the IPO trades more than 30 days after the roadshow start date.
Filing Period Length	Number of days between the initial IPO registration date and the trade date.

Variable Definitions (continued)

Variable	Definition
Prospectuses	Prospectus distribution to various IPO participants (e.g., investors, lawyers, other underwriters) during the IPO roadshow. The value is taken directly from *CORRESP* filings submitted by underwriters to the SEC.
Prospectuses per Day	Number of prospectuses distributed to various IPO participants during the IPO roadshow, divided by a modified version of Roadshow Length that excludes weekends. The number of prospectuses distributed is taken directly from *CORRESP* filings submitted by underwriters to the SEC.
Pre-Roadshow S-1 EDGAR Requests	The total number of "clicks" of the issuer's S-1 and S-1/A filings on EDGAR during the (-1,+3) five trading days surrounding the day with the largest number of clicks within the (-60,-7) calendar day period preceding the roadshow start date (Source: EDGAR Log File Data Set).
Roadshow S-1 EDGAR Requests	Total number of "clicks" of the issuer's S-1 and S-1/A filings on EDGAR over the (-1,+3) five trading-day window surrounding the trading day with the highest daily clicks within four calendar days before and after the start of the roadshow (Source: EDGAR Log File Data Set).
Post-IPO Institutional Owners	The number of institutions holding the issuer's stock as of the first Sunday at least 48 days after the calendar quarter-end of the IPO (Source: Bloomberg Terminal).
Gross Spread (%)	The dollar value of the underwriter gross spread, scaled by total post-overallotment proceeds raised.
Ln(Gross Spread ($))	The natural log of the dollar value (in 2019 dollars) of the underwriter gross spread.
Elasticity of Demand	Average daily elasticity of demand over the first 180 days after the first day of trading, where elasticity of demand is computed as the (negative of) absolute value of the daily stock return, scaled by the ratio of the daily trading volume and the number of shares outstanding.
Amihud Liquidity	(The negative of) Average daily Amihud (2002) illiquidity measure over the first 180 days after the first day of trading, where the Amihud (2002) illiquidity measure is computed as the ratio of the absolute value of the daily stock return to the daily dollar trading volume, multiplied by 1,000,000.
Number of Analysts	Total number of distinct analysts to initiate coverage (i.e., issue an EPS) of the IPO issuer during the first 180 days after issuance.

Appendix B.

Figure B1: IPO Volume by Year

This figure illustrates the number of IPOs with available roadshow data per year. Our sample consists of 1,479 common stock IPOs listed on US exchanges between January 2005 and December 2019 with non-missing prospectus distribution data.

