The JOBS Act and Post-IPO Information Uncertainty: What Role Do Pre-IPO Private Communications Play?

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August 2019

* Corresponding author. We appreciate helpful comments from participants at the 2018 Canadian Academic Accounting Association (CAAA) annual meeting, the 2018 American Accounting Association (AAA) annual meeting, and the 29th Annual Conference on Financial Economics and Accounting (CFEA) at Tulane University, workshop participants at Michigan State University, Southern Methodist University, SUNY-Albany, Neil Bhattacharya, Mengyao Cheng (discussant), Robbie Moon (discussant), Henock Louis, and Roman Schick (discussant).

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Abstract

The Jumpstart Our Business Startups (JOBS) Act creates many exemptions to reduce the cost of going public for smaller issuers that qualify as an Emerging Growth Company (EGC). One set of provisions allows analysts affiliated with EGCs' underwriters to communicate privately with management and potential investors before the IPOs. Our study examines whether such provisions affect EGCs' post-IPO information uncertainty. Using a sample of 853 IPOs during 2004-2016, we find that the dispersion in analysts' initiation forecasts is significantly higher for EGCs compared to similar IPOs in the pre-JOBS period. This higher dispersion is largely driven by affiliated analysts and is associated with larger post-IPO return volatility. Further analysis suggests that larger variations in affiliated analysts' soft skills are associated with higher forecast dispersion after the JOBS Act. Overall, our findings indicate that allowing affiliated analysts the option of pre-IPO private communications may contribute to increased information uncertainty for EGCs.

Keywords: JOBS Act, IPO, information uncertainty, analyst forecast dispersion, pre-IPO communications, post-IPO return volatility

Data Availability: Data are publicly available from the sources identified in the paper.

1. Introduction

The U.S. Congress passed the Jumpstart Our Business Startups (JOBS) Act in 2012 to reduce the regulatory burden of going public, especially for small businesses. One of the key features of the JOBS Act is that it allows issuers designated as an Emerging Growth Company (EGC) to opt out of many accounting and executive compensation disclosure requirements mandated under the Sarbanes-Oxley Act of 2002 and the Dodd-Frank Act of 2010.[1] Barth et al. (2017) find that EGCs face higher post-IPO stock return volatility and larger IPO underpricing compared to similar IPO firms in the pre-JOBS period, indicating that the JOBS Act was associated with increased post-IPO information uncertainty among EGCs. Their further analysis reveals that EGCs can potentially mitigate the increased information uncertainty by providing more voluntary disclosure after the IPOs, suggesting that reduced mandatory public disclosure "causes greater information uncertainty for EGC firms" (Barth et al. 2017, 27). However, it is unclear whether other features of the JOBS Act also affect information uncertainty.

In this study we examine the role that pre-IPO private communications play in EGCs' post-IPO information uncertainty, because the JOBS Act not only reduces mandatory *public* disclosure requirements for EGCs but also contains provisions that permit analysts affiliated (but not those unaffiliated) with the EGC's underwriters to have pre-IPO *private* communications with EGC management or potential investors. Allowing differential access to pre-IPO private communications can affect the degree of consensus among analysts following the same EGC, which may also explain the information uncertainty that the EGC faces in the post-IPO market. Therefore, we examine forecast dispersion among affiliated analysts and unaffiliated analysts

[1] For example, instead of providing three years of audited financial statements, EGCs can provide only two years of audited financial statements.

surrounding the JOBS Act and whether the forecast dispersion within different subsets of analysts is associated with differential post-IPO stock return volatility.

Understanding the effect of the provisions that permit pre-IPO private communications is helpful for regulators to better evaluate the effect of the JOBS Act on the capital market. In addition, understanding the JOBS Act's impact on analysts is important, given analysts' significant contributions to firms' information environment (Li and You 2015). Analyst forecast dispersion, in particular, is an important capital market construct that is directly tied to firm risk and valuation (Liu and Natarajan 2012; Barron et al. 2009; Merton 1987; Diether et al. 2002; Johnson 2004; Bradshaw et al. 2006). Prior studies show that the association between analyst forecast dispersion and information uncertainty is especially strong in the context of seasoned equity offerings (SEOs) (Bowen et al. 2008; Hibbert et al. 2017). So far, it remains unknown whether the JOBS Act has any impact on analyst forecast dispersion in the IPO setting.[2]

Allowing differential access to pre-IPO private communications can affect analyst forecast dispersion in several ways. At a minimum, the resulting information asymmetry between affiliated and unaffiliated analysts based on their different access to pre-IPO private communications may contribute to an increase in overall analyst forecast dispersion. At the same time, the provisions that allow pre-IPO private communications may have a unique impact on affiliated analysts, although the direction of this impact is less clear. On the one hand, access to more information may promote greater consensus and less forecast dispersion among affiliated analysts. On the other hand, differences in how affiliated analysts exploit private information could lead to higher dispersion among their forecasts. By contrast, forecast dispersion among unaffiliated analysts is

[2]Although Dambra et al. (2018) find that individual forecasts issued by affiliated analysts become more biased and less informative for EGCs after the JOBS Act, it remains unclear whether differential information access between affiliated and unaffiliated analysts affects the overall disagreement in their forecasts and whether such changes in disagreement affect the EGCs' information uncertainty after the IPO. Our study fills in this gap.

unlikely to be affected because the JOBS Act provides them no access to pre-IPO private communications. While prior literature has largely examined analyst forecast dispersion based on all analysts covering the same firm, the JOBS Act creates an interesting setting in which separately looking at forecast dispersion based on analyst affiliation can yield useful insights about the effect of private communications.

Using a sample of 853 U.S. IPOs (with less than $1 billion pre-IPO annual gross revenue) between January 1, 2004, and December 31, 2016, we compare the dispersion of analysts' initiation forecasts (i.e., each analyst's first quarterly forecast after the IPO) for EGCs and a sample of similar IPO firms before the JOBS Act (pseudo-EGCs). Pseudo-EGCs are firms that went public during the pre-JOBS period but would have qualified as an EGC had they done so in the post-JOBS period. We also separately analyze the forecast dispersion among affiliated and among unaffiliated analysts. We find that the overall forecast dispersion, as well as forecast dispersion among affiliated analysts, are significantly higher for EGCs than for pseudo-EGCs, but the forecast dispersion among unaffiliated analysts does not differ. These findings indicate that having privileged access to private communications with EGC management and potential investors can lead to a higher level of disagreement among affiliated analysts, a phenomenon that does not exist among unaffiliated analysts. Reduced mandatory public disclosure is unlikely to drive our results because all analysts, affiliated or unaffiliated, have equal access to EGCs' public disclosures. Our findings are robust to controlling for the number of Form 8-Ks that firms file during the first fiscal quarter after their IPOs.[3]

[3] Although management forecasts may be a less noisy measure of voluntary public disclosure than Form 8-K filings (Barth et al. 2017), we do not use management forecasts to proxy for public disclosure because the match between *Compustat* and *I/B/E/S* results in a large number of missing observations. Regardless, our untabulated findings from estimations using the presence of management forecasts to replace 8-K filings generate the same inferences on the differences in forecast dispersion between affiliated and unaffiliated analysts and their impact on post-IPO return volatility.

