Investor Demand for Information in Newly Issued Securities

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Abstract

Empirical studies of how information is impounded in prices often focus on the supply of information from corporate announcements, analyst reports, and news stories, or rely on proxies for the presence of informed traders such as insiders, institutional traders, trade size and short sellers. The demand for information by investors is less well understood because of the lack of data on the information acquisition process. Our study directly measures investor demand for information and its impact on security prices using search traffic associated with corporate filings on the EDGAR system of the Securities and Exchange Commission (SEC). Our analysis focuses on the registration period for IPOs when information asymmetries between investors and the issuing firm are likely to be high. Consistent with the important role of informed investors in the price discovery process, we find that EDGAR search traffic significantly increases for peer firms on IPO filing dates. We also find that investor demand for information is positively related to the probability of IPO success, and can predict both price revisions and initial returns. Overall, our results indicate that information acquisition is reflected in the pricing of newly issued securities.

Keywords: Information acquisition, EDGAR, search traffic, disclosure, IPOs, bookbuilding, underpricing

JEL Classification: D82, D83, G14

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I. Introduction

The role of information asymmetry on asset pricing is a central issue in economics. There is a broad theoretical literature examining the importance of information generation by market participants and the effect of informational heterogeneity among investors on asset prices (Grossman and Stiglitz, 1980; Kyle, 1985; Easley and O'Hara, 2004; and Veldkamp, 2006). Empirical studies examining the differential impact of information often focus on the supply of information such as corporate announcements (Chae, 2005; Brown, Hillegeist and Lo, 2004), analyst reports (Tookes, 2008; Irvine, Lipson and Puckett, 2007), and news stories (Tetlock, 2010; Hendershott, Livdan and Schurhoff, 2012; Engelberg, Reed and Ringgenberg, 2012), or rely on proxies for the presence of informed traders such as insiders (Seyhun, 1986; Lakonshok and Lee, 2001), institutional traders (Badrinath, Kale, and Noe, 1995; Sias and Starks, 1997; Chakravarty, 2001; Boehmer and Kelly 2009), trade size (Easley and O'Hara, 1987; Hasbrouck, 1991), and short sellers (Asquith, Pathak and Ritter, 2005; Christophe, Ferri and Hseih, 2010; Boehmer and Wu, 2013). The demand for information by investors is less well understood, in part, because of the lack of observable data on information acquisition by investors.

In this paper, we study the demand for information by investors and its effect on pricing using search traffic for corporate disclosures made available through the EDGAR filing system hosted by the U.S. Securities and Exchange Commission (SEC) for a sample of initial public offerings (IPOs) from February 2003 to March 2012.[1] IPOs provide an ideal setting for examining the effect of information acquisition on asset prices for two reasons. First, because these securities have not previously traded, we minimize the problem of determining whether asset returns drive information acquisition or information acquisition drives asset returns. Second, the value of acquiring information and the payoff to search is likely to be greatest when a firm issues securities to the public for the first time. It is a well-known empirical fact that IPOs are underpriced, on average, (Ritter and Welch, 2002) and theory suggests that investors are

[1] Data on EDGAR search traffic can be obtained from the SEC http://www.sec.gov/data/edgar-log-file-data-set.

compensated for acquiring information during bookbuilding and revealing this information to the underwriter and issuing firm (Benveniste and Spindt, 1989; Benveniste and Wilhelm, 1990; Spatt and Srivastava, 1991).

In order to analyze whether greater demand for information and, by extension, the presence of informed investors has an effect on the pricing of IPOs, we first identify unique viewers of documents on EDGAR accessed through the sec.gov web portal using the IP addresses from the history of page requests stored in the SEC server log files. We then classify viewers by the types of documents they access. Specifically, we classify viewers into those that view only the IPO firm's offering documents (e.g., S-1, S-1/A, 424B) which we define as "IPO viewers" and viewers that view both the IPO firm's offering documents and the historical offering documents or periodic filings (e.g., 10K, 10Q) of any other firm which we define as "peer firm viewers" (Lee, Ma and Wang, 2014). We also classify viewers as "human" if they appear to access EDGAR through one of four sec.gov search tools or "bot" if the user agent designation is a recognized web crawler. All remaining viewers, including viewers whose browsers are configured to remove identifying information, are classified as "unsure."[2] Because the number of views is related to the size of the offering, all classifications of viewers are scaled by proceeds.

Our primary measure of the presence of informed investors and, hence, demand for information is the number of viewers of the IPO's offering documents. We consider a viewer to be more informed when the viewer also requests peer firm documents (i.e., peer firm viewers) because the indication of comparable firm analysis reflects a greater degree of information acquisition. Although our main conjecture is that EDGAR search activity represents demand for information useful to pricing the offering, we also examine whether search intensity proxies for the general awareness of the offering and the size of the potential investor base. That is, greater awareness of the IPO by potential investors could affect the price and success

[2] A natural question arises as to whether we can identify the type of searcher from the IP address. Although the last octet is anonymized, it may be possible to narrow the possible identity of the searcher. However, given the time-consuming nature of collecting information on IP addresses, we are unable to classify searchers on this basis.

of an offering independent from the level of informativeness among those investors (e.g., Merton, 1987; Barber and Odean, 2008; Cook, Kieschnick, Van Ness, 2006; Liu, Sherman and Zhang, 2014).

We construct a number of tests that show how the type and intensity of IPO-related document searches are relevant to information production during the offering process. Our first test examines whether search intensity at the time of the initial registration statement reflects investor awareness and potential demand for IPO shares. Because the initial offering document is typically the first public release of the firm's financials and pricing information is generally not yet available, our conjecture is that the initial search intensity is a proxy for general interest in the offering (i.e., potential size of investor base), and thus a determinant of whether the offer is withdrawn or completed. Consistent with this, we find that search intensity associated with the initial S-1 filing is a predictor of ultimate deal success: the number of viewers of the initial registration statement is positively correlated with IPO completion. We also find a greater likelihood of deal completion when viewers of the IPO offering document also access documents of peer firms, evidence of increased probability of success when viewers are more informed.

Our second test examines whether EDGAR archival documents of IPO peer firms are used to generate information that is relevant to the pricing of an offering. Consistent with this, we find that the filing of an IPO offering document is associated with a contemporaneous increase in the number of views of peer firm offering documents and periodic filings. That the number of peer firm documents accessed increases on days in which offering documents are filed provides broad evidence consistent with the conjecture that viewers of IPO filings on EDGAR also collect information from the archived disclosures of peer firms that may be useful for valuing the offering.

We also examine how investor demand for information affects IPO pricing. In models of bookbuilding, investors provide information to the underwriter and the issuing firm that is used in pricing the offering. If the information generated is positive, the underwriter will revise the offer price up, but only partially so (Hanley, 1993). In contrast, if information revealed during bookbuilding is negative, the offer price will be lowered. If EDGAR searches are informative and contribute to the pricing process, we predict that IPOs

with a higher number of viewers, particularly those that access peer firm documents, should have greater absolute offer price revisions.

Because investors are generating both positive and negative information about the valuation of the offer, we use the direction of the price revision to discriminate whether it is demand for information specific to valuing the issuance (demand for information), or interest in the offer generally (investor awareness and demand for shares), that drives the change in offer price. For positive offer price changes, the predicted effect of demand for information specific to pricing and demand for shares more generally are identical. Both are expected to be positively related to the change in offer price. For negative price changes, however, demand for information specific to pricing the offering will have the opposite effect on offer price revisions than demand for shares generally. If EDGAR searches are primarily related to general investor awareness, and less so to information generation relevant to pricing the offering, the effect on the size of the negative price change should be positive (i.e., higher demand should result in less negative price revisions). However, if EDGAR searches are, in fact, indicative of information generation, and in this case negative information, then we expect a negative effect of the number of viewers on the price revision (i.e., greater informative demand should result in larger negative price revisions). Consistent with an information acquisition story, the greater the number of viewers of the IPO document, the greater the negative price revision. This test differentiates our findings from Da, Engelberg and Gao (2011) who examine searches on Google and attribute these searches to individual or retail investors. We contend that searchers on EDGAR are more likely to be informed because their efforts are targeted to corporate filings rather than general interest in the company.[3]

Finally, we examine whether the number of IPO viewers and peer firm document viewers are related to the level of underpricing. One of the central empirical predictions of Benveniste and Spindt (1989) is

[3] Our study examines information generation from the filing of the initial registration statement to the offer date, which is within the "quiet period." During the quiet period, issuers are only able to communicate information contained in the prospectus. Liu, Sherman and Zhang (2014) argue "If a report appeared in the media during the IPO filing period which contained substantial hard information about the issuer that was not already in the Prospectus, then by definition the issuer would be guilty of omitting material information, leading the SEC to put the offering on hold while it required substantial redrafting plus the addition of new warnings and risk factors."

that underpricing is directly related to the level of information generated during bookbuilding. In addition, Sherman and Titman (2002) develop a model in which the number of investors participating in an IPO is positively related to the quantity of information generated (and therefore pricing accuracy) and to underpricing. Consistent with these models, we find that the higher the number of viewers, the greater is the underpricing even after controlling for the change in offer price. Collectively, these findings support theories of asset pricing in which information affects security prices and of bookbuilding in which the presence of informed investors reveal information that is useful in pricing the issue. As a result, investors are compensated for revealing this information through the partial adjustment of offer prices which leads to underpricing.

In addition to contributing to the literature on the role of information in asset pricing, we also add to studies that examine the usefulness of corporate disclosures in price formation (see Verrecchia 2001, Dye 2001, Healy and Palepu, 2001, and Hanley and Hoberg, 2010) as well an emerging line of research on investor search behavior that examines web traffic and asset prices. Drake, Roulstone and Thornock (2012) examine Google searches around earnings announcements and find that when investors demand more information about a firm, the information content of the earnings announcement is partially preempted. Three recent papers use a similar dataset to ours on EDGAR search traffic. Drake, Roulstone, Thornock (2013) show that investors primarily view 10-Ks, 10-Qs, and 8-Ks and that EDGAR searches are related to news, particularly bad news. They conclude that investors access archival documents to understand context when new information is released. In our setting, these archival documents are used to in the price discovery process of newly issued securities. Loughran and McDonald (2014) study the rate of decay in download counts for filings on EDGAR and show that consumption of financial information varies across filing types. Lee, Ma and Wang (2013) examine EDGAR search traffic and propose a method to relate investors' search behavior to the identification of peer firms.

The remainder of the paper is organized as follows: Section II provides information on the offering process and the hypotheses, Section III describes the data used in the paper and summary statistics, Section IV examines whether the number of viewers and document views at the time of the filing of the initial

registration statement are related to the probability that the IPO will be completed, Section V analyzes whether the filing of an offering document increases the demand for information about peer firms, Section VI tests the relation between document views and IPO pricing, and Section VIII concludes.

II. The Offering Process and Hypotheses

In order to illustrate the offering process and the viewing of documents around filing dates, we use the IPO of Visa on 3/18/08 as an example. Table 1 shows the IPO's key dates, the type of document filed, any new valuation information disclosed in the filing and the number of viewers and peer firm document views over the day of and the day after the filing of the offering document. On 11/09/07, approximately four months before the IPO date, Visa files its initial registration statement (Form S-1) with the SEC. The S-1 is filed after months of due diligence and preparation by the issuer and its underwriters, lawyers and accountants. The S-1 includes an estimate of expected proceeds which is used in the calculation of the SEC registration fee. It generally does not contain any per share pricing information. As shown in the table, 1,381 viewers accessed Visa's S-1 on the day of and the day after its filing. Of these 1,381 viewers, 1,261 only viewed Visa's S-1 ("IPO viewers" = 1,261) and 120 viewed not only the S-1 but also a total of 861 peer firm documents ("peer firm viewers" = 120). The number of viewers is in line with the number of investors used to build the book. For instance, Cornelli and Goldreich (2003) find that the mean (median) number of bids received on their sample of IPOs is only 411 (375).

Upon filing the S-1, the SEC begins its review of the registration statement. In the next two months or so, the issuing firm and its agents respond to SEC comments, update the disclosure for recent financial developments, continue due diligence, negotiate the underwriting agreement and prepare for the roadshow. Any new disclosures are filed as an amendment to the S-1 (Form S-1/A). After the SEC's comments have been addressed and the offering document is essentially complete, the issuing firm discloses the estimated offer price (or file) range and number of shares to be offered in an amendment. In the case of Visa, its fourth S-1/A (its fifth filing) contains the file range ($37 - $42 per share) and number of shares (406 million). Using the $39.5 filing range mid-point, we calculate the expected proceeds as $16 billion. 2,584 viewers

viewed this amendment, of which 2,005 were IPO viewers and 579 were peer firm viewers, looking at 7,148 peer firm documents. With the file range in place, the company is ready for the road show and bookbuilding.

On 3/18/08, about a month after the first amendment with the file range (there can be other price amendments during this time), the SEC has no more comments and declares the offering effective (filing form EFFECT). The underwriter, in conjunction with the issuing firm, sets the final offer price and the shares are sold. Visa prices its shares above the file range at $44 with no change in the number of shares to be issued resulting in a final offer amount (excluding the overallotment option) of approximately $18 billion. The following day, 3/19/08, the 424B is filed and shares begin to trade and close at $56.50 for an initial return of 28.4%. 1,478 viewers look at the final prospectus of which 1,050 are IPO viewers and 428 are peer firm viewers, examining 5,720 peer firm documents.[4]

Figure 1 illustrates the cumulative document views of each offering document from the date it is filed throughout Visa's offering process. Many of the total number of document views are attributable to the S-1, but there is a large increase in views on the filing of the fourth amendment (the amendment with the offer price range, labeled S-1/A_Fp_5). This increase is consistent with investors demanding and gathering information during the offering process. Further, views of historical filings also increase as the offering date nears implying that even past documents may have information that is of value to investors.

This example, although specific to a single firm, leads to the development of the following hypotheses and testable predictions.

H1: Increased EDGAR search intensity at the time of the filing of the initial registration statement reflects greater investor awareness and demand for IPO shares.

Prediction: The likelihood of deal completion should increase in the number of viewers or documents viewed.

H2: Potential IPO investors access archival filings of peer firms on EDGAR to generate information that is useful in pricing the offering.

Prediction: Views of peer firm documents should increase upon the filing of an IPO firm's offering document.

[4] The 424B is filed with the Commission no later than the second business day following the earlier of the date of determination of the offering price or the date it is first used after the offer is effective. In our sample, the majority of 424Bs are filed on the first trading day.

H3: Demand for information about the IPO firm and peer firms increases the number of informed investors, resulting in more informative prices.