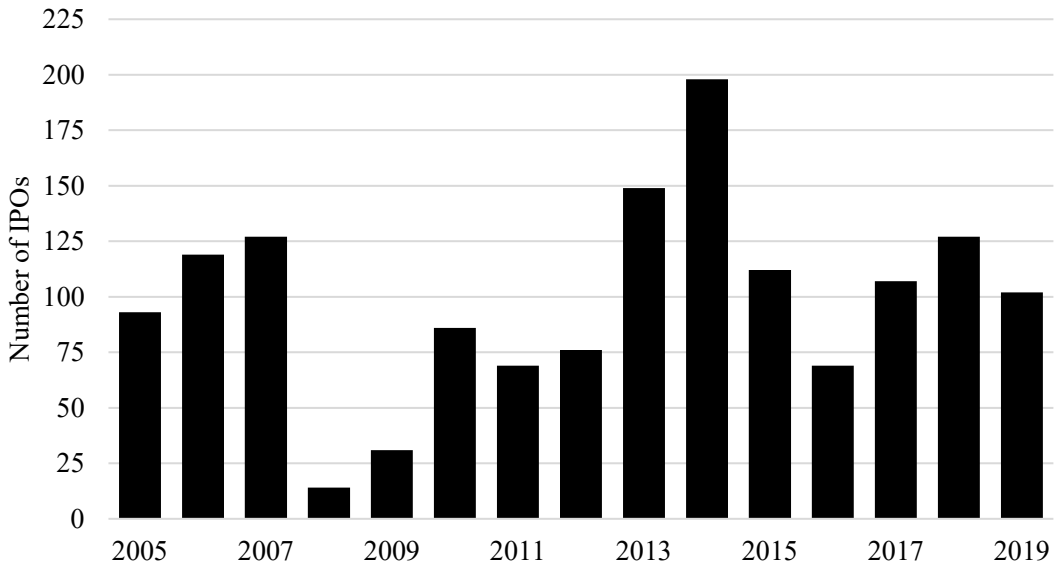

Table B1: Description of Form CORRESP Data

This table summarizes the disclosure of preliminary prospectus distribution for 1,479 completed IPOs between 2005 and 2019 with available Form CORRESP data. Panel A reports the distance from the start of prospectus distribution to the roadshow start date as reported by various sources. *Bloomberg* is the IPO roadshow start date from the Bloomberg corporate events calendar (EVTS). Corporate events including "IPO roadshow" in the description appear in the Bloomberg events calendar starting in late 2017. *Press release* is the date associated with a roadshow launch announcement, which is available for only 37 issuers. Panel B reports the frequency that particular recipient groups of preliminary prospectuses are disclosed in CORRESP filings for 576 issuers that disclose total prospectus distribution by recipient group. An additional 831 issuers disclose only the total distribution amount across a list of different recipients, including institutional and/or individual investors. Remaining issuers with available Form CORRESP data provide only the total distribution amount with little (e.g., underwriters and others) or no recipient information. Panel C reports the proportion of prospectus distribution to various groups of recipients for subsamples of CORRESP filings that describe the number of prospectuses distributed to each group. *Underwriters and Dealers* is the fraction of total prospectus distribution that is distributed from the lead underwriter(s) to other participating underwriters and dealers. *Investors, Ex-UWD* is the distribution to investors (institutional and retail) as a fraction of total distribution to investors and others, excluding underwriter and dealer distribution. *Institutions, Ex*-UWD is the distribution to institutional investors as a fraction of total distribution to investors and others, excluding underwriter and dealer distribution.

Panel A. Difference in days between prospectus distribution and roadshow launch by source

	N	% Same day	Mean	SD	Pctl(25)	Median	Pctl(75)
Bloomberg	253	90%	-1.0	4.8	0	0	0
Press release	37	65%	0.5	1.7	0	0	1

Panel B. Disclosure of total prospectus distribution by group (N=576)

Recipient group	Frequency
Other participating underwriters and/or dealers	76%
Institutional investors	67%
Individual investors	29%
Investors (unspecified)	29%
Retail & Other	7%
Other	77%

Panel C. Fraction of prospectus distribution by group

	N	Mean	SD	Pctl(25)	Median	Pctl(75)
Underwriters and Dealers	438	0.50	0.35	0.15	0.53	0.84
Investors, Ex-UWD	520	0.90	0.18	0.90	0.98	1.00
Institutions, Ex-UWD	385	0.74	0.28	0.53	0.87	0.99

Table B2: Prospectus Distribution Information for Select IPOs

This table reports the prospectus distribution information for a select group of IPOs. *Proceeds* is the total amount of IPO proceeds raised in all markets, in millions of US dollars (SDC: R_TOTDOLAMTPRO). *Roadshow length* is the number of calendar days between the start and end dates of IPO prospectus distribution, as reported in CORRESP filings submitted by underwriters to the SEC and made available on EDGAR. *Prospectuses distributed* is the number of IPO prospectuses distributed to various IPO participants (e.g., investors, lawyers, other underwriters) during the IPO roadshow, as reported in CORRESP filings.