Leveraging insights from our analysis of analyst forecast dispersion, we then examine the association between analyst forecast dispersion and post-IPO return volatility. Given that the market relies heavily on analysts, differences in analyst expectations reflected in their forecast dispersion can translate into information uncertainty in the market. To capture post-IPO information uncertainty, we follow Barth et al. (2017) and use three measures of stock return volatility, including the standard deviation of 1) daily returns, 2) the idiosyncratic component of returns, and 3) the systematic component of returns. Our regression analyses show that only the forecast dispersion among affiliated analysts is associated with significantly higher post-IPO return volatility after the JOBS Act. Neither the overall forecast dispersion nor the forecast dispersion among unaffiliated analysts is associated with differential post-IPO return volatility between EGCs and pseudo-EGCs. More interestingly, we find that the change in the impact of forecast dispersion among affiliated analysts after the JOBS Act is mainly reflected in the idiosyncratic component of return volatility, consistent with Johnson's (2004) argument that analyst forecast dispersion may proxy for idiosyncratic risk, not systematic risk.

To rule out the possibility that factors other than the pre-IPO private communications drive our findings across affiliated and unaffiliated analysts, we use a sample of SEOs during the same sample period around the JOBS Act to examine whether our inferences also hold in the SEO setting where affiliated analysts have no informational privilege. We find no changes in analyst forecast dispersion around the JOBS Act for the SEO firms, nor is forecast dispersion among affiliated or unaffiliated analysts associated with differential post-SEO return volatility. Evidence from the SEO setting boosts our confidence that our findings for the EGCs are likely driven by pre-IPO communications to which affiliated analysts have access under the JOBS Act.

Our inferences are robust to using a propensity-score-matched sample of IPOs from the pre-JOBS period as an alternative control sample. We also perform a pseudo-event analysis in which we use only the EGCs within the post-JOBS Act period and compare analyst forecast dispersion before and after a pseudo-event. All affiliated analysts in this sample have access to pre-IPO private communications. We find no differences in analyst forecast dispersion around the pseudo-event. In addition, analyst forecast dispersion is not associated with differential post-IPO return volatility, regardless of analyst affiliation. Collectively, our findings indicate that allowing affiliated analysts to have pre-IPO private communications with EGCs' management and potential investors may contribute to increased, not reduced, information uncertainty.

A natural question that arises is why the forecast dispersion among affiliated analysts covering EGCs is higher when they have privileged information access. One possibility is that not all affiliated analysts obtain the same set of information from their private communications, because private communications are not mandatory for affiliated analysts and they may not participate in the same meetings or conversations with EGC management or potential investors. Analysts who do participate in the same meetings may also glean different insights from such meetings. Therefore, it is possible that variations in analysts' soft skills lead to differences in how much they rely on interpersonal communications as an information source (e.g., private meetings) and what information they generate from private meetings.

To explore this possibility, we examine the relation between forecast dispersion and variations in affiliated analysts' professional connections listed on *LinkedIn*, which to some degree may capture analysts' soft skills. For this analysis, we focus only on affiliated analysts and manually collect their number of connections listed on *LinkedIn*. Regressing the forecast dispersion among affiliated analysts on the standard deviation of their number of *LinkedIn*

connections along with its interaction with a post-JOBS indicator variable, we find that larger variations in affiliated analysts' *LinkedIn* connections are associated with higher forecast dispersion in the post JOBS-Act period than in the pre-JOBS period.

Our study provides several important contributions to the literature. First, our study complements Barth et al. (2017) by showing that, besides reduced mandatory *public* disclosure, forecast dispersion among analysts with access to *private* communications also contributes to higher post-IPO information uncertainty for EGCs. This heightened uncertainty may arise because the market generally relies more on affiliated analysts due to their access to private information, but disagreement among these analysts makes it difficult for the market to determine which affiliated analysts best exploited the private information. Our finding that disagreement among those with privileged information access increases uncertainty highlights a potentially unintended consequence of the Act, extending the stream of research on the impact of the JOBS Act (Dambra et al. 2015; Dambra et al. 2018; Chaplinski et al. 2017; Barth et al. 2017).

Second, our study expands our understanding of the capital market implications of analyst forecast dispersion, which has been the focus of extensive research (Miller 1977; Barron et al. 1998; Diether et al. 2002; Park and Stice 2000; Doukas et al. 2006; Barron et al. 2009; Li and Chen 2016; Cen et al. 2016; Bailey et al. 2003; Garfinkel and Sokobin 2006; Hibbert et al. 2017). Our finding that the impact of forecast dispersion on return volatility varies by analysts' informational privilege (affiliated or unaffiliated) raises the possibility of additional cross-sectional variation in prior studies that examine the market impact of analyst forecast dispersion in different settings (e.g., Diether et al. 2002).

Finally, our finding that the higher forecast dispersion among EGCs' affiliated analysts is associated with variation in their soft skills implies that analysts differ in how they exploit private

information. Specifically, they may differ in their tendency to engage in private meetings with management or in what insights they glean from such meetings.

The remainder of the paper proceeds as follows. Section 2 provides the background on the JOBS Act and discusses the related literature. Section 3 describes the research design and variable constructions. Section 4 describes the sample selection and presents descriptive statistics. Section 5 discusses the empirical results. Section 6 concludes.

2. The JOBS Act and Related Literature

The U.S. Congress passed the JOBS Act on April 5, 2012, with the intention to encourage public funding of small businesses. The JOBS Act creates a new category of IPO issuers: Emerging Growth Company (EGC). An issuer can qualify as an EGC if it has less than $1 billion annual revenue during the most recent fiscal year prior to its IPO. A key purpose of the JOBS Act is to eliminate burdensome IPO disclosure requirements and encourage more small businesses to access the public capital markets (Latham and Watkins 2014; Zeidel et al. 2016). Specifically, the JOBS Act lists a set of provisions that "de-burden" the IPO process for EGCs. For example, EGCs can file draft IPO registration statements confidentially with the SEC (provided they are filed publicly no later than 21 days before the roadshow), which was prohibited prior to the Act. EGCs can now include only two years, instead of three years, of audited financial statements in the IPO registration statement. EGCs are also allowed to disclose compensation information for only two years and three named executives (as opposed to three years, five named executives, and a Compensation Discussion and Analysis section). When new or revised accounting standards become effective, EGCs can delay adopting these standards. EGCs can also opt out of Section

404(b) SOX compliance for up to five years and be exempted from future auditing standards adopted by the Public Company Accounting Oversight Board (PCAOB).