Prediction: The greater the number of viewers of offering documents and archival documents of peer firms, the greater should be the price revision. If negative information is produced through Edgar searches, higher search activity should result in more negative price revisions. Conversely, if positive information is produced through Edgar searches, higher search activity should result in more positive price revisions.

H4: Underpricing is used to both respond to the amount of interest in the offer and to compensate informed investors for revealing their private information to the lead underwriter.

Prediction: Initial returns should be increasing in the number of viewers and peer firm document views.

III. Data

a. *IPO Sample*

Our sample is primarily from Thomson Reuters SDC database, supplemented with four additional IPOs from Jay Ritter's website (https://site.warrington.ufl.edu/ritter/ipo-data/) not found on SDC. We require that the filing date of the S-1 is on or after February 14, 2002 and the offer date (or withdrawal date for withdrawn IPOs) is on or before March 31, 2012.[5] We delete any non-underwritten or best efforts offerings, rights offerings, REITs, closed-end funds, ADRs, mutual-to-stock conversions, units, and completed IPOs without trading information on CRSP. For withdrawn IPOs, we require that the firm intended to be listed on the NYSE, AMEX, or NASDAQ, to correspond with CRSP coverage for the sample of completed IPOs. Finally, we delete IPOs with missing data from the EDGAR log file. Specifically, we delete any IPO that has a filing within the period in which the EDGAR log files are unretained (September 24, 2005 to May 11, 2006). Next we delete any IPO which has missing data for EDGAR views for both the S-1 date and first offer price amendment date. This reduces the final sample to 907 completed and 351 withdrawn IPOs for a total of 1,258 IPOs.

[5] It is important to note that our sample period ends just before the provisions of the JOBS Act are effective. The JOBS Act allows, among other things, for qualifying IPOs to confidentially file a preliminary prospectus. If the IPO firm chooses not to file a registration statement after receiving comments from the SEC, it may withdraw from the process without any information about the confidential filing being made public. Therefore, determining the total number of withdrawn IPOs after this time period is impossible. For more information on the effect of the JOBS Act on the IPO offering process see Chaplinsky, Hanley and Moon (2014), Dambra, Field and Gustafson (2014), Barth, Landsmans, and Taylor (2014) and Gupta and Israelsen (2014).

Figure 2 plots the time-series of completed and withdrawn offerings by filing date of the S-1. For completed IPOs, 2004 has the highest number of filings, followed by 2007 and 2006. There are relatively few completed IPOs filed during the financial crisis years of 2008 and 2009, with a rebound in 2010 and 2011. The peak year is 2007, corresponding to offerings ultimately withdrawn during the financial crisis. The low number of IPOs filed in 2012 is due to our requirement that the offer date or withdrawal date is on or before the end of March 2012, the end of our sample period.

We collect and manually verify information on pricing, offering characteristics and firm characteristics from SDC including the proceeds raised, the first offer price range, the final offer price, the SEC file number, and filing and offer dates. In addition, we manually collect information on expected proceeds from the S-1 registration statement ($Proceeds_{S\text{-}1}$) and the amended S-1/A with the first offer price range ($Proceeds_{FP}$). Information on VC backing is from SDC for completed IPOs, but this data is not available for withdrawn IPOs. Finally, underwriter ranking (*Underwriter Rank*) and firm age (*Age*) is publicly available from Jay Ritter's website (http://bear.warrington.ufl.edu/ritter/ipodata.htm) and supplemented with hand collection when missing.

We calculate two measures of returns: the change in offer price (ΔP) is the percentage difference between the mid-point of the first file range and the offer price as in Hanley (1993)and initial returns (*IR*) on the first trading day are calculated as the return from the offer price to the closing price from CRSP. We also control for market conditions in the time period leading up to the IPO. We calculate market returns 180 calendar days prior to the filing of the S-1 using the CRSP value weighted index ($Mkt\ Return_{\text{-}180toS1}$) and the market return between the filing of the S-1 and the final offer date ($Mkt\ Return_{S1toOP}$). IPO market statistics include the number of completed IPOs in the 180 calendar days prior to the S-1 ($Number\ of\ IPOs_{\text{-}180toS1}$) and the average initial return of completed IPOs in the 180 calendar days prior to the S-1 ($IR_{\text{-}180toS1}$).

Table 2 contains summary statistics on the IPO sample for completed and withdrawn offerings. On average, IPO firms that eventually go public disclose that they intend to raise approximately $219 million dollars at the time of the filing of the S-1. The amount of expected proceeds rises to an average of $236 million at the filing of the amendment with the first offer price range and culminates in an average offering

amount of $240 million. The average underwriter rank is 8, with 9 being the highest possible rank, and 39% of offerings are venture-capital backed. Completed IPOs have an average age of 20 years.

Market returns are fairly volatile during the period due to the financial crisis. On average, market returns in the 180 days prior to the filing of the IPO's S-1 are a positive 8.5% and rise an additional 4.4% from the S-1 to the offer date. An average of approximately 66 IPOs go public in the 180 calendar days preceding the filing of an issuer's S-1 with an average initial return of 11.6%.

The average change in offer price from the filing of the first offer price range to the final offer price has a mean of -4.1%. This is likely due to the poor market conditions during the financial crisis. Consistent with a cold market, more IPOs have negative offer price changes (47.2%) than positive offer price changes (39.8%). Finally, average initial returns for our sample firms are 12.1%.

Withdrawn IPOs tend to be a bit smaller than completed IPOs and for those withdrawn IPOs that file an amendment with an offer price range, to also have a decline in the average proceeds from the filing of the S-1. Withdrawn IPOs also are younger, on average, than completed IPOs and are going public when market conditions are a bit weaker. There does not appear to be any difference in the state of the IPO market in the 180 days prior to the filing of the S-1 between withdrawn and completed IPOs.

b. *EDGAR Log Files*

We obtain data on EDGAR search traffic from the SEC for the period February 14, 2003 to March 31, 2012. Observations are unavailable between September 24, 2005 and May 11, 2006 because the data was unretained. The initial dataset consists of approximately 18 billion individual page views through the sec.gov website, of which only a subset is directed towards periodic and offering filings (defined below). Each observation includes information on the visitor's IP address, the web browser and operating system used, timestamp, CIK and accession numbers that correspond to a particular filing. The IP address is only partially observable with the last octet anonymized.

We identify the form types associated with each log entry using the quarterly EDGAR index files through the end of the first quarter of 2012, which we merge by accession number. We restrict observations

to the following types of documents: periodic reports (10-K, 10-Q, 20-F, 40-F) and offering documents (S-1, SB-1, SB-2, F-1, F-10, 424B, RW, EFFECT) as well as their amended filings (N=1,294,709).[6] We eliminate all 424B offering documents with SEC file numbers unrelated to an S-1, SB-1, SB-2, F-1, and F-10 offering document (N=986,686). We extract SIC codes from the header of each filing referenced in the log files using a Perl script and eliminate documents for which an SIC code cannot be found or is otherwise associated with an asset-backed security issuer identified by SIC code 6189 (N=955,367). Adjusting for co-registrants in the EDGAR index file where multiple CIK numbers are assigned to the same document accession number, we are left with 916,988 unique documents.

Our analysis considers two types of documents. The first type is IPO firm offering documents that are filed during the offering period of the IPO in our sample. We identify these documents by matching the SEC file number extracted from the header of each document to the SEC file number provided by SDC, supplemented with hand collection. This produces 10,751 offering documents for the 1,258 IPO firms. The second type is offering documents and periodic reports filed by potential peer firms, which make up the vast majority of documents. These include offering documents filed by our sample of IPO firms after their offerings became effective; once public, our IPO sample firms are eligible to be a peer firm for a subsequent IPO by another firm.

Our primary independent variables of interest are the number and type of unique viewers and peer firm document views on the day of and the day after the filing of an S-1, the first offer price range amendment or the final prospectus. Viewers are identified by a combination of IP address, operating system, and web browser. In counting the number of IPO and peer firm document views by an individual IP address, we delete duplicate requests for the same document by the same IP address on the same day. Thus, if a viewer examines a particular S-1 five times during the day, it is only counted once for the purposes of our analysis. Our results are robust to include multiple views of any document in a single day. We also capture whether

[6] Forms SB-1 and SB-2 are similar to the form S-1 registration statement, but for small businesses. Similarly, form F-1 and F-10 are the registration statements used by foreign and Canadian issuers respectively. When we use the term S-1, we refer to all of these registration statements. Form RW is used to withdraw a registration statement. Form EFFECT is filed when the offering is effective. Finally, the final prospectus is filed on form 424B.

a viewer who accesses an IPO document also examines historical documents of other or "peer" firms (Lee, Wang and Ma, 2013). We further delineate peer firms as being in the same one digit SIC code. We also count the total number of peer firm document views.

In addition, we identify a "Bot" viewer as any viewer that self-identifies through its user agent designation as a recognized web crawler (e.g., Googlebot, wget, spider, robot, Perl, and python among others). A "Human" viewer is any viewer that was referred to an archival EDGAR document through one of four sec.gov search tools: (current event search, full text search, and the legacy and pre-legacy search algorithms). If an IP address within a day is classified as Human for at least one document view, then it is classified as a Human for all other document views. This captures viewers who use the search tool to identify the first document and then is subsequently referred to other documents through embedded and other links within the sec.gov interface. All viewers that cannot be identified as either a Human or Bot are classified as "Unsure".[7] (See Appendix A for additional information on how variables related to the EDGAR log files are constructed.)

Our classification of viewers and peer firm documents is based on their search activity over a single day of IPO and is defined as follows:

Type of Viewer	Definition
All Viewers	Number of unique IP- operating system-browser triads that view an IPO's document during the day
All Viewers Human	Viewers that used an EDGAR search function to access EDGAR
All Viewers Bot	Viewers that self-identify in the user agent field as a web crawler
All Viewers Unsure	Viewers that are not classified as either a bot or a human
IPO Viewers	Viewers who view only an IPO firm document but no peer firm documents
Peer Firm Viewers	Viewers who view an IPO firm document and access at least one peer firm 10-Q, 10-K or offering document
Peer Firm Viewers SIC1	Viewers who view an IPO firm document and access at least one peer firm 10-Q, 10-K or offering document in the same one-digit SIC code as the issuer
Peer Firm Document Views	Number of peer firm documents viewed

[7] Another method to identify bots is to examine search intensity (Drake, Roulstone, and Thornock, 2012; Lee, Ma, and Wang, 2013; Loughran and McDonald, 2014). However, using this identification method may misclassify many viewers as bots, particularly at financial institutions with fixed IP addresses where multiple users can share the same IP address. Our results are robust to identifying bots by search intensity by differentiating viewers by the number of documents viewed (less than 10 or greater than 100).

Table 3 provides summary information on document views in the full EDGAR log files in Panel A and our classification of viewers and documents view for the IPO sample in Panel B. As shown in Panel A, the largest number of documents and the highest number of views are for periodic filings (10-Q and 10-K). 10-Ks are viewed an average of 467 times in the two days surrounding the filing and 10-Qs are viewed 199 times. There are 110,497 offering documents (S-1, SB-1, SB-2, F-1, F-10, EFFECT, 424B and amendments) on EDGAR and they are viewed less frequently, in total, than period filings. This is not surprising given that periodic filings are significantly larger in number than offering documents. On average, initial offering documents (form S-1 and equivalents) are viewed an average of 327 times and amended S-1 filings are viewed 189 times.

Figure 3 plots the time-series of document views by month over the sample period. The unretained data from September 2005 to May 2006 is apparent. Also, seen is a substantial increase in the number of document views mid-2008 onward. The composition of views as well as the number of views exhibits some volatility over the time period which may indicate changes in preferences for document views over time. The majority of document views in any given year, however, are for periodic filings 10-K and 10-Q. Offering documents views are a much smaller proportion of the total document views.

Panel B of Table 3 provides summary information on the different categories of unique viewers as well as peer firm document views. The largest average number of viewers occurs at the filing of the S-1. There are very few bot viewers, on average, with more viewers classified as "unsure" than "human". Figure 4 presents the time series of document views by whether the viewer is classified as human, bot or unsure. For these classifications, the majority of the documents viewed are by human and unsure unique viewers. Human and bot document views are increasing since the financial crisis.

Most viewers only view the IPO firm's documents (*IPO Viewer)* and do not search for related documents filed by peer firms. But the proportion of viewers that access peer firm documents increases as the offering progresses as does the average number of documents viewed.

Figure 5 plots the times series of the average number of document views around key filing dates for the filing of the initial registration statement on form S-1 and the first amendment with pricing information. A

similar pattern as the first pricing amendment exists for the final prospectus so it is not shown for brevity. Document views include both the newly filed document as well as previously filed documents for that IPO. On each of the filing dates, the majority of views of outstanding offering documents occur either on the filing day (t=0) or on the next day (t=1) with a subsequent drop in demand, a rate of decay also documented by Loughran and McDonald (2014). Although not shown, there is a large differential between the mean and maximum number of views and thus, for the purposes of our analysis, we winsorize the number of viewers and document views at the 99% level (i.e., one-sided at the upper 1%). Our primary measure of the number of viewers and document views are constructed using the day of and the day after the offering document is filed, but our findings are robust to cumulating views over the entire IPO event window.

Figure 5 also highlights how document views are correlated with firm size. The figure graphs the number of document views by expected proceeds as of the S-1 (Panel A) or as of the first price amendment (Panel B): <$100 million, $100 million-$1 billion, >$1 billion (secondary axis). Document views are much higher for companies that are expected to raise $1 billion or more in proceeds. Small companies, those issuing less than $100 million, have a substantially smaller number of views. This dichotomy in the number of views between large and small companies is in line with the conjecture by industry and academics that there is less investor interest in smaller initial public companies.[8] But the time trend of document views are similar irrespective of the amount of proceeds to be raised, suggesting that results are generalizable across firm size.

c. *Caveats*

There are a number of caveats when using log files to assess the demand for information. First, users of SEC documents can access these documents from a variety of other sources outside of EDGAR, such as Bloomberg. In addition, our analysis does not include any requests for SEC filings from the EDGAR ftp

[8] See The IPO Task Force Report (IPO Task Force, Rebuilding the IPO On-Ramp: Putting Emerging Companies and the Job Market Back on the Road to Growth, presented to the U.S. Department of Treasury (October 20, 2011) — http://www.sec.gov/info/smallbus/acsec/rebuilding_the_ipo_on-ramp.pdf

site. Therefore, using records from the EDGAR log files as measure of demand is conservative as it likely under represents the actual demand for information.