Issuer (Year)	Proceeds (Millions USD)	Roadshow Length (Days)	Prospectuses Distributed
Visa (2008)	17,864	22	94,585
MasterCard (2006)	2,399	18	34,448
Facebook (2012)	16,007	12	31,718
Twitter (2013)	1,820	12	12,969
Snap (2017)	3,400	12	7,500
Lyft (2019)	2,340	9	4,056
Uber (2019)	8,100	12	8,200
General Motors (2010)	15,774	6	10,990
Spirit AeroSystems (2006)	1,432	5	40,000
Hertz Global Holdings (2006)	1,324	18	36,995

Table B3: First-Stage Regression of Underwriter Network Effects

This table reports results from an OLS regression explaining cross-sectional variation in IPO roadshow preliminary prospectus distribution. The dependent variable is the natural log of *Prospectuses*, which is the total number of preliminary prospectuses distributed by underwriters to various IPO participants (e.g., investors, lawyers, other underwriters) during the IPO roadshow, as reported in *CORRESP* filings submitted by underwriters to the SEC. *Ln(Syndicate Size)* is the natural log of the number of lead and co-managers underwriting the offer. The regression includes year fixed effects. All variables are defined in Table A2 in Appendix A. The sample includes common stock IPOs listed on US exchanges between January 2005 and December 2019 with available marketing data. Robust standard errors are reported. t-statistics are reported in parentheses, and *, **, and *** represent statistical significance at the 10%, 5%, and 1% levels, respectively.

	(1) Ln(Prospectuses)
Ln(Syndicate Size)	**0.588***** **(11.10)**
Ln(Proceeds Filed)	0.180*** (5.14)
Ln(Revenue)	0.018** (2.04)
Constant	6.340*** (59.68)
Year FE	Yes
Adj. R-squared	0.661
Observations	1,519

Table B4: Determinants of Discretionary Prospectus Distribution w/o Underwriter FE

This table reports results from OLS regressions explaining cross-sectional variation in preliminary prospectus distribution during IPO roadshows. The dependent variable is the natural logarithm of *Prospectuses*, which is the total number of prospectuses distributed by underwriters to various IPO participants (e.g., investors, lawyers, other underwriters) during the IPO roadshow, as reported in *CORRESP* filings submitted by underwriters to the SEC. *Industry Geographic Concentration* is the sum of squared county-level wages (from QCEW public-use files) in the 4-digit NAICS industry of the IPO issuer in the year of the IPO. *High Reputation Lead Underwriter* is an indicator variable equal to one of the lead underwriter managing the IPO is the top quartile of number of IPOs managed that year. The regression sample includes common stock IPOs listed on U.S. exchanges between January 2005 and December 2019 with available marketing data. All variables are defined in Table A2 in Appendix A. Standard errors are clustered at lead-left underwriter level. t-statistics are reported in parentheses, and *, **, and *** represent statistical significance at the 10%, 5%, and 1% levels, respectively.

	(1) Ln(Prospectuses)	(2) Ln(Prospectuses)
Industry Geographic Concentration	**1.190*** **(3.27)**	**1.214*** **(4.01)**
Ln(Syndicate Size)	**0.893*** **(15.73)**	**0.524*** **(9.06)**
High Reputation Lead Underwriter	**0.202*** **(4.54)**	**0.218*** **(6.19)**
Prior Month FF49 Ret.		**-0.857** **(-2.56)**
PE-Backed		0.126** (2.37)
VC-Backed		0.209*** (4.15)
Ln(Proceeds Filed)		0.205*** (5.49)
Ln(Revenue)		0.025** (2.02)
Loss		0.013 (0.33)
IPO Pioneer		-0.080** (-2.30)
IPO Hotness		-0.031 (-0.79)
Ln(Lagged IPO Volume)		-0.117** (-2.47)
Constant	6.663*** (52.10)	6.417*** (35.65)
Industry FE	Yes	Yes
Year FE	Yes	Yes
Underwriter FE	Yes	Yes
Underwriter-Year FE	No	No
Adj. R-squared	0.668	0.698
Observations	1,534	1,426