Besides reduced mandatory disclosure, the JOBS Act contains provisions that promote analyst coverage and analyst research communication with EGCs, including allowing affiliated analysts to participate in pitch meetings and due diligence sessions with EGCs' management. Under the JOBS Act, investment bankers can arrange communications between potential investors and analysts.[4] However, investment bankers do not always have to participate in these private communications and not all affiliated analysts covering the same EGC participate in the same private meeting or conversation with EGC management or potential investors.

Several recent studies examine how IPO activities and the post-IPO information environment changed after the JOBS Act. Dambra et al. (2015) find that the number of IPOs increases after the Act, especially for firms in biotech and pharmaceutical industries that face high proprietary disclosure costs. At the same time, other studies document deterioration in EGCs' post-IPO information environment. Chaplinsky et al. (2017) and Agarwal et al. (2017) find that first-day IPO underpricing is larger after the JOBS Act. Dambra et al. (2018) find that affiliated analysts—who have privileged information access—issue more biased and less accurate forecasts, and their research reports are less informative. Barth et al. (2017) conclude that information uncertainty for EGCs, measured by IPO underpricing and post-IPO stock return volatility, increases after the Act, which they attribute to reduced mandatory disclosure requirements.[5]

[4] The JOBS Act also allows an investment banker to share with its affiliated analysts a list of clients. The analysts can then contact these clients at their own discretion (with appropriate controls).

[5] Consistent with this possibility, Barth et al. (2017) find that EGCs attempt to mitigate the information uncertainty by increasing their voluntary disclosure through press releases, Form 8-K filings, or management earnings forecasts.

While reduced mandatory public disclosure may contribute to the deterioration in EGCs' post-IPO information environment, it is possible that allowing analysts to have differential access to private communications under the JOBS Act also can play an important role. Examining analyst forecast dispersion helps shed new light on this issue because different provisions of the JOBS Act can have different impacts on EGCs' information uncertainty. Insight into the drivers of the JOBS Act's impact on EGCs' post-IPO information environment is necessary for policymakers to evaluate the costs and the benefits of the JOBS Act in a more balanced way.

Examining changes in analyst forecast dispersion surrounding the JOBS Act is also meaningful because forecast dispersion is an important capital market phenomenon. Prior research has documented strong associations between analyst forecast dispersion and both market uncertainty and future stock returns (Miller 1977; Barron et al. 1998; Diether et al. 2002; Johnson 2004; Doukas et al. 2006; Barron et al. 2009; Li and Chen 2016; Cen et al. 2016). The association between analyst forecast dispersion and uncertainty may be stronger in the context of equity offerings. Using the seasoned equity offerings (SEO) setting, Bowen et al. (2008) show that firms with higher analyst forecast dispersion prior to the SEO tend to experience larger SEO underpricing. Hibbert et al. (2017) find that analyst forecast dispersion has significant explanatory power for firms' volatility dynamics surrounding the SEOs. However, neither study examines the relation between analyst forecast dispersion and post-offering return volatility based on analyst affiliation. Given that affiliated analysts have an information privilege under the JOBS Act, our study fills the gap in the literature on how forecast dispersion within different subsets of analysts affects post-IPO information uncertainty differently in the IPO setting.

In general, analyst forecast dispersion is positively related to information asymmetry and disagreement (Barron et al. 1998), both of which are potentially affected by the provisions of the

JOBS Act that permit differential access to private communications. These provisions can create information asymmetry between those with and without access to private information (i.e., affiliated and unaffiliated analysts), which may contribute to an increase in overall analyst forecast dispersion for EGCs. While these provisions are unlikely to affect disagreement among unaffiliated analysts because they have no access to private communications, they may affect disagreement among affiliated analysts, although the directional impact is not obvious. On the one hand, access to more information may lead to less disagreement among affiliated analysts. On the other hand, analysts may differ in how much they rely on interpersonal communications as an information source (e.g., whether they choose to participate in private meetings), and in what insights they glean from such private communications, which may lead to more disagreement among affiliated analysts. Hence, forecast dispersion among affiliated analysts can either increase or decrease.

To shed light on which impact on affiliated analysts is most descriptive, we separately examine how forecast dispersion among affiliated and unaffiliated analysts changes surrounding the JOBS Act in addition to changes in overall forecast dispersion. We also extend Barth et al. (2017) by studying how changes in forecast dispersion among affiliated and unaffiliated analysts affect post-IPO stock return volatility.

3. Research Design

3.1 Does Analyst Forecast Dispersion Change after the JOBS Act?

In this section, we describe how we examine the effect of the JOBS Act on analyst forecast dispersion, focusing on the dispersion of the first quarterly earnings forecast issued by analysts who initiate coverage before the first post-IPO earnings announcement. Because the JOBS Act

only allows analysts affiliated with EGCs' underwriter(s) to engage in pre-IPO communications with EGC management and potential investors, it is important to investigate whether there is any differential impact on affiliated and unaffiliated analysts. Similar to Dambra et al. (2018), we classify an analyst as "affiliated" if she/he is employed by any investment bankers in the IPO issuer's underwriting syndicate, including lead managers, co-lead managers, and non-managing members as listed in the IPO prospectus. Otherwise, the analyst is classified as "unaffiliated."

Our dependent variables are analyst forecast dispersion measures constructed as the standard deviation of the first quarterly earnings forecasts issued by: 1) all analysts covering the IPO firm (*Dispersion_All*), 2) only affiliated analysts (*Dispersion_Affiliated*), and 3) only unaffiliated analysts (*Dispersion_Unaffliated*), and scaled by the absolute value of the corresponding median earnings forecast. We regress these dispersion measures on an indicator variable, *Post_JOBS* (that equals 1 for the period after the JOBS Act became effective, and 0 otherwise), and a set of control variables that are found to be associated with analyst forecast dispersion. We estimate the following model:

$$\begin{aligned} \textit{Forecast Dispersion}_i = {} & \beta_0 + \beta_1 * \textit{Post\_JOBS}_i + \beta_2 * \textit{Analyst Characteristics}_i \\ & + \beta_3 * \textit{Firm Characteristics}_i + \beta_4 * \textit{Filings8K}_i \\ & + \textit{Fixed Effects} + \varepsilon_i \end{aligned} \quad (1)$$

The coefficient of interest is β_1, which captures the differences in analyst forecast dispersion between the EGCs in the post-JOBS period and the pseudo-EGCs in the pre-JOBS period. We control for analyst-specific characteristics that may affect forecast dispersion, including 1) *LnAnalystFollowing*, measured as the natural logarithm of the number of analysts issuing an earnings forecast for the first quarter after the IPO, 2) *LnAnalystExperience*, measured as the natural logarithm of the average forecasting experience (in years) that analysts have before they initiate coverage on the IPO firm in our sample, and 3) *LnDaysForecastTo1stEA*, measured

as the natural logarithm of the average number of days between analysts' initial quarterly earnings forecasts for the IPO firm and the actual quarterly earnings announcement.