Second, user IP addresses can change dynamically during a given day. Industry convention for determining a new session (and therefore a potential new user) generally uses 30 minutes of non-activity as the cut-off point. This convention is used when examining web sites that have a high proportion of activity from individual viewers using commercial internet service providers (ISPs). Because EDGAR search traffic is more specialized than at commercial websites with more varied content and larger viewing audiences, we believe that it is relatively unlikely that two viewers from the same ISP request the same filing from EDGAR and in sequence are dynamically assigned the same IP address. For this reason, and computation simplicity, we assume that views by a given IP during the same day are from the same viewer. However, we may be double counting viewership to the extent that the same viewer returns to sec.gov later in the day after being reassigned a new IP address.

Third, many companies own IP blocks. This makes it difficult to distinguish unique viewers within a block. In order to refine the definition of a unique viewer, we consider whether the viewer uses the same web browser and operating system. However, it is still possible that all employees at a firm have the same browser and operating system (e.g., Internet Explorer and Windows 7), in which case this method will not allow us to distinguish different users. Thus, if two or more people employed by a firm share an IP address during a day and view the same document with the same browser and operating system, our method assigns one viewer when actually there are actually multiple viewers.

Fourth, ISPs cache frequently requested documents for future ease of reference. This means that requests for the same content that have been cached may not be captured by the log file. The caching of documents may result in an undercounting of the number of document views and unique viewers for documents that are widely demanded.

Fifth, the user agent information is self-reported by the browser. Sophisticated users can (and do) reprogram this field in order to obfuscate their identity which may make them difficult to classify.

Finally, many web crawlers rotate IP addresses to prevent being blocked from sites which could lead to the over-counting of the number of unique viewers. However, the SEC does not have a policy of blocking web crawlers, lessening incentive to do so. Thus, we believe that this issue will only minimally affect our analysis.

d. *Determinants of Viewers and Document Views*

This section examines the factors that contribute to the number of viewers and peer firm document views at the time of the filing of the initial S-1. Table 4 presents the results of OLS regressions where the dependent variables are the number of viewers (columns 1-7) by type of viewer and number of peer firm document views (column 8). We consider several explanatory variables. Figure 5 indicates that the initial demand for the issuer's filings should be related to the size of the offering. Ex ante investor awareness of the offering through other means may also be relevant, so we include the reputation of the underwriter (Carter and Manaster, 1990 and Megginson and Weiss, 1991) and the age of the IPO firm. Since this table includes both completed and withdrawn offerings, venture capital backing is not fully populated and thus, is excluded from the independent variables. We also include recent IPO and market conditions.

The number of viewers, with the exception of viewers classified as bots, is greater the larger the expected size of the offering. This is consistent with the finding on proceeds in Figure 4 – larger firms have more views than smaller firms. Viewership is higher when the issue is brought to market by a more reputable underwriter. The number of viewers is unrelated to the age of the firm. Viewership is lower when the number of prior IPOs is higher perhaps reflecting "busy" investors and limited ability to collect information in a hot market (Khanna, Noe and Sonti, 2008). The results for document views are similar to the results for the different types of viewers. Overall, these findings point to the important role of size, underwriter reputation and IPO market conditions in determining investor demand for information.

To account for differences in the number of views by offering size, we hereafter scale the number of peer firm document views and unique viewers by the expected proceeds (in $ millions) disclosed in the document of interest, either the initial registration statement or the first pricing amendment.[9]

IV. Effect of Search on IPO Completion

Busaba, Benveniste and Guo (2001) examine the factors that affect the probability that an IPO will be withdrawn during the offering process. Central to their analysis is the proposition that weak investor demand for the shares of the offering will affect the ability of the underwriter to fully place the issue. If the issuing firm cannot lower the amount of expected proceeds sufficiently to meet investor demand, the issue will be withdrawn. They further hypothesize that withdrawal will be affected by investor reservation values. If the reservation value of the investor is less than the expected offer price, then the probability of withdrawal will increase.

Search activity for IPO offering documents may reflect both the demand for the offering and demand for information about the offering. If investor demand for the shares of the offer is relatively weak, perhaps due to a lack of investor awareness about the issuing firm (Merton, 1987), we would predict that the offer is likely to be unsuccessful and ultimately withdrawn. Indeed, approximately one third of the withdrawn IPOs in our sample are withdrawn prior to filing a pricing amendment.

In this section, we examine whether the number of viewers and documents viewed at the time of the filing of the initial S-1 can predict which IPOs will ultimately be successful in completing the offering. More formally, we test Hypothesis 1:

> H1*:* Increased EDGAR search intensity at the time of the filing of the initial registration statement reflects greater investor awareness and demand for IPO shares.

The prediction is a positive association between the number of viewers and document views of an issuing firm's S-1 and the probability that the offering will be completed. Because the initial registration statement does not typically disclose an offer price range, search intensity likely reflects a demand for the

[9] There is a high degree of correlation between the number of viewers both by type and by time: an offering with high demand for information at the time of the S-1 is likely to continue having high demand for subsequent filings.

offering that is not conditioned on price. Table 5 presents the results of a probit specification in which the dependent variable takes a value of one if the offer is completed and zero if the offer is withdrawn. The heading of each specification represents the type of viewer or document views as the main independent variable of interest (first row). All viewing variables are scaled by the expected proceeds in the S-1 (in millions) and winsorized at the 99% level (at the high end only). We control for the reputation of the underwriter, age of the IPO firm, market returns in the past 180 days and IPO market conditions prior to the filing of the S-1.

As shown in Table 5, the coefficient on the number of viewers, regardless of type, and peer firm document views is statistically significant and positive indicating that the greater the search activity with respect to the IPO and peer firms, the greater is the probability of completion. Interestingly, the coefficient on viewers who are more likely to be informed – human and peer firm viewers – are larger than other types of viewers such as viewers that access only the IPO document, reflecting the role of information production in the decision to withdraw. Older firms and firms that go public when there have been many prior IPOs are more likely to complete the offering. In summary, the greater the number of viewers and documents viewed, the less likely an offer will be withdrawn.

V. Investor Demand for Shares or Demand for Information?

The findings on the probability of completion provide evidence that the number of viewers has predictive power in determining which IPOs will be successful in completing the offering. However, in this paper we are primarily interested in whether we are capturing information generation by investors. In this section, we test Hypothesis 2:

> H2: Potential IPO investors access archival filings of peer firms on EDGAR to generate information that is useful in pricing the offering.

If this hypothesis is correct, then the filing of an IPO document should be accompanied by increased demand for information from the filings of comparable firms. In particular, some subset of viewers of IPO documents will subsequently search for information about peer firms on EDGAR to gather additional information that allows them to become more informed about the issuing firm. For example, the filing of

the S-1 for Visa may increase the views of previously filed offering documents and periodic reports of comparable firms such as American Express. We test this hypothesis by examining whether views of archival documents previously filed by peer firms is higher on days when an issuing firm with the same one-digit SIC industry code (SIC1) files an offering document. While observing such an association does not show how investors use archival information from peer firms to price an IPO, it is consistent with the relevance of archival information in the price discovery process.

We consider archival documents to be those filed at least two days prior to the filing of an IPO document. This eliminates contemporaneous filings of peer firm documents. We also eliminate all other IPO documents by the issuing firm. We form 10 daily portfolios of peer firm document views based upon the firm's SIC1 industry code. The sample consists of 2,216 total days (excluding weekends and trading holidays) during the sample period and 10 SIC1 portfolios resulting in a total of 22,160 SIC1-day observations.

Table 6 presents the frequency of filing days in which an IPO document in the same SIC1 as the issuer is filed and the number of peer firm document views on those days. If the filing of an offering document has no effect on number of peer firm documents viewed, then we would expect the same percentage of peer firm documents to be viewed as the percentage of days in which an offering document is filed (i.e., the null hypothesis is that the values in column 4 should be equal those in column 2).

The vast majority of same SIC1 days are not associated with the filing of any offering document (88.05%). Initial S-1, first offer price range amendment and final prospectus documents are filed during 4.12%, 3.47%, and 3.00% of same SIC1 days, respectively. By contrast, the percent of peer document views during those same SIC1-days is higher at 5.17%, 4.49%, and 4.02%, respectively, indicating greater viewing of archival documents on filing days relative to others, consistent with H2.

To understand the source of the increased viewing, we estimate OLS regression models of the effect of a document filing on the viewing of peer firm documents in Table 7. The dependent variable is the log of the number of peer firm document views in each of the 10 SIC1-day portfolios and we further subset the portfolios by the type of viewer: Human, Bot and Unsure. The independent variables of interest are indicator

variables set equal to one when there is an IPO document filed on the same day in the same SIC1 as the dependent variable's portfolio of peer firm document views (*Same SIC1 filing day*) and when there is an IPO document filed on the same day in a different SIC1 than the dependent variable's portfolio (*Different SIC1 filing day*). Additional controls include month, year and day of the week fixed effects.

As shown in the table, there is a positive and significant coefficient estimate on the number of peer firm document views for IPO document filing days whether for the same or different SIC code; views of peer firm documents on EDGAR increase by 6.1% when an S-1 is filed in the same SIC1 industry and by 2.9% when an S-1 is filed in a different SIC1 industry. However, there is a 5.5% decrease in views associated with first price amendment documents in the same SIC1 and a 4.9% decrease in different SIC1. The disaggregation of viewer types in models 2 through 4 indicate that this negative association is due to bot searches. That bots are less likely to view peer firm documents on filing days may indicate that resources devoted to search by bots are redirected to search by other means. Peer firm document views at the time of the filing of the final prospectus are almost 9% higher for peer firms in both the same and different SIC code as the issuing firm.

Consistent with viewers on EDGAR being informed, other than for first price amendment documents in the same SIC1, human viewers are associated with significantly positive and higher coefficient estimates on all IPO document filing days. Overall, these findings show that searchers increasingly view peer firm documents more often on days in which information about an IPO is made public. Collectively, these findings indicate that filings by issuing firms increase the demand by viewers and potential investors for information about peer firms. We next examine whether the demand for information affects IPO pricing.

VI. Effect of Search on Pricing

Many of the theories of pricing in newly issued securities rely on information provided by investors in the pre-market. To fully test these theories, one must have access to bookbuilding data. Traditional bookbuilding data, however, has been made available only to a limited set of researchers and in most cases, is incomplete and on a small sample of firms (see for example Hanley and Wilhelm, 1995, Aggarwal,

Prabhala and Puri, 2002 and Cornelli and Goldreich 2001, 2003). We suggest that the demand for information on the firm's IPO filings can be used as a proxy for bookbuilding information as well as the presence of informed investors, thus allowing a more comprehensive examination of this issue.

a. *Effect on offer price revisions*

Viewers of the first offer price range amendment have the opportunity to see an expected offer price and expected number of shares to be issued for the first time. All investors who visit the SEC website are, to a certain extent, "informed" by viewing the IPO's documents. However, investors can become better informed at this point by gathering additional information to determine if their expectations on the offer price range are correct. We hypothesize that this information gathering, as determined by the amount of EDGAR search, will be incorporated into the subsequent price revision (Benveniste and Spindt, 1989).

If the number of viewers and document views are related to the demand for information, then greater search activity should result in greater information generation, both good and bad, that can be used to determine the final offer price. This leads to the following hypothesis:

H3: Demand for information about the IPO firm and peer firms increases the number of informed investors, resulting in more informative prices.

Table 8 presents the effect of document views on the absolute change in offer price from the first price amendment to the offer date. The heading of each specification or column in the table represents the type of viewer or document views as the main independent variable of interest. All viewing variables are scaled by the expected proceeds in the first offer price range amendment and winsorized at the 99% level (at the high end only). Our specification controls for characteristics of the offering by including a dummy variable for whether the offer is VC-backed, the ranking of the underwriter and the age of the firm. Variables on market conditions around the time of the offering such as market returns and prior IPO market characteristics are also included. The regressions include industry and year fixed effects.

We use the absolute price change rather than the price revision because informed investor participation in the IPO process should generate information that has both a positive and a negative effect on pricing. We are, therefore, interested in whether the number of viewers and documents viewed increase the amount

of information generated during the IPO process irrespective of whether it moves the offer price upward or downward.

The number of viewers in all categories except bot viewers is positively related to the absolute change in offer price. We do not find any significance on the number of peer firm documents viewed. Overall, these finding support the hypothesis that heightened investor demand for information about the offering results in useful pricing information.

One concern about the interpretation of the effect of the number of viewers and document views on the absolute price revision is that these variables could be capturing demand for the issue in general rather than information gathering activities. We exploit the fact that the type of information revealed about the offering can be either positive or negative and examine those circumstances under which information revealed is likely to be of greatest value: when the final offer price is higher than the maximum price in the offer price range (*ΔP Positive*) and lower than the minimum price in the offer price range (*ΔP Negative*).

By dichotomizing the price revision into its positive and negative components, we can discriminate between a pure demand story in which a greater number of viewers and document views reflect investor interest and one that incorporates information generation. Thus, if the number of viewers and document views only reflect investor awareness and not information gathering, the relation between the number of viewers and document views for both positive and negative price revisions should be positive. Consistent with a supply and demand argument, stronger demand results in positive changes in the offer price. If investor demand for shares of the offering are weak, the underwriter will lower the offer price in order to clear the market.

However, if the number of viewers and document views proxy for demand for information, then the sign on the coefficient of the number of viewers and document views differs on whether the information generated is good or bad. As in the supply and demand story, a positive coefficient is expected when the change in offer price is positive. The coefficient on viewing for negative price revisions, however, will be *negative*, if greater intensity of viewing generates more negative information about the offer resulting in a lower final offer price and therefore a more negative price revision.

Table 9 presents the effect of the number of viewers and peer firm document views at the time of the filing of the first offer price range amendment on the change in offer price. Panel A examines positive changes in offer price and Panel B uses negative changes in offer price as the dependent variable. Our sample period is characterized by a relatively "cold" market and the majority of the offerings in our sample (428 out of 907) have negative price revisions of which 313 are outside of the offer price range. Positive price revisions occur in 361 IPOs with 210 IPOs pricing outside the offer price range. Missing data for EDGAR views at the first price amendment date reduce the number of observations in Panel A to 206 (out of the 210 above-range IPOs) and in Panel B to 300 (out of the 313 below-range IPOs).

The results in Panel A for positive price revisions indicate that the number of viewers in all categories is positively related to the change in offer price. Again, we do not find significance for the number of peer firm documents viewed. Our finding on positive price revision is consistent with both an information generation and an investor demand story about the effect of viewing on the change in offer price. In order to parse out these two effects, we examine negative price revisions in Panel B of Table 9.