Table B5: OLS Analysis of Effect of Prospectus Distribution on IPO Fees, Pricing and Post-IPO Market Quality – Proceeds-Year and Underwriter Fixed Effects

This table reports OLS regression results estimating the relation between IPO underwriter marketing breadth and IPO fees, pricing, and post-IPO outcomes. *Ln(Prospectuses)* is the log of one plus the number of preliminary prospectuses distributed by underwriters to various IPO participants (e.g., investors, lawyers, other underwriters) during the IPO roadshow period, as reported in *CORRESP* filings submitted by underwriters to the SEC. *Ln(Syndicate Size)* is the natural log of one plus the total number of institutions in the underwriting syndicate. The four dependent variables in Panel A are (1) the underwriter spread fee, scaled by post-overallotment total proceeds raised; (2) the natural log of the dollar value the underwriter spread fee (in 2019 dollars); (3) the issuer's stock return on the initial day of trading, computed as the close on the first day of trading, scaled by the offer price, minus 1 (multiplied by 100); and (4) the percentage change from the midpoint of the initial filing range as of the beginning of the roadshow period and the offer price (multiplied by 100). The three dependent variables in Panel B are (1) (the negative of) the daily average demand inelasticity during the first 180 calendar days of trading, where demand inelasticity is computed as the absolute value of the daily stock return, scaled by the ratio of the daily trading volume and the number of shares outstanding; (2) (the negative of) the daily average Amihud (2002) illiquidity measure during the first 180 calendar days of trading, where Amihud (2002) illiquidity is computed as the ratio of the absolute value of the daily stock return to the daily dollar trading volume, multiplied by 1,000,000; and (3) (the log of one plus) the number of distinct analysts covering the firm during the first 180 calendar days of trading. Each regression includes – in addition to 2-digit NAICS and lead-left underwriter – proceeds decile-by-year fixed effects. All variables are defined in Table A2 in Appendix A. The sample includes common stock IPOs listed on US exchanges between January 2005 and December 2019 for which we are able to identify roadshow prospectus distribution information. Standard errors are clustered at the lead-left underwriter level. t-statistics are reported in parentheses, and *, **, and *** represent statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel A: IPO Fees and Pricing

	(1) Spread+ Expenses (%)	(2) Spread+ Expenses ($ Mil)	(3) Underpricing	(4) Price Revisions
Ln(Prospectuses)	**-0.023**	**0.056*** **	**3.687*** **	**2.676*** **
	(-0.59)	**(3.00)**	**(4.00)**	**(3.00)**
Ln(Syndicate Size)	**0.033**	**0.122** **	**1.451**	**1.432**
	(0.43)	**(2.09)**	**(0.86)**	**(1.24)**
Prior Month FF49	0.414**	0.643***	42.151***	44.267***
Ret.	(2.65)	(4.48)	(5.92)	(4.83)
PE-Backed	0.091**	-0.024	-1.412	-2.719***
	(2.27)	(-1.11)	(-0.92)	(-2.84)
VC-Backed	0.064	0.077**	10.105***	4.734**
	(1.54)	(2.49)	(4.35)	(2.58)
Ln(Proceeds Filed)	-0.908***	0.493***	-5.699	-3.134**
	(-8.21)	(6.34)	(-1.39)	(-2.63)
Ln(Revenue)	-0.045***	0.005	0.817*	0.484
	(-4.02)	(0.60)	(1.79)	(1.42)
Loss	0.011	-0.024	0.556	-0.453
	(0.30)	(-1.19)	(0.36)	(-0.34)
IPO Pioneer	0.036	-0.053*	-0.968	-1.545
	(0.91)	(-1.89)	(-0.68)	(-1.27)
IPO Hotness	-0.022	-0.014	-0.215	-1.091
	(-0.77)	(-0.66)	(-0.28)	(-0.76)
Ln(Lagged IPO	0.020	-0.006	5.836***	2.342