We also include firm-specific characteristics that prior literature has shown to be correlated with analysts' forecasts of earnings, including total assets, total revenue, Tobin's Q, return on assets, leverage, incidence of losses, an indicator for technology firms, firm age, an indicator for venture capital-backed IPOs, and industry, exchange, and year fixed effects (Bradley et al. 2003; Loughran and Ritter 2004; Lowry et al. 2010; Loughran and McDonald 2013; Barth et al. 2017; Dambra et al. 2018).

LnAssets is the natural logarithm of 1plus the IPO firm's total assets as of the most recent fiscal year prior to the IPO. *LnRevenue* is the natural logarithm of 1 plus the IPO firm's annual total revenue as of the most recent fiscal year prior to the IPO. *LnTobin'sQ* is the natural logarithm of the IPO firm's Tobin's Q, where Tobin's Q is measured as the sum of total assets and the market value of equity minus the sum of the book value of equity and IPO proceeds, scaled by total assets (Dambra et al. 2018). Return on assets (*ROA*) is the ratio of net income to total assets as of the most recent fiscal year prior to the IPO. *Leverage* is measured as total liabilities divided by total assets as of the most recent fiscal year prior to the IPO. *Loss* is an indicator variable that equals 1 if the firm reported a net loss in the most recent fiscal year prior to IPO, and 0 otherwise. *Tech* is an indicator variable that equals 1 if the IPO firm is a technology firm based on Loughran and Ritter's (2004) classification and 0 otherwise.[6] *LnAge* is the natural logarithm of the number of years between the IPO date and the founding date of the firm (prior to the IPO), retrieved from

[6] Loughran and Ritter's (2004) classification of technology and internet-based firms better identifies firms' industry membership at the time of the IPO.

Professor Jay Ritter's Founding Date database.[7] *VC_Backed* is an indicator variable that equals 1 if the IPO firm is backed by venture capital, and 0 otherwise.

Further, Barth et al. (2017) document an increase in EGCs' post-IPO voluntary disclosure when mandatory disclosure declines. To control for the potential impact of EGCs' voluntary disclosure on analyst forecast dispersion, we include *Filings8K* to capture firms' voluntary disclosure, measured as the number of Form 8-Ks filed by the IPO firms between the IPO listing date and the first post-IPO earnings announcement date.

3.2 Do Changes in Forecast Dispersion affect Post-IPO Return Volatility after the JOBS Act?

In this section, we describe how we examine the effect of analyst forecast dispersion on EGCs' post-IPO return volatility after the JOBS Act. Similar to Barth et al. (2017), our dependent variables include three measures of post-IPO return volatility. The first measure, *TotVol*, captures total stock return volatility and is calculated as the standard deviation of daily raw returns over the window spanning from the day after the IPO through the day before the first post-IPO quarterly earnings announcement.[8] We exclude the returns on the date of IPO listing to mitigate the effects of the large first-day underpricing on return volatility (Barth et al. 2017). The second measure, *IdioVol*, captures idiosyncratic volatility and is calculated as the standard deviation of residuals from a firm-specific market model estimated over the same window as for *TotVol*. The third measure, *SysVol*, captures systematic volatility and is calculated as the slope coefficient from a firm-specific market model estimated over the same window as for *TotVol*. We then estimate the following model:

$$Post\text{-}IPO\ Return\ Volatility_i = \beta_0 + \beta_1 * Post\_JOBS_i * Dispersion_i + \beta_2 * Post\_JOBS_i$$

[7] Professor Jay Ritter's Founding Date database is available at https://site.warrington.ufl.edu/ritter/ipo-data/.
[8] Barth et al. (2017) measure volatility over a 30-day window starting from the day after the IPO. The window for our volatility measures ends on the day before the first quarterly earnings announcement because we want to capture the impact of analyst forecast dispersion over the entire first quarter after the IPO.

$$+ \beta_3 * Dispersion_i + \beta_4 * Firm\ Characteristics_i + \beta_5 * IPO\ Characteristics_i + Fixed\ Effects + \varepsilon_i \quad (2)$$

Our main interest is in the interaction terms between the *Post_JOBS* indicator and the forecast dispersion measures (*Dispersion_All*, *Dispersion_Affiliated*, and *Dispersion_Unaffiliated*). The coefficients on the interaction terms capture the differences in the impact of analyst forecast dispersion on post-IPO return volatility between the EGCs and pseudo-EGCs. Our control variables largely follow Barth et al. (2017), including firm-specific and IPO-offer-specific characteristics such as total assets, total revenue, Tobin's Q, return on assets, indicators for technology firms, R&D, IPO proceeds, firm age, whether the firm has a Big 4 auditor, and whether the firm is backed by venture capital. *LnR&D* is the natural logarithm of 1 plus research and development expenditures reported for the most recent fiscal year prior to the IPO, scaled by total revenue for the same period. *LnProceeds* is the natural logarithm of 1 plus the total number of shares offered during the IPO multiplied by the offer price per share. *Big4* is an indicator variable that equals 1 if the IPO firm is audited by a Big 4 auditor (Deloitte, EY, KPMG, or PwC) and 0 otherwise. Finally, we include exchange and industry fixed effects, where the industry classification follows Fama and French's (1997) 12-industry classification.

4. Sample Selection and Descriptive Statistics

From Thomson One's Securities Data Corporation (SDC) new equity database, we extract all U.S. IPOs between January 1, 2004, and December 31, 2016. Following prior literature, we exclude unit offers, closed-end funds, real estate investment trusts (REITs), American depositary receipts (ADRs), and limited partnerships (Lowry et al. 2010; Loughran and McDonald 2013; Barth et al. 2017). We also exclude IPOs with an offer price below $5 to ensure that small illiquid stocks do not drive our results. After excluding issuers without stock price data from *CRSP*,

financial statement data from *Compustat*, underwriter and analyst identification information from *I/B/E/S*, or firms' founding date data from Professor Jay Ritter's Founding Dates database, we end up with 1,258 IPOs. After further excluding 142 IPOs with pre-IPO annual revenue greater than $1 billion, our sample includes 1,116 IPOs with less than $1 billion pre-IPO annual revenue.

For the 1,116 IPO firms, we obtain from *I/B/E/S* analyst earnings per share forecasts and actual earnings per share for the first quarter after the IPO. We limit the analyst forecasts to those issued on the dates that analysts initiate their coverage of the IPO firm and require that the initiation dates occur before the first quarterly earnings announcement by the IPO firm. We choose the initiation quarterly earnings forecasts to ensure that our measures of analyst forecast dispersion capture the direct impact of differential information access rather than the confounding effect of analyst herding (Bowen et al. 2008; Dambra et al. 2018). We require at least two analyst forecasts to calculate forecast dispersion (Diether et al. 2002; Sadka and Scherbina 2007). Imposing this requirement leaves us with 853 (660 and 378) IPOs with an available measure of forecast dispersion among all (only affiliated and only unaffiliated) analysts covering the firm. Of the 853 IPOs, 313 occur after the JOBS Act and qualify for the EGC status, and the remaining 540 are firms that would have qualified for the EGC status under the JOBS Act but went public *before* the Act (pseudo-EGC). We winsorize all continuous variables at the 1 percent and 99 percent levels for these firms across the sample period.