If the number of viewers of EDGAR documents reflects primarily investor awareness of the offering, and is the dominant determinant of the positive relation we find between number of viewers and absolute price changes in Table 8, then the relation between the number of viewers and the negative change in the offer price should be positive. Fewer viewers, implying lower demand for the offering, will make the change in offer price more negative as the issuer must lower the price so that supply and demand will meet. A negative relation, however, should be present if the number of viewers reflects the intensity of information gathering about the offering. The more viewers, particularly those that gather additional information, the greater should be the negative price change.

In Panel B of Table 9 we discriminate between these two competing explanations. For all types of viewers, we see that the relation between the number of viewers and the size of the negative price revision is negative. This finding is inconsistent with a simple investor demand for shares in the offering story and consistent with our hypothesis that EDGAR viewers are generating information that is useful in setting the

final offer price. Overall, this section provides evidence that investors generate information demand for information affects the pricing of securities. The next section will examine the effect on the initial return.

b. *Effect on Initial Return*

According to the theory of Benveniste and Spindt (1989), underwriters reward investors for truthful revelation of information by a combination of underpricing and allocation. The empirical predictions of their model are twofold: First, underpricing is directly related to the ex-ante value of investors' information and second, underpricing is directly related to the level of interest in the pre-market. These two predictions lead to our final hypothesis:

> H4: Underpricing is used to both respond to the amount of interest in the offer and to compensate informed investors for revealing their private information to the lead underwriter.

Table 10 examines the effect EDGAR search on the initial return. In this regression, we include the number of viewers or document views at the time of the filing of the first offer price range amendment. Missing data on views reduce the number of observations from 907 IPOs to 874 IPOs. We control for the offer price revision which has been shown to be a predictor of underpricing (Hanley, 1993). The results show that an increase in the number of all types of viewers and peer firm document views has a positive and statistically significant effect on the initial return over and above that explained by the offer price revision.

The findings presented in the prior three tables, and those especially related to peer views, point to the role of both information on investor demand and more importantly, firm fundamentals being conveyed during bookbuilding.

VII. Conclusion

This paper uses searches of offering documents of initial public offerings and archival searches of peer firms to examine the role of informed investors in IPO pricing. Our research is part of a growing body of literature that examines whether web search traffic for information on firms is related to the pricing of the firm's securities.

The amount of search for filings on EDGAR could be related to investor awareness rather than demand for information as in Da, Engelberg and Gao (2011). For example, investor attention for IPOs could be generated through the use of media (Cook, Kieschnick, Van Ness, 2006; Liu, Sherman and Zhang; 2014). Consistent with an investor demand story, we show that the greater the number of viewers of an issuing firm's IPO documents, the higher is the probability that the offering will be successful.

Central to our thesis, however, is that IPO and peer firm document viewing is capturing demand for information. Consistent with this prediction, we find evidence that the number of views of historical documents of peer firms increases on days when an IPO files an offering document. This is consistent with the hypothesis that EDGAR searches are searches for information about the firm that may be useful in setting the offer price.

More importantly, we can further discriminate between informed demand and overall investor demand by examining the effect of the number of viewers and document views for IPOs with a negative price revision. If overall demand for the offering is being captured by viewing, then the effect of viewing on the negative price revision is hypothesized to be positive. In contrast, if search is associated with informed demand, then the relationship should be negative. We find a significant and negative relationship between the number of viewers and the negative price revision indicating that search on EDGAR is related to informed demand. Finally, we show that greater the number of viewers and peer firm document viewers, the higher the initial return on the offering. We provide one of the first studies of actual demand for information by potential investors and its subsequent effect on the pricing of the firm's securities. Our findings are consistent with asset pricing theories of the role of informed investors in price formation and more specifically, theories of bookbuilding in which informed investors are compensated for revealing information through underpricing.

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Appendix A
EDGAR Log File Classification

The activity of each visitor to the sec.gov web portal is recorded in the SEC server log files using the open source Apache web server application. Each unique visitor request (e.g., "clicking" a web link) is recorded with the following structure:

IP identity user [day/month/year:hour:minute:second -zone] "{request line}" status size "{referrer}" "{user agent}"

As an example, here is the log file for one user who viewed a form 8-K filed by Microsoft Corp.:

167.181.12.abc - - [31/Dec/2008:01:08:39 -0500] "GET /Archives/edgar/data/**789019**/***000119312508157953***/ 0001193125-08-157953-index.htm HTTP/1.1" 200 6224 "http://www.sec.gov/cgi-bin/browse-idea?action=getcompany&CIK=**MSFT**&owner= exclude&count=40" "Mozilla/4.0 (compatible; MSIE 6.0; Windows NT 5.1; SV1; STIE60-021004; STIE60-020212; .NET CLR 1.0.37"

The following information is parsed from the log file:

- The web address (167.181.12.abc) which is partially anonymized (i.e., the last three digits have been changed to "abc").
- {request line} "GET /Archives/edgar/data/**789019**/***000119312508157953***/0001193125-08-157953-index.htm HTTP/1.1"
  - By merging the CIK **789019** and accession number for the document ***000119212408157953*** with information from the EDGAR master index file we can determine the company name (Microsoft) and type of document (8-K).
- {referrer} "http://www.sec.gov/cgi-bin/browse-idea?action=getcompany&CIK=**MSFT**&owner= exclude&count=40"
  - The searcher manually requests Microsoft (MSFT) from the EDGAR website, excludes form 4s and shows 40 hits per page and is thus, classified as a human unique viewer.
- {user agent}"Mozilla/4.0 (compatible; MSIE 6.0; Windows NT 5.1; SV1; STIE60-021004; STIE60-020212; .NET CLR 1.0.37
  - In order to refine unique viewers with the same IP address, we use the combination of IP address, operating system and web browser (MSIE) to classify viewers.

We classify unique viewers into human, bot and unsure using the following:

- Human: The referring address indicates a sec.gov search for EDGAR filing (as in the example above). Examples include:
  - "action=getcurrent" = *current event search*
  - "Find+Companies" = *legacy SEC filing search (example use previously)*
  - "cgi-bin/srch-edgar" = *pre-legacy legacy search*
  - "EDGARFSClient" = *full text search*
  - All other requests by the same IP in the same day are also classified as human, This may overstate the number of human viewers.
- Bot: The user self identifies as a web crawler in the user agent field. Examples include:
  - "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)"
  - "Mozilla/5.0 (compatible; Yahoo! Slurp/3.0http://help.yahoo.com/help/us/ysearch/slurp)"
  - Full crawler list: (wget|Googlebot|polybot|Yahoo\!\s*Slurp|spider|robot|perl|python|lwp|crawler)
- Unsure: All other requesters that cannot be classified as either human or bot.
  - These searches may be a result of web crawling algorithms that modify their user agent information in way that obfuscates their identity or they could be human searchers that do not manually enter a request in a field as required by our methodology for human classification.

Below are some examples of a human and a bot visit to the EDGAR website:

Typical Human Visit
Sequence of log entries for unique IP searching on Sungame Corp.

{request line} index of filings for Sungame Corp 10-K filed previous day -- {referrer} EDGAR search of company name "Sungame"
00:10:29 "GET /Archives/edgar/data/1462506/000111776812000120/0001117768-12-000120-index.htm HTTP/1.1" "http://www.sec.gov/cgi-bin/browse-edgar?company=sungame&match=&CIK=&filenum=&State=&Country= &SIC=&owner=exclude&Find=Find+Companies&action=getcompany"

{request line} VIEWING 10-K (20 seconds) -- COUNT AS DOCUMENT VIEW #1
00:10:30 "GET /Archives/edgar/data/1462506/000111776812000120/mainbody.htm HTTP/1.1" "http://www.sec.gov/Archives/edgar/data/1462506/000111776812000120/0001117768-12-000120-index.htm"

{request line} reload index page
00:10:50 "GET /Archives/edgar/data/1462506/000111776812000120/0001117768-12-000120-index.htm HTTP/1.1"

{request line} index of filings for Sungame Corp PRE 14A filed previous day -- {referrer} EDGAR search of company name "Sungame"
00:10:52 "GET /Archives/edgar/data/1462506/000111776812000122/0001117768-12-000122-index.htm HTTP/1.1" "http://www.sec.gov/cgi-bin/browse-edgar?company=sungame&match=&CIK=&filenum=&State=&Country= &SIC=&owner=exclude&Find=Find+Companies&action=getcompany"

{request line} VIEWING PRE 14A (32 seconds) – COUNT AS DOCUMENT VIEW #2
00:10:53 "GET /Archives/edgar/data/1462506/000111776812000122/mainbody.htm HTTP/1.1" "http://www.sec.gov/Archives/edgar/data/1462506/000111776812000122/0001117768-12-000122-index.htm"

{request line} back to 10-K index page
00:11:25 "GET /Archives/edgar/data/1462506/000111776812000122/0001117768-12-000122-index.htm HTTP/1.1"

{request line} back to PRE 14A index page
00:11:27 "GET /Archives/edgar/data/1462506/000111776812000120/0001117768-12-000120-index.htm HTTP/1.1"

{request line} RE-VIEWING 10-K (2 minutes 6 seconds) – ALREADY COUNTED (DO NOT COUNT AGAIN)
00:11:28 "GET /Archives/edgar/data/1462506/000111776812000120/mainbody.htm HTTP/1.1" "http://www.sec.gov/Archives/edgar/data/1462506/000111776812000120/0001117768-12-000120-index.htm"

{request line} back to 10-K index page
00:13:34 "GET /Archives/edgar/data/1462506/000111776812000120/0001117768-12-000120-index.htm HTTP/1.1"

{request line} back to PRE 14A index page
00:13:38 "GET /Archives/edgar/data/1462506/000111776812000122/0001117768-12-000122-index.htm HTTP/1.1"

{request line} RE-VIEWING PRE 14A (4 seconds) -- ALREADY COUNTED (DO NOT COUNT AGAIN)
00:13:39 "GET /Archives/edgar/data/1462506/000111776812000122/mainbody.htm HTTP/1.1" "http://www.sec.gov/Archives/edgar/data/1462506/000111776812000122/0001117768-12-000122-index.htm"

{request line} back to 10-K index page
00:13:43 "GET /Archives/edgar/data/1462506/000111776812000122/0001117768-12-000122-index.htm HTTP/1.1"

{request line} RE-VIEWING 10-K (11 minutes 57 seconds) -- ALREADY COUNTED (DO NOT COUNT AGAIN)
00:13:44 "GET /Archives/edgar/data/1462506/000111776812000122/mainbody.htm HTTP/1.1" "http://www.sec.gov/Archives/edgar/data/1462506/000111776812000122/0001117768-12-000122-index.htm"

{request line} back to 10-K index page
00:25:41 "GET /Archives/edgar/data/1462506/000111776812000122/0001117768-12-000122-index.htm HTTP/1.1"

{request line} VIEWING 10-K EXHIBIT (30 seconds) -- ALREADY COUNTED AS DOCUMENT VIEW (DO NOT COUNT AGAIN)
00:25:43 "GET /Archives/edgar/data/1462506/000111776812000122/exhibit321.htm HTTP/1.1" "http://www.sec.gov/Archives/edgar/data/1462506/000111776812000122/0001117768-12-000122-index.htm"

Typical “Bot” Visit
Sequence of log entries for a self-identified web crawler

{request line} Sequence of Form 4 filings -- {referrer} blank because crawler is simply scraping new documents -- {user agent} identified as Googlebot crawler
For each request -- Status code 503 returned (server busy) indicating webserver limiting web crawling due to high traffic

72.172.227.abc [31/Mar/2012:01:01:30 -0400] "GET /Archives/edgar/data/1190163/000035294704000012/xslF345X02/hes59.xml HTTP/1.1" 503 637 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)”
72.172.227.abc [31/Mar/2012:01:01:32 -0400] "GET /Archives/edgar/data/352947/000035294704000012/xslF345X02/hes59.xml HTTP/1.1" 503 637 "-" “Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)”
72.172.227.abc [31/Mar/2012:01:46:45 -0400] "GET /Archives/edgar/data/1255995/000119968304000060/xslF345X02/edgardoc.xml HTTP/1.1" 503 637 "-" “Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)”
72.172.227.abc [31/Mar/2012:01:46:46 -0400] "GET /Archives/edgar/data/858877/000119968304000060/xslF345X02/edgardoc.xml HTTP/1.1" 503 637 "-" “Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)”
72.172.227.abc [31/Mar/2012:01:46:46 -0400] "GET /Archives/edgar/data/1199159/000119915904000005/xslF345X02/edgar.xml HTTP/1.1" 503 637 "-" “Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)”
72.172.227.abc [31/Mar/2012:01:46:47 -0400] "GET /Archives/edgar/data/1141719/000119915904000005/xslF345X02/edgar.xml HTTP/1.1" 503 637 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)”
72.172.227.abc [31/Mar/2012:04:21:48 -0400] "GET /Archives/edgar/data/1284621/000120919109026922/xslF345X02/c85657_3x5.xml HTTP/1.1" 503 637 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)”
72.172.227.abc [31/Mar/2012:04:21:49 -0400] "GET /Archives/edgar/data/894315/000120919109026922/xslF345X02/c85657_3x5.xml HTTP/1.1" 503 637 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)”

Another sequence of views, each view only a second or less in duration (toggles back and forth between two companies)

72.172.227.abc [31/Mar/2012:05:36:35 -0400] "GET /Archives/edgar/data/1138755/000120919108067637/xslF345X03/c78749_4x0.xml HTTP/1.1" 503 637 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)”
72.172.227.abc [31/Mar/2012:05:36:36 -0400] "GET /Archives/edgar/data/1138755/000120919108067636/xslF345X03/c78748_4x0.xml HTTP/1.1" 503 637 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)”
72.172.227.abc [31/Mar/2012:05:36:36 -0400] "GET /Archives/edgar/data/1379384/000120919108067637/xslF345X03/c78749_4x0.xml HTTP/1.1" 503 637 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)”
72.172.227.abc [31/Mar/2012:05:36:37 -0400] "GET /Archives/edgar/data/1138755/000120919108067638/xslF345X03/c78750_4x0.xml HTTP/1.1" 503 637 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)”
72.172.227.abc [31/Mar/2012:05:36:37 -0400] "GET /Archives/edgar/data/1138755/000120919108067640/xslF345X03/c78752_4x0.xml HTTP/1.1" 503 637 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)”
72.172.227.abc [31/Mar/2012:05:36:37 -0400] "GET /Archives/edgar/data/1379384/000120919108067636/xslF345X03/c78748_4x0.xml HTTP/1.1" 503 637 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)”
72.172.227.abc [31/Mar/2012:05:36:38 -0400] "GET /Archives/edgar/data/1379384/000120919108067638/xslF345X03/c78750_4x0.xml HTTP/1.1" 503 637 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)”
72.172.227.abc [31/Mar/2012:05:36:38 -0400] "GET /Archives/edgar/data/1379384/000120919108067640/xslF345X03/c78752_4x0.xml HTTP/1.1" 503 637 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)”