Volume)	(0.61)	(-0.20)	(3.10)	(1.45)
Constant	11.482***	13.050***	-11.604	-18.507*
	(14.81)	(50.31)	(-0.54)	(-1.71)
Industry FE	Yes	Yes	Yes	Yes
Proceeds Decile-Year FE	Yes	Yes	Yes	Yes
Underwriter FE	Yes	Yes	Yes	Yes
Adj. R-squared	0.689	0.883	0.208	0.208
Observations	1,395	1,395	1,405	1,405

Panel B: Post-IPO Demand and Liquidity

	(1) Demand Elasticity	(2) Amihud Liquidity	(3) Ln(Analyst Coverage
Ln(Prospectuses)	**2.126*** **	**0.024*** **	**0.026***
	(3.43)	**(3.48)**	**(1.88)**
Ln(Syndicate Size)	**5.251** **	**0.036***	**0.516*** **
	(2.69)	**(1.89)**	**(23.63)**
Prior Month FF49 Ret.	27.419***	0.233***	-0.188
	(3.50)	(2.89)	(-1.46)
PE-Backed	-1.021	-0.004	0.045*
	(-1.05)	(-0.46)	(1.77)
VC-Backed	2.252	0.026	0.125***
	(1.47)	(1.45)	(4.29)
Ln(Proceeds Filed)	0.545	0.009	0.095***
	(0.34)	(0.53)	(3.95)
Ln(Revenue)	1.036***	0.010***	0.018
	(3.28)	(2.70)	(1.64)
Loss	-1.348	-0.009	0.083**
	(-1.29)	(-0.89)	(2.48)
IPO Pioneer	2.193	0.017	-0.034
	(1.63)	(1.39)	(-0.90)
IPO Hotness	1.062	0.014	0.009
	(1.63)	(1.48)	(0.50)
Ln(Lagged IPO Volume)	-0.745	-0.018	-0.036
	(-0.69)	(-1.44)	(-1.23)
Constant	-48.888***	-0.431***	0.134
	(-4.45)	(-3.30)	(0.69)
Industry FE	Yes	Yes	Yes
Proceeds Decile-Year FE	Yes	Yes	Yes
Underwriter FE	Yes	Yes	Yes
Adj. R-squared	0.351	0.392	0.689
Observations	1,401	1,401	1,405

Table B6: OLS Results – Controlling for Pre-Roadshow S-1 Requests

This table reports results from OLS regressions estimating the relations between underwriter marketing breadth – measured through underwriter preliminary prospectus distribution – and IPO fees, pricing, and post-IPO outcomes, after controlling for pre-roadshow investor demand using EDGAR user requests of the issuer's S-1/A filings. Each regression includes pre-roadshow S-1/A request decile-by-year fixed effects. Pre-roadshow S-1/A requests are computed as the total number of "clicks" of the issuer's S-1 and S-1/A filings on EDGAR during the (-1,+3) five trading days surrounding the day with the largest number of clicks occurring at least seven calendar days before the start of the roadshow (as defined in Section 3). Deciles are annually-sorted. *Ln(Prospectuses)* is the log of one plus the number of preliminary prospectuses distributed by underwriters to various IPO participants (e.g., investors, lawyers, other underwriters) during the IPO roadshow period, as reported in *CORRESP* filings submitted by underwriters to the SEC. *Ln(Syndicate Size)* is the natural log of one plus the number of lead and co-managers underwriting the offer. The four dependent variables in Panel A are (1) the underwriter spread fee, scaled by post-overallotment proceeds raised; (2) the natural log of the dollar value the underwriter spread fee (in 2019 dollars); (3) the issuer's stock return on the initial day of trading, computed as the close on the first day of trading, scaled by the offer price, minus 1 (multiplied by 100); and (4) the percentage change from the midpoint of the initial filing range as of the beginning of the roadshow period and the offer price (multiplied by 100). The three dependent variables in Panel B are (1) (the negative of) the daily average demand inelasticity during the first 180 calendar days of trading, where demand inelasticity is computed as the absolute value of the daily stock return, scaled by the ratio of the daily trading volume and the number of shares outstanding; (2) (the negative of) the daily average Amihud (2002) illiquidity measure during the first 180 calendar days of trading, where Amihud (2002) illiquidity is computed as the ratio of the absolute value of the daily stock return to the daily dollar trading volume, multiplied by 1,000,000; and (3) (the log of one plus) the number of distinct analysts covering the firm during the first 180 calendar days of trading. All variables are defined in Table A2 in Appendix A. The sample includes common stock IPOs listed on US exchanges between January 2005 and December 2019 with available marketing data. Standard errors are clustered at the lead-left underwriter level. t-statistics are reported in parentheses, and *, **, and *** represent statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel A: IPO Pricing