Table 1 provides descriptive statistics for the full sample of 853 IPO firms. Panel A shows that, on average, the IPO firms in our sample have total assets of $374.88 million, annual revenue of $163.65 million, and IPO proceeds of $151.81 million. The average number of analysts covering the IPO firms is about four (measured as of the first quarterly earnings announcement date after the IPO), with an average experience of 9.5 years before they start following the IPO firm of

interest. On average, analysts following the IPO firms issue their first quarterly earnings forecasts about 57 days before the actual earnings announcements. Panel B reports the univariate comparison across the EGC and the pseudo-EGC samples. Compared to pseudo-EGCs in the pre-JOBS period, EGCs on average have lower revenue, higher Tobin's Q, and lower ROA prior to the IPO. EGCs also tend to be younger firms and are more likely to be backed by venture capital (Loughran and Ritter 2004; Lowry et al. 2010), compared to pseudo-EGCs in the pre-JOBS period. Panel B also shows that EGCs are covered by analysts who have more experience and initiate forecasts sooner after the IPO. Consistent with the increased information uncertainty documented in Barth et al. (2017), Panel B shows that EGCs experience significantly higher return volatility than pseudo-EGCs in the pre-JOBS period.

5. Results

5.1 Main Results

Table 2 presents the results from estimating Model (1) when we examine the impact of the JOBS Act on analyst forecast dispersion. Table 2 shows that the coefficient on *Post_JOBS* is significantly positive ($p < 0.05$) when forecast dispersion is measured among all analysts (*Dispersion_All*) and among affiliated analysts covering the IPO firm (*Dispersion_Affiliated*), but is *not* significant when forecast dispersion is measured among only unaffiliated analysts (*Dispersion_Unaffiliated*). These findings suggest that while EGCs have significantly higher overall forecast dispersion than pseudo-EGCs in the pre-JOBS period, this higher forecast dispersion is mainly driven by affiliated analysts. Because affiliated and unaffiliated analysts have the same access to EGCs' public disclosure, our findings of higher forecast dispersion among the affiliated analysts but *not* among the unaffiliated analysts are more likely attributable to the

differential information privilege granted to affiliated analysts under the JOBS Act. Table 2 also shows that overall analyst forecast dispersion is higher when analyst coverage is higher, but lower when analysts issue their initiation forecast closer to the earnings announcement date.

Table 3 presents the results from estimating Model (2) when we examine whether differences in analyst forecast dispersion between EGCs and pseudo-EGCs are associated with differences in post-IPO return volatility around the JOBS Act.[9] We focus on the three interaction terms: *Post_JOBS * Dispersion_All*, *Post_JOBS * Dispersion_Affiliated*, and *Post_JOBS * Dispersion_Unaffiliated*. Columns 1 through 3 show that the forecast dispersion among all analysts covering the EGC is not associated with any incremental differences in post-IPO return volatility compared to pseudo-EGCs. Columns 4 through 6 show that the forecast dispersion among *affiliated* analysts covering the EGC is associated with significantly higher total return volatility and higher idiosyncratic return volatility, but not systematic return volatility, compared to pseudo-EGCs in the pre-JOBS period. The contrast in the associations of affiliated analysts' forecast dispersion with idiosyncratic return volatility and systematic return volatility is also interesting in its own right because it supports Johnson's (2004) argument that analyst forecast dispersion may proxy for idiosyncratic risk, but not systematic risk. Finally, Columns 7 to 9 show that the forecast dispersion among unaffiliated analysts is *not* associated with any differences in post-IPO return volatility compared to pseudo-EGCs in the pre-JOBS period.

As for the control variables, Table 3 shows that firms that are smaller (in total assets) and those in the high-tech industries generally experience lower return volatility soon after their IPOs.

[9] In an untabulated analysis, we replicate Barth et al. (2017) by examining whether EGCs experience increased post-IPO return volatility after the JOBS Act. We confirm the Barth et al. (2017) finding that EGCs have significantly higher post-IPO return volatility relative to similar IPO firms in the pre-JOBS period. For brevity, we do not tabulate these results.

These findings are largely consistent with Barth et al. (2018). We also find that firms backed by venture capital tend to have higher total and idiosyncratic return volatility after their IPOs.

Our analyses so far suggest that forecast dispersion among affiliated analysts, but *not* that among the unaffiliated analysts covering the EGCs, plays an incremental role in explaining EGCs' higher post-IPO return volatility, indicating that the informational advantage granted to affiliated analysts may contribute to increased market uncertainty. However, because we cannot directly observe or measure the private communications that occur between affiliated analysts and EGC management or potential investors, we can only infer that the differences in market uncertainty are driven by affiliated analysts' informational advantage.

To further validate our inferences, we utilize the setting of seasoned equity offerings (SEOs) during the same sample period (2004-2016) to benchmark against the IPOs in our main sample. Because the JOBS Act does *not* apply to SEOs, affiliated analysts covering the SEO firms do not have the same informational advantage as they do with the EGCs. Therefore, we do not expect our findings for EGCs to extend to SEO firms of similar size. We extract from Thomson One's SDC database all SEOs in the U.S. between January 1, 2004, and December 31, 2016. We impose similar selection criteria on the SEOs as we do on our IPO sample and identify 2,696 SEOs with pre-SEO annual revenue below $1 billion.

To measure analyst forecast dispersion after the SEOs, we obtain from *I/B/E/S* the first quarterly earnings forecast each analyst issued between the SEO date and the first earnings announcement date after the SEO. The calculation of the standard deviation of these forecasts is similar to the dispersion measures used in our main analyses. We also construct similar post-offering return volatility measures for the SEO sample. After imposing additional data requirements, we end up with a sample of 1,931 SEOs. Among the 1,931 SEOs, 1,066 occur before,

and 865 occur after the JOBS Act. Firms with SEOs in the post-JOBS period would have qualified for the EGC status had the JOBS Act also applied to SEOs. Our regression analyses include the same set of control variables (except *VC_Backed*) because SEOs rarely involve venture capital.

Table 4 Panel A reports the univariate comparisons of firm- and offer-specific characteristics across the SEOs between the pre- and the post-JOBS periods. Compared to SEOs in the pre-JOBS period, SEOs in the post-JOBS period tend to involve firms that on average have lower revenue, lower ROA, higher Tobin's Q, are followed by more experienced analysts, generate a larger amount of offering proceeds, and experience larger return volatility after the offerings. Many of these differences are similar to what we find in our IPO sample across EGCs and pseudo-EGCs, suggesting that using SEOs as a benchmark may mitigate concerns of any economy- or market-wide trends driving our main findings, and can help us indirectly evaluate the impact of pre-IPO communications on market uncertainty.