Figure 1
Cumulative Views of the Offering Documents for Visa Inc. IPO Document Type

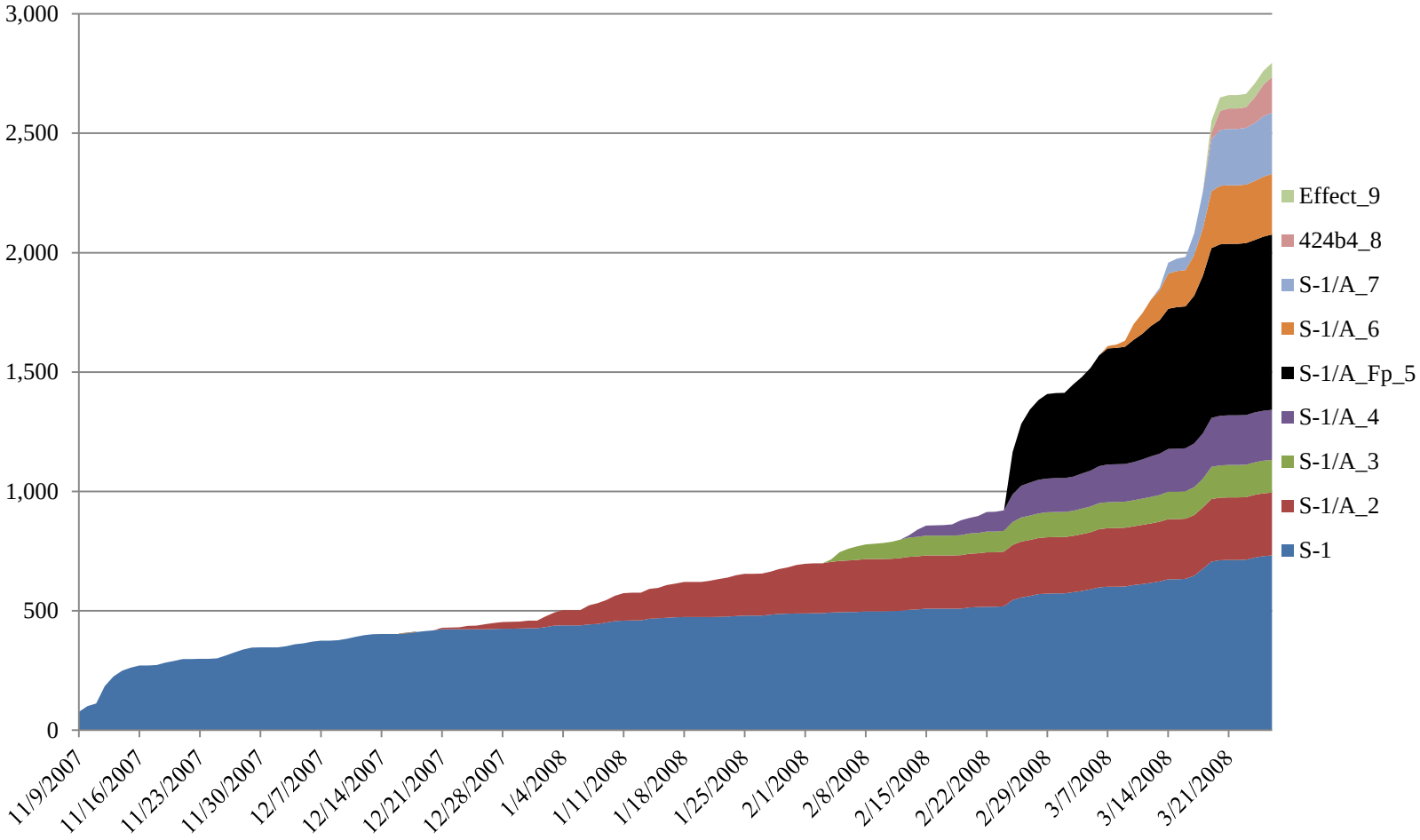


Figure 2
Time series of Number of IPOs and Proceeds

Time series of the sample of 1,258 completed (907) and withdrawn (351) IPOs that filed an initial registration statement (S-1) and completed their IPO (or withdrew their IPO registration) between February 2003 and March 2012. The year is the filing year of the S-1.

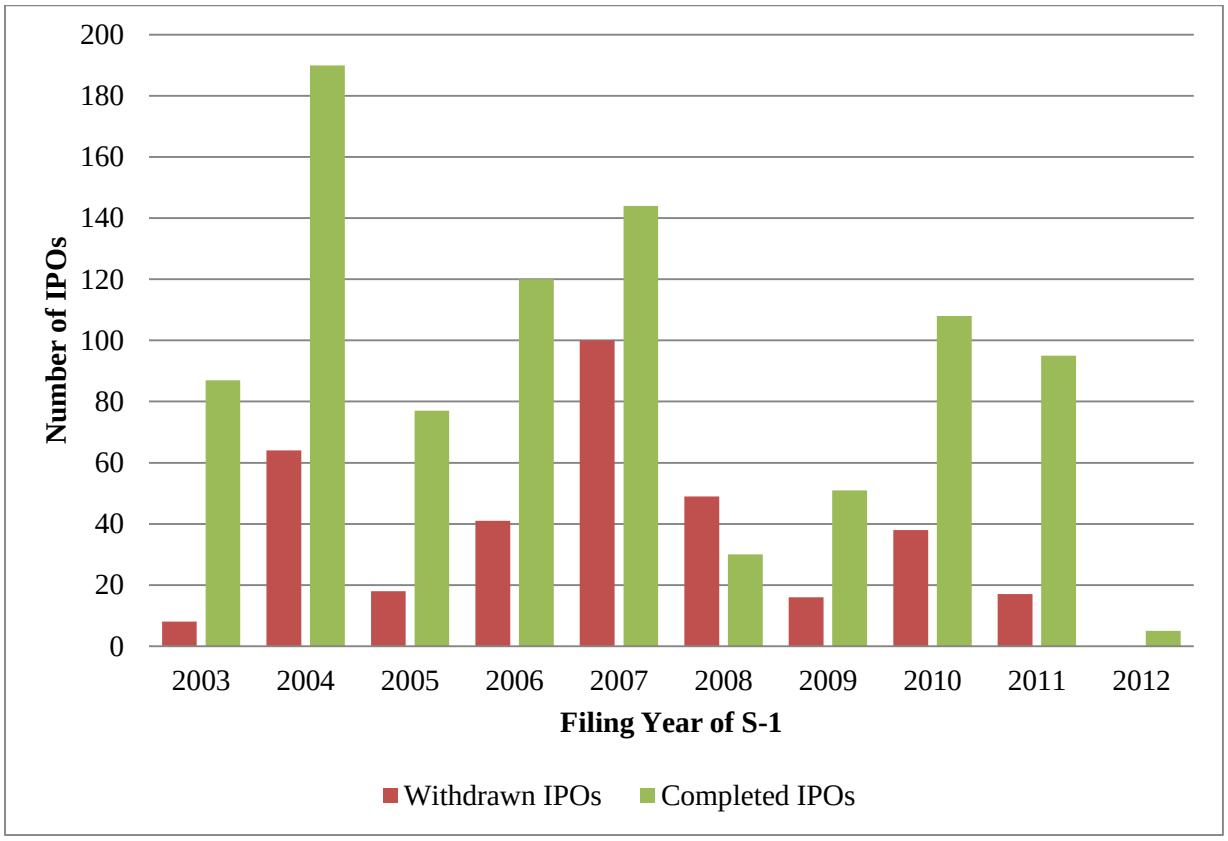


Figure 3
Monthly Document Views by Form Type

Cumulative monthly document views from 2003 to 2012 on EDGAR for all companies filing a 10-K, 10-Q, S-1, F-1, F-10, 20-F and 40-F and amendments.

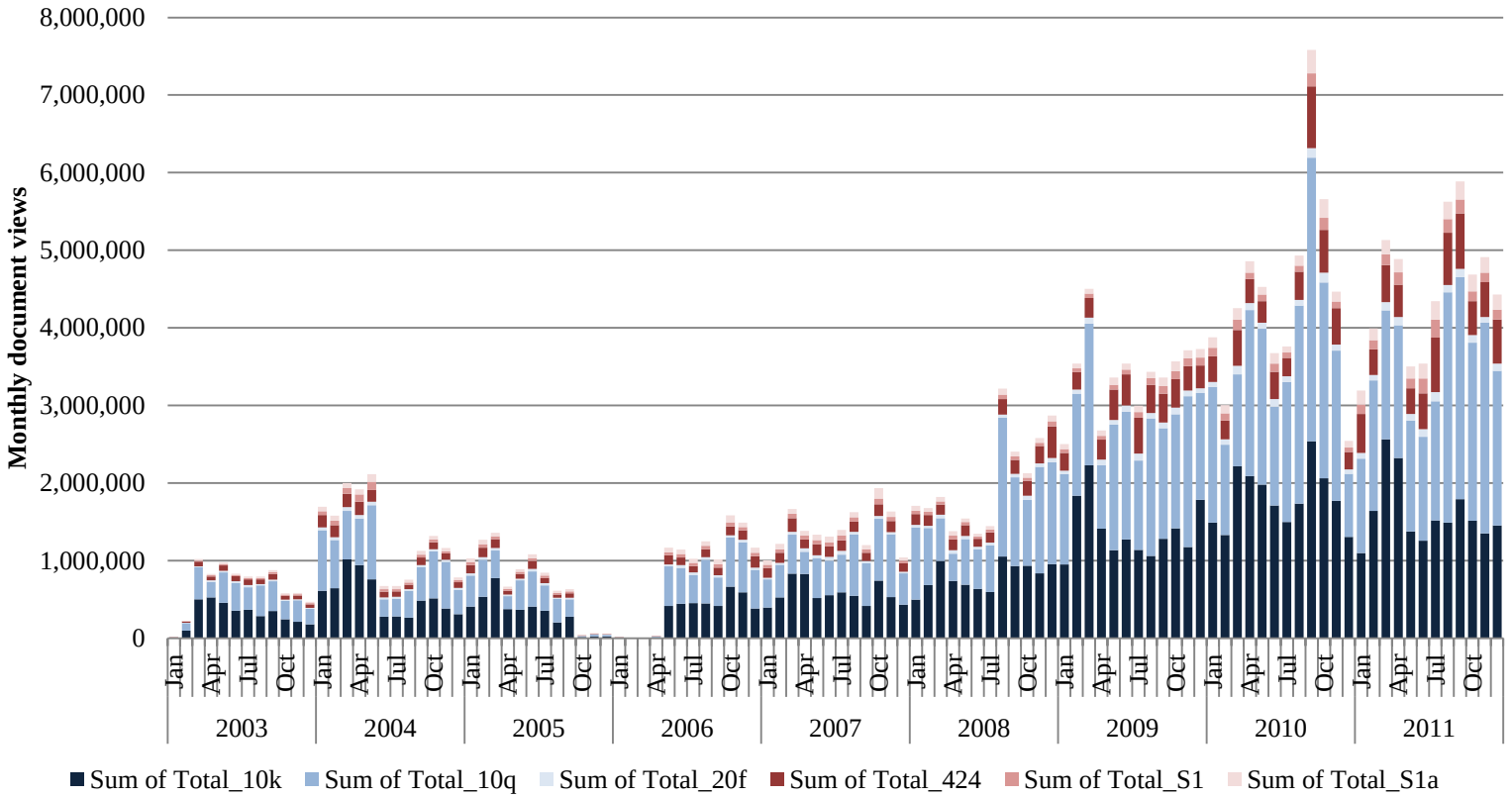


Figure 4
Monthly Document Views by Type of Viewer

Cumulative monthly document views from 2003 to 2012 on EDGAR for all companies filing a 10-K, 10-Q, S-1, F-1, F-10, 20-F and 40-F, and amendments, by type of viewer: human, bot and unsure.