	(1) Spread+ Expenses (%)	(2) Spread+ Expenses ($ Mil)	(3) Underpricing	(4) Price Revisions
Ln(Prospectuses)	**0.048**	**0.073*** **	**4.597** **	**2.527***
	(1.37)	**(2.92)**	**(2.58)**	**(1.79)**
Ln(Syndicate Size)	**-0.136**	**0.121**	**-2.818**	**1.724**
	(-1.63)	**(1.21)**	**(-0.95)**	**(0.55)**
Controls	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
S1 Requests-Year FE	Yes	Yes	Yes	Yes
Underwriter FE	Yes	Yes	Yes	Yes
Adj. R-squared	0.587	0.866	0.222	0.251
Observations	1,058	1,058	1,064	1,064

Panel B: Post-IPO Demand and Liquidity

	(1) Demand Elasticity	(2) Amihud Liquidity	(3) Ln(Analyst Coverage)
Ln(Prospectuses)	**3.193*** **	**0.035*** **	**0.031**
	(3.14)	**(2.87)**	**(1.48)**
Ln(Syndicate Size)	**2.320**	**0.027**	**0.537*** **
	(0.94)	**(1.03)**	**(19.68)**
Controls	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
S1 Requests-Year FE	Yes	Yes	Yes
Underwriter FE	Yes	Yes	Yes
Adj. R-squared	0.318	0.377	0.673
Observations	1,061	1,061	1,064

Table B7: Reduced Form Results – Controlling for Pre-Roadshow S-1 Requests

This table reports OLS estimates of reduced-form regressions of the relation between issuers' industry geographic concentration – which captures variation in IPO marketing breadth – and IPO fees, pricing, and post-IPO outcomes, after controlling for pre-roadshow investor demand using EDGAR user requests of issuers' S-1/A filings before the roadshow. Each regression includes pre-roadshow S-1/A request decile-by-year fixed effects. *Pre-roadshow S-1/A Requests* are computed as the total number of "clicks" of the issuer's S-1 and S-1/A filings on EDGAR during the (-1,+3) five trading days surrounding the day with the largest number of clicks occurring at least seven calendar days before the start of the roadshow (as defined in Section 3). Deciles are annually-sorted. The four dependent variables in Panel A are (1) the underwriter spread fee, scaled by post-overallotment total proceeds raised; (2) the natural log of the dollar value the underwriter spread fee (in 2019 dollars); (3) the issuer's stock return on the initial day of trading, computed as the close on the first day of trading, scaled by the offer price, minus 1 (multiplied by 100); and (4) the percentage change from the midpoint of the initial filing range as of the beginning of the roadshow period and the offer price (multiplied by 100). The three dependent variables in Panel B are (1) (the negative of) the daily average demand inelasticity during the first 180 calendar days of trading, where demand inelasticity is computed as the absolute value of the daily stock return, scaled by the ratio of the daily trading volume and the number of shares outstanding; (2) (the negative of) the daily average Amihud (2002) illiquidity measure during the first 180 calendar days of trading, where Amihud (2002) illiquidity is computed as the ratio of the absolute value of the daily stock return to the daily dollar trading volume, multiplied by 1,000,000; and (3) (the log of one plus) the number of distinct analysts covering the firm during the first 180 calendar days of trading. The regression models in Panels A and B include all control variables from Tables 6 and 7; coefficient estimates are suppressed to conserve space. The main explanatory variables of interest in each panel are *Industry Geographic Concentration* – the sum of squared county-level wages (from QCEW public-use files) in the 4-digit NAICS industry of the IPO issuer in the year of the IPO – and *Ln(Syndicate Size)* – the natural log of one plus the number of lead and co-managers underwriting the offer. All variables are defined in Table A2 in Appendix A. The sample includes common stock IPOs listed on US exchanges between January 2005 and December 2020 with available marketing data. Standard errors are clustered at the lead-left underwriter level. t-statistics are reported in parentheses, and *, **, and *** represent statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel A: IPO Fees and Pricing