Panel B of Table 4 shows the differences in forecast dispersion among analysts following the SEO firms in the pre- and post-JOBS periods. In contrast to our findings from the IPO sample, we find that none of the coefficients on the *Post_JOBS* indicator is statistically significant. Only *Loss* is associated with higher analyst forecast dispersion ($p < 0.10$). Panel C of Table 4 reports the results for our analysis of the impact of analyst forecast dispersion on post-SEO return volatility. Also in contrast to our main findings from the IPO sample, we find that for SEOs in the post-JOBS period there is no incremental difference in the impact of forecast dispersion among affiliated analysts on post-SEO return volatility between the pre- and the post-JOBS periods. Given that affiliated analysts have no informational advantage in the SEO setting, these findings collectively suggest that our inferences on EGCs are unlikely to be driven by other confounding events or

trends in the capital markets, but are more likely due to the pre-IPO communications that affiliated analysts are allowed to have under the JOBS Act.

5.2 Robustness Tests

In this section, we conduct robustness tests to help further strengthen the validity of our inferences. First, we rerun our analyses using a propensity-score-matched (PSM) control sample that includes pre-JOBS IPOs that are similar to EGCs along various observable dimensions. Our original control sample only matches on pre-IPO annual total revenue. To obtain the PSM control sample, we estimate a logit model that predicts the probability of going public as a function of firm characteristics including revenue, total assets, Tobin's Q, the incidence of loss, and whether a firm is a technology firm (based on Loughran and Ritter's (2004) classification). Each EGC firm is matched to one pre-JOBS IPO firm using a "greedy" algorithm (without replacement) in the same Fama-French 12-industry classification that has the smallest absolute difference in the propensity score. This PSM control sample includes 351 firms that went public between January 1, 2004, and April 5, 2012 (i.e., the pre-JOBS period) and have less than $1 billion annual revenue prior to the IPO.

Univariate comparisons between the PSM control sample and the EGC sample reported in Panel A of Table 5 confirm that the two samples do not differ significantly along the matching dimensions. Panel B of Table 5 reports our analysis of the impact of the JOBS Act on analyst forecast dispersion using the PSM control sample. Consistent with results reported in Tables 2 and 3, we continue to find that the forecast dispersion among unaffiliated analysts following the EGCs is not different from that for the PSM sample, but forecast dispersion among affiliated analysts is significantly higher for the EGC sample than for the PSM sample. In terms of post-IPO return

volatility, Panel C of Table 5 reports results that also are similar to our primary findings: only the dispersion among affiliated analysts is associated with higher post-IPO return volatility (*TotVol* and *IdioVol*) for EGCs than for the PSM sample.

In our second robustness test, we conduct a pseudo-event analysis using only the sample of EGCs *within* the post-JOBS period. Specifically, we split our EGC sample into two subsamples based on the year of the IPO (2012-2013 and 2014-2016). We then create an indicator variable, *Post_PseudoEvent*, which is the equivalent of the *Post_JOBS* indicator in our main analyses except that it represents a pseudo-event, not the real event of the JOBS Act. Using only the post-JOBS EGC sample along with the *Post_PseudoEvent* variable, we rerun our analysis of forecast dispersion change around the pseudo-event. We compare the forecast dispersion among affiliated analysts following EGCs around the pseudo-event when *all* of these analysts are allowed private pre-IPO communications. If private pre-IPO communications can explain the differences we find between the pre- and post-JOBS periods, we would not expect to see any differences in forecast dispersion among affiliated analysts within the post-JOBS period.

Table 6 reports the results of the pseudo-event analysis. Consistent with our expectation, we find no difference in any of the forecast dispersion measures before and after the pseudo-event, nor is there any differential impact of analyst forecast dispersion on post-IPO return volatility after the pseudo-event.[10] Results from this pseudo-event analysis provide additional support for our inferences that the pre-IPO communications permitted under the 2012 JOBS Act likely explain the

[10] One possible concern for the lack of significant findings in this pseudo-analysis is that our sample size for this analysis (N=313) becomes smaller and may reduce the power of our tests. In an untabulated analysis, we also use the pseudo-EGCs within the pre-JOBS period (N=540) to conduct a similar pseudo-analysis and again we find no significant difference in either analyst forecast dispersion or the association between forecast dispersion and post-IPO return volatility around the pseudo-event we create within the pre-JOBS period.

higher forecast dispersion among affiliated analysts and the larger post-IPO return volatility incrementally associated with the forecast dispersion among affiliated analysts for EGCs.[11]

5.3 Supplemental Analysis

Given our findings so far, one may ask why the forecast dispersion among affiliated analysts covering the EGCs is higher when they have privileged informational access after the JOBS Act.[12] One possibility is that not all affiliated analysts generate the same information set from their pre-IPO private communications. This is because private communications are allowed but not mandated for all affiliated analysts, and some affiliated analysts may not participate in the same meetings or conversations with EGC management or potential investors. Analysts who do participate may also glean different insights from such meetings. It is likely that at least some of the privately communicated information is qualitative and contextual, in the form of nonverbal cues such as body language, vocal tone, and overall affect. Recent research suggests that market participants can glean information from nonverbal cues (e.g., Blankespoore, Hendricks, and Miller 2017; Mayew and Venkatachalam 2012). If individual analysts vary in their ability to exploit the information in nonverbal cues, they may exhibit higher disagreement. Therefore, it is possible that variations in analysts' soft skills lead to differences in how much they rely on interpersonal

[11] In an untabulated robustness test, we also use IPOs that are *above* the $1 billion revenue threshold both before and after the JOBS Act as an alternative control sample. These larger IPOs would not have qualified for EGC status either before or after the JOBS Act. Focusing on these larger IPOs provides another opportunity to evaluate whether the pre-IPO communications applicable to EGCs are the main reason for the differences we observe between the affiliated and unaffiliated analysts. This sample includes 141 IPOs, of which 76 occurred before the JOBS Act and 65 afterward. We analyze the differences in forecast dispersion among all analysts, among only affiliated analysts, and among only unaffiliated analysts during the pre- and post-JOBS periods. We find no difference in the forecast dispersion among all analysts, among affiliated analysts and among unaffiliated analysts in the post-JOBS period. In addition, analyst forecast dispersion for these larger IPO firms has no incremental impact on post-IPO return volatility after the JOBS Act, regardless of the analyst affiliation.

[12] The ideal way to answer this question is to directly measure the information each affiliated analyst obtains through their pre-IPO private communications with EGC management or potential investors. However, this is impossible to do empirically.

communications (e.g., private meetings) as an information source, differences in the information they generate from such meetings, and, eventually, a higher level of disagreement in their forecasts.