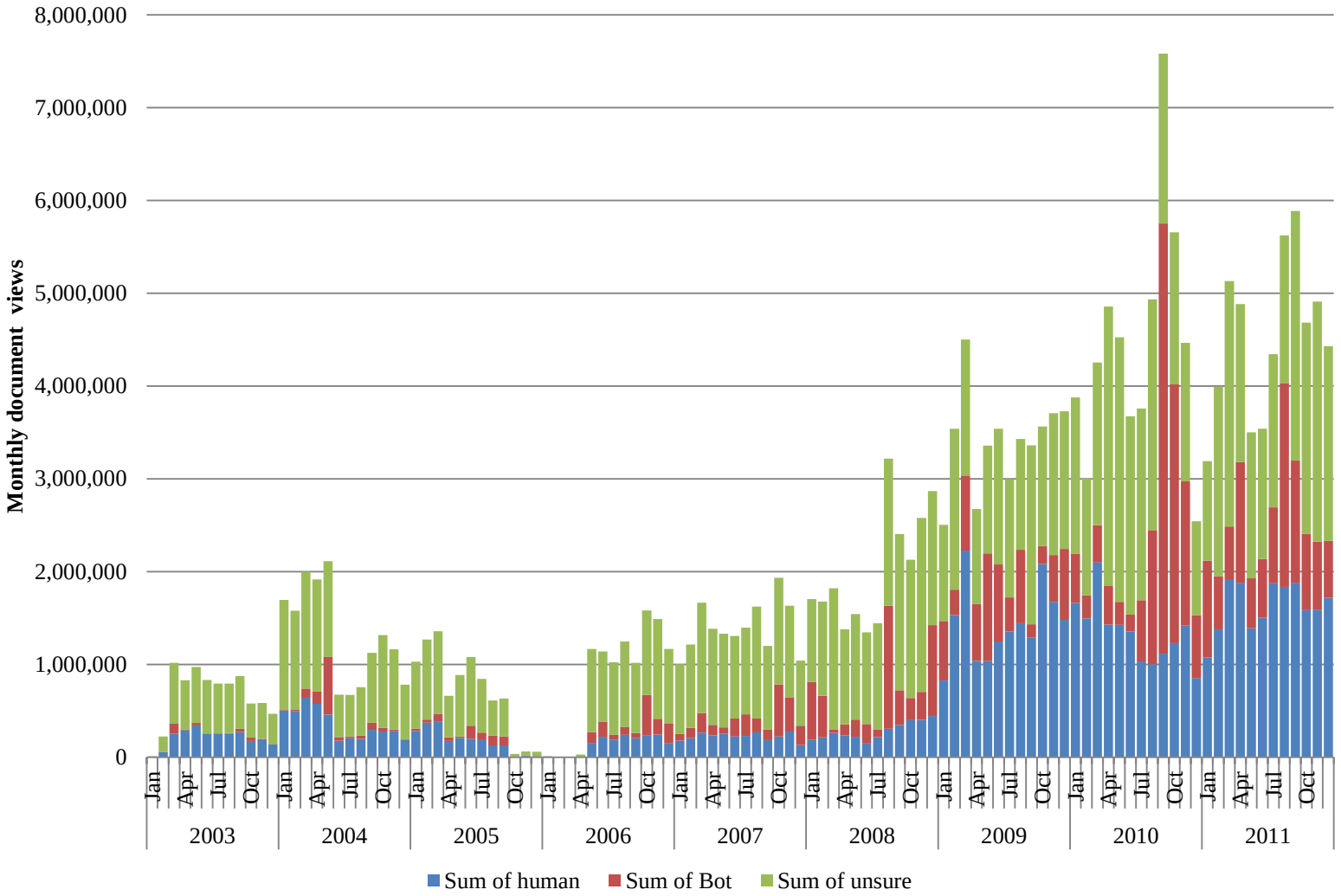
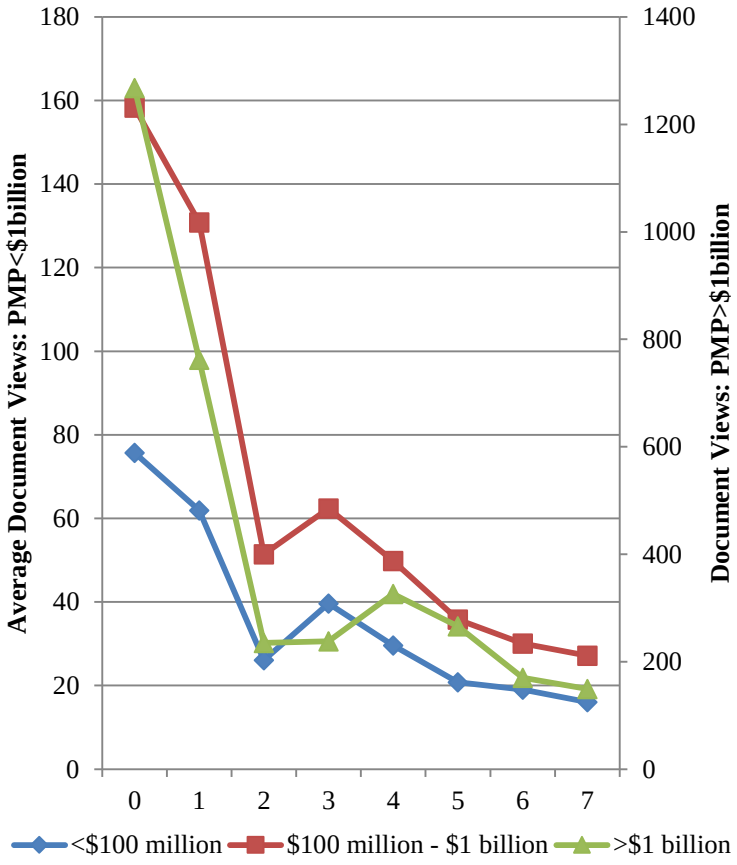
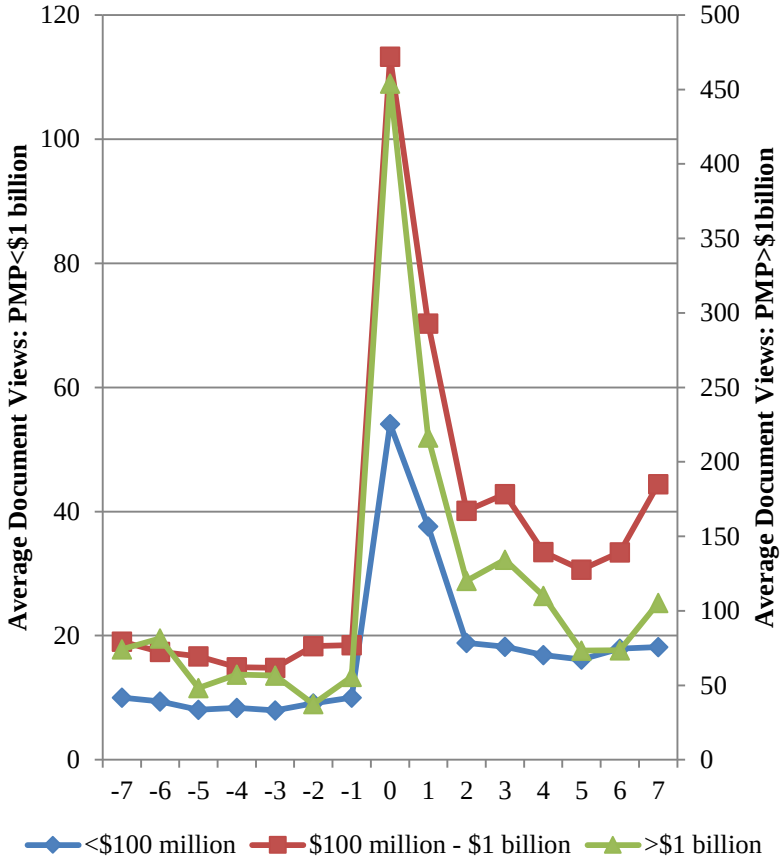


Figure 5
Average Document Views Around Filing of S-1 and First Offer Price Range Amendment

Average number of views of offering documents on the date of the filing of the S-1 and the first price amendment for 1,258 IPOs that filed their initial registration statement (S-1) and completed their IPO (or withdrew their IPO registration) between February 2003 and March 2012. Although not shown, a similar pattern exists for views around the final offer prospectus (424B). Document views are present by category of proceeds: <$100 million, $100 million-$1billion and >$1 billion (secondary axis).



a. S-1 Views



b. First Offer Price Range S-1/A Views

Table 1
Event Days During Visa Inc.'s IPO

The timing, document filed, key events and new valuation information associated with the offering documents filed for Visa Inc.'s IPO. Viewers are categorized as all viewers of the IPO's documents (*All Viewers*), viewers who only view the IPO document (*IPO Viewers*) and of viewers of the IPO document who view at least one other peer firm document (*Peer Firm Viewers*). Number of viewers and number of peer firm documents viewed is for the day of and the day after the filing date of the offering document.

Event Date	Date	Document Filed	Key Events	Valuation Information	All Viewers	IPO Viewers	Peer Firm Viewers	Peer Firm Documents Viewed
T-4 months	11/09/07	S-1	SEC review process begins	E(Proceeds) = $10b	1,381	1,261	120	861
	12/21/07	S-1/A_2						
	02/04/08	S-1/A_3						
	02/13/08	S-1/A_4						
T-1 months	02/25/08	S-1/A_FP_5	File range set, road show and bookbuilding begins	P_{mid} = $39.50, Shrs = 406m, E(Proceeds)=$16b	2,584	2,005	579	7,148
	03/07/08	S-1/A_6						
	03/13/08	S-1/A_7						
T=0	03/18/08	EFFECT	Offering price set and shares sold	P_{ipo} = $44, Shrs = 406m, ΔP= 11.4%, Proceeds=$17.9b				
T+1	03/19/08	424B4_8	Trading begins	P_{mkt} = $56.50, IR=28.4%	1,478	1,050	428	5,720

Table 2
Summary Statistics on Initial Public Offerings

Descriptive statistics for the sample of 1,258 IPOs that filed an initial registration statement and completed their IPO (or withdrew their IPO registration) between February 2003 and March 2012. Panel A presents summary statistics for the sample of completed offerings and Panel B for withdrawn offerings. *Proceeds* (in millions) are subscripted by the file type source for proceeds: S1 represents the initial registration statement (S-1), FP the amendment with the first offer price or file range and OP the final prospectus (424B). *Underwriter Rank* is the Carter-Manaster underwriter rank of the IPO's lead underwriter, *VC* is a dummy variable if the issue is VC-backed, *Age* (in years) is the difference between the IPO's S-1 date and its founding date, *Mkt Returns* are buy and hold value weighted CRSP returns for both the 180 calendar days before the filing of the S-1 ($Mkt\ Return_{-180toS1}$) and between the S-1 and the offer date ($Mkt\ Return_{S1toOP}$), $Number\ of\ IPOs_{-180toS1}$ is the total number of IPOs that went public in the 180 calendar days prior to the IPO's filing of its S-1 using the selection criteria for our sample, $Average\ IR_{-180toS1}$ is the average initial return of IPOs that went public in the 180 calendar days prior to the IPO's filing of its S-1 using the selection criteria for our sample, ΔP is the change in offer price from the midpoint of the first price range to the final offer price, ΔP+ and ΔP- are dummy variables equal to one if ΔP is positive and negative, respectively, and IR is the initial return from the final offer price to the first day trading price.

Variable	N	Mean	Median	Min	Max	Std. Dev.
			Panel A: Completed Offerings			
$Proceeds_{S1}$	907	$218.59	$115.00	$1.38	$10,000.00	$453.90
$Proceeds_{FP}$	907	$235.93	$105.52	$1.05	$16,037.00	$706.22
$Proceeds_{OP}$	907	$239.85	$107.90	$1.40	$17,864.00	$849.03
Underwriter Rank	907	8.00	9	1	9	1.63
VC	907	38.59%	0	0	1	48.71%
Age	907	20.04	10	0	200	27.41
Mkt $Return_{-180toS1}$	907	8.47%	8.89%	-34.93%	54.22%	10.00%
Mkt $Return_{S1toOP}$	907	4.44%	5.01%	-44.12%	52.85%	7.89%
Number of $IPOs_{-180toS1}$	907	66.27	71	2	119	27.52
Average $IR_{-180toS1}$	907	11.56%	11.78%	-10.59%	22.73%	3.83%
ΔP	907	-4.07%	0.00%	-70.59%	146.15%	20.71%
ΔP+	907	39.80%				
ΔP-	907	47.19%				
IR	907	12.11%	6.43%	-29.55%	125.41%	19.28%
			Panel B: Withdrawn Offerings			
$Proceeds_{S-1}$	351	$193.76	$100.00	$8.70	$4,600.00	$317.45
$Proceeds_{FP}$	116	$141.90	$78.48	$7.67	$1,221.87	$174.54
Underwriter Rank	351	7.82	8.50	0	9	1.87
Age	351	12.12	7.00	0	134	19.24
Mkt $Return_{-180toS1}$	351	5.81%	5.83%	-34.93%	33.81%	8.79%
Number of $IPOs_{-180toS1}$	351	69.11	74.00	5	116	25.17
Average $IR_{-180toS1}$	351	11.65%	11.59%	5.11%	22.73%	3.18%

Table 3
Summary Statistics on Document Views and Viewers

Summary statistics on the number of documents from Jan 1994 – Mar 2012 and viewers from the EDGAR log files from February 2003 to March 2012. Panel A presents the number of total documents, total document views and average document views by type of filing in the EDGAR log file. Panel B presents the number of viewers on the day of and the day after the filing of the S-1, first offer price range amendment and the final prospectus by type of viewer for the sample of IPOs. Viewers are categorized as all viewers of the IPO's documents (*All Viewers*), human viewers (*All Viewers Human*), bot viewers (*All Viewers Bot*), unsure viewers (*All Viewers Unsure*), viewers who only view the IPO document (*IPO Viewers*), viewers of the IPO document who view at least one other peer firm document (*Peer Firm Viewers*), peer firm viewers who view at least one peer firm document in the same one-digit SDC industry code as the IPO (*Peer Firm Viewers SIC1),* and the number of peer firm documents viewed (*Peer Firm Document Views*).

Panel A: Documents and Document Views (Edgar Log File)

Type of document	Filing type	Total documents	Total document views	Average document views
Periodic	10-Q	573,221	114,284,959	199
Periodic	10-K	219,457	102,549,907	467
Periodic	20-F and 40-F	13,813	5,876,648	425
Offering	S-1, SB-1, SB-2, F-1, F-10	20,921	6,845,106	327
Offering	Amended S-1, SB-1, SB-2, F-1, F-10	52,884	9,986,774	189
Offering	424B	36,692	5,747,941	157
Total	All	916,988	245,291,335	267

Panel B: Viewers and Document Views (IPO Sample Only)

	S-1 (905 IPOs)			*First Offer Price Range (874 IPOs)*			*Final Prospectus 424B (876 IPOs)*		
	Mean	Median	Max	Mean	Median	Max	Mean	Median	Max
All Viewers	339	121	31,976	167	78	3,723	210	115	5,887
All Viewers Human	103	45	4,814	74	27	1,212	98	32	2,627
All Viewers Bot	5	2	163	4	2	82	4	2	149
All Viewers Unsure	231	67	27,011	90	46	3,188	108	69	3,223
IPO Viewers	250	66	29,565	94	38	3,037	111	55	4,384
Peer Firm Viewers	89	51	2,411	73	39	838	100	58	1,503
Peer Firm Viewers SIC1	43	22	798	40	19	443	55	30	717
Peer Firm Document Views	3,239	1,005	209,282	7,282	877	362,253	11,075	1,548	317,772

Table 4

Determinants of Viewers and Peer Firm Document Views Around the Filing of the S-1

OLS regression where the dependent variable is the number of viewers on the day of and day after the filing of the initial registration statement for the sample of 1,258 IPOs that filed an initial registration statement and completed their IPO (or withdrew their IPO registration) between February 2003 and March 2012. Viewers are categorized as all viewers of the IPO's documents (*All Viewers*), human viewers (*All Viewers Human*), bot viewers (*All Viewers Bot)*, unsure viewers (*All Viewers Unsure*), viewers who only view the IPO document (*IPO Viewers*), viewers of the IPO document who view at least one other peer firm document (*Peer Firm Viewers*), peer firm viewers who view at least one peer firm document in the same one-digit SDC industry code as the IPO (*Peer Firm Viewers SIC1)*, and the number of peer firm documents viewed (*Peer Firm Document Views*). All viewer variables are in logs. Independent variables include the log of proceeds in $ millions indicated on the S-1 (*Proceeds$_{S1}$*), the Carter-Manaster underwriter rank (*Underwriter Rank*) of the lead underwriter, the log of *Age+1* (in years), the difference between the IPO's S-1 date and its founding date, *Mkt Return$_{-180toS1}$*, the buy and hold value weighted CRSP returns for the 180 calendar days before the filing of the S-1, *Number of IPOs$_{-180toS1}$*, the total number of IPOs that went public in the 180 calendar days prior to the IPO's filing of its S-1 using the selection criteria for our sample, and *Average IR$_{-180toS1}$*, the average initial return of IPOs that went public in the 180 calendar days prior to the IPO's filing of its S-1 using the selection criteria for our sample. Includes industry (SIC1) and year fixed effects. T-statistics are in parentheses below the coefficients. *, **, *** indicate significance at the 10, 5 and 1% levels. Standard errors are clustered by industry (SIC1).