	(1) Spread+ Expenses (%)	(2) Spread+ Expenses ($ Mil)	(3) Underpricing (Day 0)	(4) Price Revisions
Industry Geographic Concentration	**-0.011**	**0.208***	**12.410**	**17.987****
	(-0.04)	**(1.92)**	**(1.40)**	**(2.53)**
Ln(Syndicate Size)	**-0.114**	**0.155**	**-0.737**	**2.731**
	(-1.39)	**(1.56)**	**(-0.31)**	**(1.00)**
Controls	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Requests-Year FE	Yes	Yes	Yes	Yes
Underwriter FE	Yes	Yes	Yes	Yes
Adj. R-squared	0.587	0.864	0.214	0.253
Observations	1,057	1,057	1,063	1,063

Panel B: Post-IPO Demand and Liquidity

	(1) Demand Elasticity	(2) Amihud Liquidity	(3) Ln(Analyst Coverage)
Industry Geographic Concentration	**11.952*** **	**0.093** **	**0.155**
	(4.25)	**(2.68)**	**(1.57)**
Ln(Syndicate Size)	**3.617**	**0.041**	**0.553*** **
	(1.47)	**(1.53)**	**(20.46)**
Controls	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Requests-Year FE	Yes	Yes	Yes
Underwriter FE	Yes	Yes	Yes
Adj. R-squared	0.310	0.364	0.673
Observations	1,060	1,060	1,063

Table B8: Covariate Balance Tests

This table reports a test of covariate balance across variation in issuer *Industry Geographic Concentration*, or the sum of squared county-level wages (from QCEW public-use files) in the 4-digit NAICS industry of the IPO issuer in the year of the IPO. The explanatory variables are various issuer- and IPO-level characteristics that we define in Table A2 in Appendix A. The sample includes common stock IPOs listed on US exchanges between January 2005 and December 2019 with available marketing data. Standard errors are clustered at the lead-left underwriter level. t-statistics are reported in parentheses, and *, **, and *** represent statistical significance at the 10%, 5%, and 1% levels, respectively.

	(1) Industry Geographic Concentration	(2) Industry Geographic Concentration
Prior Month FF49 Ret.	-0.016	-0.034
	(-0.42)	(-0.73)
PE-Backed	-0.007	-0.006
	(-1.08)	(-1.04)
VC-Backed	0.004	0.005
	(0.79)	(0.88)
Ln(Proceeds Filed)	0.003	0.003
	(1.04)	(0.79)
Ln(Revenue)	0.002	0.002
	(1.58)	(1.29)
Loss	0.013***	0.014***
	(2.80)	(3.02)
IPO Pioneer	-0.004	-0.006
	(-0.83)	(-1.16)
IPO Hotness	0.000	0.000
	(0.95)	(0.87)
Ln(Lagged IPO Volume)	0.000	0.002
	(0.09)	(0.39)
Constant	0.026	0.025
	(1.36)	(1.18)
Industry FE	Yes	Yes
Underwriter FE	Yes	No
Underwriter-Year FE	No	Yes
Adj. R-squared	0.266	0.253
Observations	1,411	1,313