To explore this possibility, we examine differences in affiliated analysts' number of connections on *LinkedIn*, which we use to capture analysts' soft skills (e.g., social skills). For this analysis, we focus only on affiliated analysts and manually collect their number of connections listed on *LinkedIn*. To collect the profiles of affiliated analysts from *LinkedIn*, we rely on the names of both the underwriters and the individual analysts recorded in the *I/B/E/S* database to identify each affiliated analyst.[13]

For each analyst profile that we locate on *LinkedIn*, we go through the "title" and "experience" sections to confirm that the analyst worked at the underwriter during our sample period. We then extract the number of connections listed on each analyst's *LinkedIn* profile and calculate the standard deviation of these affiliated analysts' connections (*Stdv_Connections*). Because *LinkedIn* truncates the number of connections at 500 (listed as 500+), we use the logarithm of *Stdv_Connections* in our analysis (*Ln_Stdv_Connections*). Truncating the number of connections at 500 can also lead us to underestimate the true variations among affiliated analysts' soft skills, lowering our chance of finding any significant results. Finally, we estimate the following model to examine the effect of variations in affiliated analysts' soft skills on their forecast dispersion:

$$\begin{aligned} Dispersion\_Affiliated_i = {} & \beta_0 + \beta_1 * Post\_JOBS_i * Ln\_Stdv\_Connections \\ & + \beta_2 * Post\_JOBS_i + \beta_3 * Ln\_Stdv\_Connections \\ & + \beta_4 * Analyst\ Characteristics_i + \beta_5 * Firm\ Characteristics_i \\ & + \beta_6 * Filings8K_i + Fixed\ Effects + \varepsilon_i \end{aligned} \quad (3)$$

[13] Not every affiliated analyst lists a professional profile on *LinkedIn*. As a result, the number of affiliated analysts entering this analysis is smaller than that in our main analyses.

Our primary variable of interest is the interaction term between the *Post_JOBS* indicator and *Ln_Stdv_Connections*, which captures the differences in the impact of variations in affiliated analysts' soft skills on their forecast dispersion before and after the JOBS Act. Table 7 shows that the coefficient on the interaction term is significantly positive ($p < 0.05$), suggesting that variations in affiliated analysts' *LinkedIn* connections are associated with higher forecast dispersion among the affiliated analysts in the post-JOBS period than in the pre-JOBS period. In contrast, the coefficient on *Ln_Stdv_Connections* is insignificant, indicating that variation in *LinkedIn* connections is not associated with forecast dispersion among affiliated analysts during the pre-JOBS period. While these findings are not conclusive, they do lend some support to our conjecture that variations in soft skills or the degree of reliance on interpersonal communications may explain, at least partially, the higher forecast dispersion among affiliated analysts following EGCs after the JOBS Act. Our evidence also implies that the privileged information access to EGC management and potential investors may have increased the disagreement among the affiliated analysts following the same firm.

6. Conclusions

In this study, we examine the impact of the JOBS Act's provisions that permit pre-IPO private communications between affiliated analysts and EGC management or potential investors. Because this informational privilege does not extend to unaffiliated analysts, pre-IPO private communications potentially affect affiliated and unaffiliated analysts differently. Therefore, we compare the forecast dispersion among affiliated analysts and among unaffiliated analysts for EGCs and for a control sample of similar IPOs that occurred before the JOBS Act. Our focus on analyst forecast dispersion is important not only because it sheds light on the drivers of the JOBS

Act's impact on EGCs' post-IPO information environment, but also because analyst forecast dispersion itself has a significant capital market impact.

Using a sample of 853 IPOs during 2004-2016, we find that the dispersion in analysts' initial quarterly earnings forecasts after the IPO is significantly higher for EGCs compared to similar IPOs in the pre-JOBS period. This higher dispersion is largely driven by affiliated analysts, who have privileged access to pre-IPO private communications. More importantly, we find that the forecast dispersion among affiliated analysts is associated with significantly higher post-IPO return volatility in EGCs than in similar IPOs in the pre-JOBS period. However, there is no difference in the impact of forecast dispersion among unaffiliated analysts on post-IPO return volatility surrounding the JOBS Act. These findings indicate that the increased information uncertainty EGCs face after the JOBS Act is more likely due to affiliated analysts' privileged access to private information.

Our results do not extend to the SEO setting when we use a sample of SEOs of similar size during the same sample period, implying that our main findings are attributable to the JOBS Act and not to confounding market- or economy-wide events. Our inferences continue to hold in a battery of robustness tests using a propensity-score-matched control sample and a pseudo-event analysis. These robustness tests further support our conclusion that affiliated analysts' privileged access to pre-IPO private communications may contribute to the higher information uncertainty that EGCs experience in the post-JOBS period.

To understand the possible reasons for the higher forecast dispersion among affiliated analysts for EGCs, we conduct a supplemental analysis. We explore the possibility that not all affiliated analysts generate the same information set, either because they do not necessarily attend the same private meetings with EGC management or potential investor or because those who do

attend glean different insights from such meetings. Therefore, we examine whether variations in analysts' soft skills help to explain the higher forecast dispersion we observe among affiliated analysts. Using the number of connections on *LinkedIn* to proxy for analysts' soft skills, we find that variations in affiliated analysts' number of connections are associated with higher forecast dispersion in the post-JOBS Act period than in the pre-JOBS Act period. This evidence indicates that variation in affiliated analysts' soft skills may explain the higher forecast dispersion among them after the JOBS Act.

Our study extends Barth et al. (2017) by showing that the JOBS Act's provisions related to affiliated analysts' access to pre-IPO private communications also play an important role in affecting EGCs' post-IPO information uncertainty. Our findings also highlight a potential unintended consequence of the JOBS Act: allowing privileged private communications with EGC management and potential investors can increase the disagreement among affiliated analysts, causing deterioration in firms' post-IPO information environments.

References

Agarwal, S., Gupta, S., & Israelsen, R. D. (2017). Public and private Information: Firm disclosure, SEC letters, and the JOBS Act. Available at SSRN: https://ssrn.com/abstract=2891089.

Bailey, W., Li, H., Mao, C. X., & Zhong, R. (2003). Regulation Fair Disclosure and earnings information: Market, analyst, and corporate responses. *Journal of Finance, 58*(6), 2487-2514.

Barron, O. E., Kim, O., Lim, S. C., & Stevens, D. E. (1998). Using analysts' forecasts to measure properties of analysts' information environment. *The Accounting Review*, *73*(4), 421-433.

Barron, O. E., Stanford, M. H., & Yu, Y. (2009). Further evidence on the relation between analysts' forecast dispersion and stock returns. *Contemporary Accounting Research*, *26*(2), 329-357.

Barth, M. E., Landsman, W. R., & Taylor, D. J. (2017). The JOBS Act and information uncertainty in IPO firms. *The Accounting Review*, *92*(6): 25-47.