Variables	All Viewers (1)	All Viewers Human (2)	All Viewers Bot (3)	All Viewers Unsure (4)	IPO Viewers (5)	Peer Firm Viewers (6)	Peer Firm Viewers SIC (7)	Peer Firm Document Views (8)
Ln(Proceeds$_{S1}$)	0.189***	0.166***	0.043	0.198***	0.179***	0.186***	0.189***	0.200**
	(3.81)	(3.89)	(1.21)	(4.07)	(3.37)	(4.65)	(5.38)	(2.87)
Underwriter Rank	0.073***	0.059**	0.019**	0.084***	0.085***	0.051**	0.057**	0.066**
	(3.49)	(3.01)	(2.30)	(3.58)	(3.74)	(2.70)	(2.63)	(2.82)
Ln(Age)	-0.005	0.019	0.003	-0.017	-0.016	0.021	0.000	0.026
	(-0.13)	(0.67)	(0.11)	(-0.38)	(-0.35)	(0.69)	(0.01)	(0.49)
Mkt Return$_{-180toS1}$	0.776	1.133***	0.485*	0.443	0.617	0.987**	1.103**	0.719
	(1.68)	(3.74)	(1.98)	(0.75)	(1.28)	(2.42)	(2.56)	(1.70)
Number of IPOs$_{-180toS1}$	-0.006**	-0.006***	-0.002*	-0.005**	-0.004*	-0.009***	-0.010***	-0.009**
	(-3.14)	(-3.52)	(-1.91)	(-2.78)	(-2.02)	(-4.47)	(-6.15)	(-2.90)
Average IR$_{-180toS1}$	-0.527	-0.617	-1.242	-0.310	-0.907	0.167	0.835	0.720
	(-0.69)	(-1.12)	(-1.71)	(-0.36)	(-1.14)	(0.23)	(1.18)	(1.25)
Industry FE	Y	Y	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y	Y	Y
Constant	2.344***	1.455***	-0.395	1.866***	1.979***	1.327***	-1.704***	3.991***
	(8.65)	(5.92)	(-1.23)	(6.82)	(6.29)	(5.86)	(-7.07)	(10.40)
Observations	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256
Adjusted R^2	0.467	0.555	0.513	0.367	0.455	0.415	0.404	0.441

Table 5

Effect of Viewers and Document Views on the Probability of Offer Completion

Probit analysis of the effect of unique viewers and document views the day of and day after the filing of the initial registration statement on the probability that the IPO will be completed for the sample of 1,258 IPOs that filed an initial registration statement and completed their IPO (or withdrew their IPO registration) between February 2003 and March 2012. Eight IPOs have missing data on views at the S-1 date and are excluded. The dependent variable is a dummy variable equal to 1 if the offer is completed, 0 if withdrawn. The main independent variable of interest, viewers and document views at the time of the filing of the initial registration statement (S-1), are categorized as all viewers of the IPO's documents (*All Viewers*), human viewers (*All Viewers Human*), bot viewers (*All Viewers Bot*), unsure viewers (*All Viewers Unsure*), viewers who only view the IPO document (*IPO Viewers*), viewers of the IPO document who view at least one other peer firm document (*Peer Firm Viewers*), peer firm viewers who view at least one peer firm document in the same one-digit SDC industry code as the IPO (*Peer Firm Viewers SIC1),* and the number of peer firm documents viewed (*Peer Firm Document Views*). All viewer variables are scaled by proceeds and winsorized at the 99% level (one-sided). Independent variables include the Carter-Manaster underwriter rank (*Underwriter Rank*) of the lead underwriter, the log of *Age+1* (in years), the difference between the IPO's S-1 date and its date of founding, $Mkt\ Return_{-180toS1}$, the buy and hold value weighted CRSP returns for the 180 calendar days before the filing of the S-1, $Number\ of\ IPOs_{-180toS1,}$ the total number of IPOs that went public in the 180 calendar days prior to the IPO's filing of its S-1 using the selection criteria for our sample, and $Average\ IR_{-180toS1}$, the average initial return of IPOs that went public in the 180 calendar days prior to the IPO's filing of its S-1 using the selection criteria for our sample. Includes industry (SIC1) and year fixed effects. T-statistics are in parentheses below the coefficients. *, **, *** indicate significance at the 10, 5 and 1% levels. Standard errors are clustered by industry (SIC1).

	Dependent Variable: Probability of Offer Completion							
	(Column Heading Represents the Type of Viewer or Views as the Independent Variable)							
	All Viewers	All Viewers Human	All Viewers Bot	All Viewers Unsure	IPO Viewers	Peer Firm Viewers	Peer Firm Viewers SIC1	Peer Firm Document Views
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Viewer or Views	0.052***	0.157***	2.347***	0.076***	0.073***	0.166***	0.285**	0.003*
	(3.07)	(2.97)	(2.96)	(2.96)	(2.99)	(2.76)	(2.56)	(1.95)
Underwriter Rank	0.032	0.039	0.040	0.026	0.027	0.038	0.034	0.028
	(1.33)	(1.57)	(1.60)	(1.11)	(1.14)	(1.54)	(1.39)	(1.18)
Ln(Age)	0.274***	0.274***	0.274***	0.273***	0.274***	0.273***	0.273***	0.273***
	(6.74)	(6.75)	(6.74)	(6.74)	(6.75)	(6.73)	(6.72)	(6.72)
Mkt Return$_{-180toS1}$	0.559	0.501	0.541	0.568	0.576	0.473	0.487	0.588
	(0.98)	(0.89)	(0.96)	(1.00)	(1.01)	(0.84)	(0.87)	(1.05)
Number of IPOs$_{-180toS1}$	0.008**	0.008**	0.007**	0.008**	0.008**	0.008**	0.008**	0.007**
	(2.20)	(2.18)	(2.05)	(2.16)	(2.15)	(2.21)	(2.18)	(2.05)
Average IR$_{-180toS1}$	-1.021	-0.910	-0.892	-1.003	-0.976	-1.024	-1.102	-1.252
	(-0.65)	(-0.59)	(-0.58)	(-0.64)	(-0.62)	(-0.66)	(-0.71)	(-0.81)
Industry FE	Y	Y	Y	Y	Y	Y	Y	
Year FE	Y	Y	Y	Y	Y	Y	Y	
Constant	0.117	0.077	0.074	0.144	0.148	0.070	0.220	-0.057
	(0.14)	(0.09)	(0.09)	(0.17)	(0.18)	(0.08)	(0.27)	(-0.07)
Observations	1,248	1,248	1,248	1,248	1,248	1,248	1,248	1,248
Pseudo R^2	0.121	0.119	0.119	0.120	0.120	0.118	0.117	0.115

Table 6

Frequency of Filing Days and Views of Peer Firm Documents in the Same SIC1 Industry Code

Frequency of filing days and the total number of views for other-firm documents when an offering document in the same one digit SIC industry code (SIC1) is filed for the sample of 1,258 IPOs that filed an initial registration statement and completed their IPO (or withdrew their IPO registration) between February 2003 and March 2012. The data is by calendar day (excluding weekends) with views in SIC1 portfolios. There are 2,216 total days in the sample in which documents are filed and 10 SIC portfolios in the sample resulting in a total of 22,160 observations. Filing days include the filings of S-1 (*S-1*), first offer price range amendment (*First price*), Final prospectus (*Final prospectus*) document, and days when more than one type of document was filed.

Filing days in which an IPO document in the same SIC1 is filed	Frequency of SIC1 filing days (1)	Percent of SIC1 filing days (2)	Number of peer firm documents views in the same SIC1filing day (3)	Percent of peer firm document views in the same SIC1 filing day (4)
No IPO document filed	19,511	88.05%	161,457,906	84.69%
S-1	914	4.12%	9,847,094	5.17%
First price	768	3.47%	8,560,270	4.49%
Final prospectus	664	3.00%	7,655,073	4.02%
First price & final prospectus	47	0.21%	589,563	0.31%
S-1 & first price	138	0.62%	1,310,785	0.69%
S-1 & final prospectus	93	0.42%	942,649	0.49%
S-1 & first price & final prospectus	25	0.11%	275,603	0.14%
Total	22,160	100.00%	190,638,943	100.00%

Table 7

Effect of Filing of IPO Offering Document on Peer Firm Document Views

OLS regressions where the dependent variables are 10 daily portfolios of peer firm document views based on the one-digit SIC industry code (SIC1). Peer firm document views are further classified by whether they are viewed by humans, bots or unsure viewers. The independent variables are a dummy variable equal to 1 on days for which an offering document was filed by an issuer from the sample of 1,258 IPOs that filed an initial registration statement and completed their IPO (or withdrew their IPO registration) between February 2003 and March 2012. Offering documents include the S-1, first offer price range amendment and final prospectus, in the same SIC1 filed an S-1 (Same SIC1 S-1 filing day), a first offer price range amendment (Same SIC1 first price S-1/A filing day) or the final prospectus (Same SIC1 424B filing day). Three similar dummy variables are included for if the issuer is in a different SIC1. Includes industry and time fixed effects. Standard errors are in parentheses below the coefficients. *, **, *** indicate significance at the 10, 5 and 1% levels. Standard errors are clustered by industry (SIC1).

	All Views (1)	All Views Humans (2)	All Views Bots (3)	All Views Unsure (4)
S-1 filing day (Same SIC1)	0.061***	0.099***	0.072	0.062***
	(0.015)	(0.026)	(0.054)	(0.017)
S-1 filing day (Different SIC1)	0.029***	0.079***	0.016	0.043***
	(0.005)	(0.005)	(0.018)	(0.004)
First offer price range S-1/A filing day (Same SIC1)	-0.055*	0.032	-0.090	-0.081**
	(0.028)	(0.028)	(0.052)	(0.033)
First offer price range S-1/A filing day (Different SIC1)	-0.049***	0.036***	-0.128***	-0.068***
	(0.006)	(0.004)	(0.010)	(0.007)
424B filing day (Same SIC1)	0.087***	0.144***	0.058	0.059*
	(0.023)	(0.025)	(0.040)	(0.028)
424B filing day (Different SIC1)	0.089***	0.122***	0.068***	0.067***
	(0.006)	(0.005)	(0.015)	(0.006)
Constant	4.260***	3.035***	-0.910***	4.044***
	(0.063)	(0.072)	(0.147)	(0.079)
Industry FE (SIC1)	Y	Y	Y	Y
Month FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y
Day-of-week (drop Sat/Sun) FE	Y	Y	Y	Y
Observations	22,160	22,160	22,160	22,160
Adjusted R-squared	0.858	0.878	0.606	0.824

Table 8

Effect of Viewers and Document Views on the Absolute Change in Offer Price

OLS regression examining the effect of the number of viewers on the day of and the day after the filing of the first offer price range amendment on |ΔP|, which is the absolute change in offer price from the mid-point of the first price range to the final offer for the sample of 907 completed IPOs. Thirty-three IPOs have missing data on views at the first offer price range amendment and are excluded. The main independent variable of interest, viewers and document views at the time of the filing of the first offer price range amendment, are categorized as all viewers of the IPO's documents (*All Viewers*), human viewers (*All Viewers Human*), bot viewers (*All Viewers Bot*), unsure viewers (*All Viewers Unsure*), viewers who only view the IPO document (*IPO Viewers*), viewers of the IPO document who view at least one other peer firm document (*Peer Firm Viewers*), peer firm viewers who view at least one peer firm document in the same one-digit SDC industry code as the IPO (*Peer Firm Viewers SIC1),* and the number of peer firm documents viewed (*Peer Firm Document Views*). All viewer variables are scaled by proceeds and winsorized at the 99% level (one-sided). Independent variables include *Underwriter Rank*, the Carter-Manaster underwriter rank of the IPO's lead underwriter, *VC*, a dummy variable for whether the issue is VC-backed, the log of *Age+1* (in years), the difference between the IPO's S-1 date and its date of founding, $Mkt\ Return_{-180toS1}$, the buy and hold value weighted CRSP returns for the 180 calendar days before the filing of the S-1, $Mkt\ Return_{S1toOP}$, the buy and hold value weighted CRSP returns between the filing of the S-1 and the offer date, $Number\ of\ IPOs_{-180toS1}$, the total number of IPOs that went public in the 180 calendar days prior to the IPO's filing of its S-1 using the selection criteria for our sample, and $Average\ IR_{-180toS1}$, the average initial return of IPOs that went public in the 180 calendar days prior to the IPO's filing of its S-1 using the selection criteria for our sample. Includes industry (SIC1) and year fixed effects. T-statistics are in parentheses below the coefficients. *, **, *** indicate significance at the 10, 5 and 1% levels. Standard errors are clustered by industry (SIC1).

	Dependent Variable: Daily SIC1 Portfolios of Peer Firm Views							
	(Column Heading Represents Type of Viewers or Views Used as Independent Variable)							
Variables	All Viewers (1)	All Viewers Human (2)	All Viewers Bot (3)	All Viewers Unsure (4)	IPO Viewers (5)	Peer Firm Viewers (6)	Peer Firm Viewers SIC1 (7)	Peer Firm Document Views (8)
Viewers or Views	0.011**	0.022**	0.213	0.017*	0.014**	0.025***	0.038***	0.000
	(2.71)	(2.92)	(1.18)	(2.23)	(2.41)	(3.39)	(4.04)	(0.95)
VC	0.055***	0.055***	0.060***	0.057***	0.056***	0.055***	0.056***	0.060***
	(5.54)	(6.00)	(6.02)	(5.92)	(5.93)	(6.05)	(6.43)	(7.49)
Underwriter Rank	-0.001	-0.002	-0.002	-0.002	-0.001	-0.001	-0.002	-0.006*
	(-0.34)	(-0.44)	(-0.40)	(-0.54)	(-0.29)	(-0.35)	(-0.80)	(-2.23)
Ln(Age)	0.000	-0.000	-0.000	-0.000	-0.001	-0.000	-0.000	-0.001
	(0.01)	(-0.04)	(-0.08)	(-0.07)	(-0.16)	(-0.00)	(-0.01)	(-0.22)
Mkt Return$_{-180toS1}$	-0.062	-0.064	-0.075	-0.062	-0.051	-0.069	-0.067	-0.073
	(-0.75)	(-0.78)	(-0.92)	(-0.80)	(-0.80)	(-0.82)	(-0.78)	(-0.88)
Mkt Return$_{S1toFP}$	-0.014	-0.010	-0.032	-0.015	-0.002	-0.018	-0.020	-0.031
	(-0.25)	(-0.17)	(-0.63)	(-0.28)	(-0.03)	(-0.32)	(-0.37)	(-0.53)
Number of IPOs$_{-180toS1}$	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(-0.89)	(-0.90)	(-0.86)	(-0.81)	(-0.68)	(-0.89)	(-0.87)	(-0.77)
Average IR$_{-180toS1}$	0.084	0.089	0.084	0.072	0.054	0.084	0.075	0.068
	(0.30)	(0.32)	(0.29)	(0.25)	(0.20)	(0.29)	(0.26)	(0.27)
Industry FE	Y	Y	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y	Y	Y
Constant	0.186**	0.190**	0.203**	0.195**	0.193**	0.186**	0.213**	0.232***
	(2.57)	(2.57)	(2.85)	(2.58)	(2.42)	(2.64)	(3.10)	(3.49)
Observations	874	874	874	874	874	874	874	874
Adjusted R^2	0.141	0.139	0.132	0.142	0.156	0.138	0.135	0.128

Table 9

Effect of Viewers and Document Views on Change in Offer Price By ΔP Positive and ΔP Negative

OLS regression examining the effect of the number of viewers on the day of and the day after the filing of the first offer price range amendment on ΔP positive for 210 of the 907 completed IPOs when the offer price is higher than the highest price in the offer price range (Panel A) and on ΔP negative for 313 of the 907 completed IPOs when the offer price is lower than the lowest price in the offer price range (Panel B). Four (thirteen) IPOs have missing data on views at the first offer price range amendment and are excluded in Panel A (Panel B). ΔP positive is the percentage change in offer price from the mid-point of the first price range to the offer date only for offers whose offer price is higher than the highest price in the offer price range. ΔP negative is the percentage change in offer price from the mid-point of the first price range to the offer date only for offers whose offer price is lower than the lowest price in the offer price range. The main independent variable of interest, viewers and document views at the time of the filing of the first offer price range amendment, are categorized as all viewers of the IPO's documents (*All Viewers*), human viewers (*All Viewers Human*), bot viewers (*All Viewers Bot*), unsure viewers (*All Viewers Unsure*), viewers who only view the IPO document (*IPO Viewers*), viewers of the IPO document who view at least one other peer firm document (*Peer Firm Viewers*), peer firm viewers who view at least one peer firm document in the same one-digit SDC industry code as the IPO (*Peer Firm Viewers SIC1)*, and the number of peer firm documents viewed (*Peer Firm Document Views*). All viewer variables are scaled by proceeds and winsorized at the 99% level (one-sided). Independent variables include *Underwriter Rank*, the Carter-Manaster underwriter rank of the IPO's lead underwriter, *VC*, a dummy variable for whether the issue is VC-backed, the log of *Age+1* (in years), the difference between the IPO's S-1 date and its date of founding, *Mkt Return*$_{-180toS1}$, the buy and hold value weighted CRSP returns for the 180 calendar days before the filing of the S-1, *Mkt Return*$_{S1toOP}$, the buy and hold value weighted CRSP returns between the filing of the S-1 and the offer date, *Number of IPOs*$_{-180toS1}$, the total number of IPOs that went public in the 180 calendar days prior to the IPO's filing of its S-1 using the selection criteria for our sample, and *Average IR*$_{-180toS1}$, the average initial return of IPOs that went public in the 180 calendar days prior to the IPO's filing of its S-1 using the selection criteria for our sample. Includes industry (SIC1) and year fixed effects. T-statistics are in parentheses below the coefficients. *, **, *** indicate significance at the 10, 5 and 1% levels. Standard errors are clustered by industry (SIC1).

Panel A

Dependent Variable: ΔP Positive

(Column Heading Represents Type of Viewer or Views Used as Independent Variable)

Variables	All Viewers (1)	All Viewers Human (2)	All Viewers Bot (3)	All Viewers Unsure (4)	IPO Viewers (5)	Peer Firm Viewers (6)	Peer Firm Viewers SIC (7)	Peer Firm Document Views (8)
Viewers or Views	0.026**	0.060**	0.970*	0.038**	0.038**	0.067**	0.085**	0.000
	(2.47)	(2.48)	(2.12)	(2.34)	(2.42)	(2.43)	(3.08)	(0.27)
VC	0.003	-0.004	-0.003	0.008	0.004	0.000	0.005	0.013
	(0.09)	(-0.12)	(-0.11)	(0.26)	(0.12)	(0.01)	(0.16)	(0.38)
Underwriter Rank	-0.026	-0.025	-0.012	-0.030*	-0.029*	-0.024	-0.031**	-0.040***
	(-1.86)	(-1.71)	(-0.59)	(-2.20)	(-2.13)	(-1.73)	(-2.67)	(-3.93)
Ln(Age)	0.022	0.022	0.017	0.019	0.019	0.023	0.021	0.014
	(1.13)	(1.07)	(0.80)	(1.01)	(0.99)	(1.14)	(1.05)	(0.67)
Mkt Return$_{-180toS1}$	-0.184	-0.182	-0.321	-0.173	-0.175	-0.170	-0.115	-0.121
	(-0.93)	(-0.89)	(-1.54)	(-1.04)	(-1.00)	(-0.82)	(-0.51)	(-0.52)
Mkt Return$_{S1toOP}$	0.041	0.034	-0.200	0.041	0.037	0.042	0.023	-0.004
	(0.37)	(0.33)	(-1.83)	(0.35)	(0.31)	(0.40)	(0.22)	(-0.05)
Number of IPOs$_{-180toS1}$	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(0.27)	(0.17)	(0.14)	(0.29)	(0.35)	(0.10)	(0.11)	(0.12)
Average IR$_{-180toS1}$	0.139	0.123	0.192	0.113	0.148	0.074	-0.010	0.111
	(0.26)	(0.26)	(0.38)	(0.23)	(0.30)	(0.15)	(-0.02)	(0.18)
Industry FE	Y	Y	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y	Y	Y
Constant	0.268**	0.257**	0.218**	0.308***	0.302***	0.248**	0.331***	0.413***
	(3.14)	(3.10)	(2.31)	(4.01)	(3.84)	(3.10)	(5.13)	(6.22)
Observations	206	206	206	206	206	206	206	206
Adjusted R^2	0.231	0.229	0.252	0.254	0.256	0.212	0.162	0.111

Panel B:

Dependent Variable: ΔP Negative

(Column Heading Represents Type of Viewer or Views Used as Independent Variable)

Variables	All Viewers (1)	All Viewers Human (2)	All Viewers Bot (3)	All Viewers Unsure (4)	IPO Viewers (5)	Peer Firm Viewers (6)	Peer Firm Viewers SIC (7)	Peer Firm Document Views (8)
Viewers or Views	-0.025**	-0.040**	-0.778**	-0.049**	-0.049**	-0.046**	-0.075**	-0.000*
	(-2.41)	(-2.31)	(-2.64)	(-2.64)	(-2.78)	(-2.32)	(-2.53)	(-1.92)
VC	-0.076***	-0.078***	-0.081***	-0.076***	-0.076***	-0.076***	-0.075***	-0.082***
	(-3.59)	(-3.75)	(-3.90)	(-3.80)	(-3.55)	(-3.78)	(-3.76)	(-4.84)
Underwriter Rank	0.004	0.005	0.004	0.004	0.004	0.004	0.005	0.010
	(0.59)	(0.78)	(0.57)	(0.60)	(0.62)	(0.67)	(0.85)	(1.30)
Ln(Age)	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.007
	(1.21)	(1.24)	(1.15)	(1.20)	(1.16)	(1.32)	(1.37)	(1.42)
Mkt Return$_{-180toS1}$	0.039	0.044	0.027	0.044	0.040	0.041	0.039	0.075
	(0.43)	(0.48)	(0.38)	(0.48)	(0.44)	(0.46)	(0.44)	(0.88)
Mkt Return$_{S1toOP}$	0.045	0.033	0.074	0.058	0.050	0.042	0.043	0.076
	(0.53)	(0.37)	(0.81)	(0.69)	(0.61)	(0.48)	(0.48)	(0.75)
Number of IPOs$_{-180toS1}$	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
	(-1.50)	(-1.32)	(-1.16)	(-1.81)	(-1.43)	(-1.57)	(-1.54)	(-1.44)
Average IR$_{-180toS1}$	-0.269	-0.307	-0.200	-0.236	-0.255	-0.281	-0.276	-0.311
	(-1.24)	(-1.38)	(-1.03)	(-1.02)	(-1.16)	(-1.27)	(-1.25)	(-1.26)
Industry FE	Y	Y	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y	Y	Y
Constant	-0.229***	-0.242***	-0.269***	-0.227***	-0.233***	-0.232***	-0.279***	-0.295***
	(-4.10)	(-4.38)	(-4.33)	(-4.14)	(-3.97)	(-4.39)	(-4.79)	(-5.84)
Observations	300	300	300	300	300	300	300	300
Adjusted R^2	0.349	0.345	0.343	0.342	0.348	0.346	0.343	0.327

Table 10
Effect of Document View Effect of Viewers on the Initial Return

OLS regression examining the effect of the number of viewers on the day of and the day after the filing of the first price range on the independent variable, initial return. Thirty three IPOs (of the 907 completed IPOs) have missing data on views at the first offer price range amendment and are excluded. Initial return is the change in from the offer price to the price at the close of the first trading day. The main independent variable of interest, viewers and document views at the time of the filing of the first offer price range amendment, are categorized as all viewers of the IPO's documents (*All Viewers*), human viewers (*All Viewers Human*), bot viewers (*All Viewers Bot*), unsure viewers (*All Viewers Unsure*), viewers who only view the IPO document (*IPO Viewers*), viewers of the IPO document who view at least one other peer firm document (*Peer Firm Viewers*), peer firm viewers who view at least one peer firm document in the same one-digit SDC industry code as the IPO (*Peer Firm Viewers SIC1),* and the number of peer firm documents viewed (*Peer Firm Document Views*). All viewer variables are scaled by proceeds and winsorized at the 99% level (one-sided). Independent variables include ΔP, the percentage change in offer price from the mid-point of the first price range to the offer price, *Underwriter Rank,* the Carter-Manaster underwriter rank of the IPO's lead underwriter, *VC,* a dummy variable for whether the issue is VC-backed, the log of *Age+1* (in years), the difference between the IPO's S-1 date and its date of founding, *Mkt Return*$_{-180toS1}$, the buy and hold value weighted CRSP returns for the 180 calendar days before the filing of the S-1, *Mkt Return*$_{S1toOP}$, the buy and hold value weighted CRSP returns between the filing of the S-1 and the offer date, *Number of IPOs*$_{-180toS1}$, the total number of IPOs that went public in the 180 calendar days prior to the IPO's filing of its S-1 using the selection criteria for our sample, and *Average IR*$_{-180toS1}$, the average initial return of IPOs that went public in the 180 calendar days prior to the IPO's filing of its S-1 using the selection criteria for our sample. Standard errors are clustered by industry (SIC1). Includes industry (SIC1) and year fixed effects. *, **, *** indicate significance at the 10, 5 and 1% levels.

	Dependent Variable: Initial Return							
	(Column Heading Represents Type of Viewer or Views Used as Independent Variable)							
	All Viewers	All Viewers Human	All Viewers Bot	All Viewers Unsure	IPO Viewers	Peer Firm Viewers	Peer Firm Viewers SIC1	Peer Firm Document Views
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Viewers or Views	0.019***	0.037***	0.430***	0.030***	0.029***	0.042***	0.079***	0.000**
	(5.84)	(5.90)	(4.41)	(5.59)	(5.90)	(5.96)	(7.28)	(3.19)
ΔP	0.355***	0.363***	0.362***	0.347***	0.346***	0.367***	0.371***	0.376***
	(7.40)	(7.48)	(7.07)	(6.99)	(7.07)	(7.46)	(7.42)	(6.94)
VC	0.063***	0.064***	0.072***	0.066***	0.065***	0.064***	0.061***	0.073***
	(7.72)	(7.94)	(10.01)	(7.64)	(7.66)	(7.39)	(7.64)	(8.47)
Underwriter Rank	0.014**	0.013**	0.014**	0.013**	0.013**	0.014**	0.013**	0.007
	(2.85)	(2.76)	(2.44)	(2.69)	(2.70)	(3.04)	(2.97)	(1.54)
Ln(Age)	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.001
	(0.84)	(0.72)	(0.73)	(0.70)	(0.69)	(0.76)	(0.77)	(0.21)
Mkt $\text{Return}_{-180toS1}$	-0.107	-0.110	-0.124*	-0.105	-0.099	-0.119	-0.104	-0.094
	(-1.51)	(-1.61)	(-2.01)	(-1.45)	(-1.32)	(-1.82)	(-1.58)	(-1.53)
Mkt Return_{S1toOP}	0.069	0.073	0.031	0.069	0.077	0.059	0.054	0.008
	(0.76)	(0.78)	(0.35)	(0.82)	(0.89)	(0.63)	(0.58)	(0.08)
Number of $\text{IPOs}_{-180toS1}$	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(-0.55)	(-0.56)	(-0.55)	(-0.49)	(-0.49)	(-0.59)	(-0.61)	(-0.52)
Average $\text{IR}_{-180toS1}$	-0.290*	-0.280*	-0.295*	-0.314*	-0.299*	-0.287*	-0.310**	-0.387**
	(-2.02)	(-1.98)	(-2.05)	(-2.01)	(-1.92)	(-2.13)	(-2.26)	(-2.31)
Industry FE	Y	Y	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y	Y	Y
Constant	-0.006	0.000	0.006	0.006	0.005	-0.005	0.002	0.068
	(-0.15)	(0.01)	(0.17)	(0.17)	(0.14)	(-0.13)	(0.06)	(1.53)
Observations	874	874	874	874	874	874	874	874
Adjusted R^2	0.294	0.292	0.285	0.297	0.298	0.291	0.294	0.287