Blankespoor, E., Hendricks, B., & Miller, G. (2017). Perceptions and price: Evidence from CEO presentations at IPO roadshows. *Journal of Accounting Research, 55*(2): 275-327.

Bowen, R. M., Chen, X., & Cheng, Q. (2008). Analyst coverage and the cost of raising equity capital: Evidence from underpricing of seasoned equity offerings. *Contemporary Accounting Research*, *25*(3), 657-700.

Bradley, D. J., Jordan, B. D., & Ritter, J. R. (2003). The quiet period goes out with a bang. *Journal of Finance, 58*(1), 1-36.

Bradshaw, M. T., Richardson, S. A., & Sloan, R. G. (2006). The relation between corporate financing activities, analysts' forecasts and stock returns. *Journal of Accounting and Economics*, *42*(1), 53-85.

Bradshaw, M. T. (2009). Analyst information processing, financial regulation, and academic research. *The Accounting Review, 84*(4), 1073-1083.

Cen, L., Wei, K. J., & Yang, L. (2016). Disagreement, underreaction, and stock returns. *Management Science*, *63*(4), 1214-1231.

Chaplinsky, S., Hanley, K. W., & Moon, S. K. (2017). The JOBS Act and the costs of going public. *Journal of Accounting Research*, *55*(4), 795-836.

Dambra, M., Field, L. C., & Gustafson, M. T. (2015). The JOBS Act and IPO volume: Evidence that disclosure costs affect the IPO decision. *Journal of Financial Economics*, *116*(1), 121-143.

Dambra, M., Field, L. C., Gustafson, M., & Pisciotta, K. J. (2018). The consequences to analyst involvement in the IPO process: Evidence surrounding the JOBS Act. *Journal of Accounting and Economics*, *65*(2-3), 302-330.

Diether, K. B., Malloy, C. J., & Scherbina, A. (2002). Differences of opinion and the cross section of stock returns. *Journal of Finance*, *57*(5), 2113-2141.

Doukas, J. A., Kim, C. F., & Pantzalis, C. (2006). Divergence of opinion and equity returns. *Journal of Financial and Quantitative Analysis*, *41*(3), 573-606.

Fama, E. F., & French, K. R. (1997). Industry costs of equity. *Journal of Financial Economics*, *43*(2), 153-193.

Garfinkel, J. A., & Sokobin, J. (2006). Volume, opinion divergence, and returns: A study of post–earnings announcement drift. *Journal of Accounting Research*, *44*(1), 85-112.

Hibbert, A. M., Kang, Q., Kumar, A., & Mishra, S. (2017). Heterogeneous beliefs and return volatility around seasoned equity offerings. Available at SSRN: https://ssrn.com/abstract=2924041.

Johnson, T. C. (2004). Forecast dispersion and the cross section of expected returns. *Journal of Finance*, *59*(5), 1957-1978.

Latham and Watkins, LLP. (2014). The JOBS Act two years later: An updated look at the IPO landscape. Available at: https://www.lw.com/thoughtLeadership/lw-jobs-act-ipos-second-year.

Li, C., Lin, A., & Lu, H. (2017). Analyzing the Analysts: The effect of technical and social skills on analyst careers. Available at: https://editorialexpress.com/cgi-bin/conference/download.cgi?db_name=CICF2017&paper_id=561

Li, L., & C. R., Chen (2016). Analysts' forecast dispersion and stock returns: A panel threshold regression analysis based on conditional limited market participation hypothesis. *Finance Research Letters*, *18*, 100-107.

Li, K., & H., You. (2015). What is the value of sell-side analysts? Evidence from coverage initiations and terminations. *Journal of Accounting and Economics*, 60(2-3), 141-160.

Liu, X. G., & Natarajan, R. (2012). The effect of financial analysts' strategic behavior on analysts' forecast dispersion. *The Accounting Review*, *87*(6), 2123-2149.

Loughran, T., & Ritter, J. (2004). Why has IPO underpricing changed over time? *Financial Management*, *33*(3), 5-37.

Loughran, T., & McDonald, B. (2013). IPO first-day returns, offer price revisions, volatility, and form S-1 language. *Journal of Financial Economics*, *109*(2), 307-326.

Lowry, M., Officer, M. S., & Schwert, G. W. (2010). The variability of IPO initial returns. *Journal of Finance, 65*(2), 425-465.

Mayew, W., & Venkatachalam, M. (2012). The power of voice: Managerial affective states and future firm performance. *Journal of Finance,* 67(1), 1-43.

Merton, R. C. (1987). A simple model of capital market equilibrium with incomplete information. *Journal of Finance, 42*(3), 483-510.

Miller, E. M. (1977). Risk, uncertainty, and divergence of opinion. *Journal of Finance, 32*(4), 1151-1168.

Park, C. W., & Stice, E. K. (2000). Analyst forecasting ability and the stock price reaction to forecast revisions. *Review of Accounting Studies, 5*(3), 259-272.

Ritter, J. R., & Welch, I. (2002). A review of IPO activity, pricing, and allocations. *Journal of Finance, 57*(4), 1795-1828.

Sadka, R., & Scherbina, A. (2007). Analyst disagreement, mispricing, and liquidity. *Journal of Finance, 62*(5), 2367-2403.

Soltes, E. (2014). Private interaction between firm management and sell-side analysts. *Journal of Accounting Research, 52*(1), 245-272.

Zeidel, M., Negri, K., and Turner, B. (2016). The JOBS Act: Did it accomplish its goals? Available at: https://www.skadden.com/insights/publications/2016/07/the-jobs-act-did-it-accomplish-its-goals

Appendix. Variable Definitions and Data Sources

Variable	Definition	Source
Big4	An indicator variable that equals 1 if the IPO firm is audited by a Big 4 auditor (Deloitte, EY, KPMG, or PwC) and 0 otherwise.	*SDC*
Dispersion_All	The standard deviation of the initial earnings forecasts for the first post-IPO quarter issued by all analysts following the IPO firm, scaled by the absolute value of the median of these forecasts. A minimum of two forecasts is required.	*I/B/E/S*
Dispersion_Affiliated	The standard deviation of the initial earnings forecasts for the first post-IPO quarter issued by analysts who are affiliated with any of the underwriting investment banks on the IPO syndicate team, scaled by the absolute value of median of these forecasts. A minimum of two forecasts is required.	*I/B/E/S*
Dispersion_Unaffiliated	The standard deviation of the initial earnings forecasts for the first post-IPO quarter issued by analysts who are not affiliated with any of the underwriting investment banks on the IPO syndicate team, scaled by the absolute value of median of these forecasts. A minimum of two forecasts is required.	*I/B/E/S*
Filings8K	The number of Form 8-Ks the IPO firms filed between the IPO date and the first post-IPO quarterly earnings announcement date.	*EDGAR & Hand Collection*
IdioVol	The standard deviation of residuals from a firm-specific market model estimated over the period between the first day after the IPO and one day before the first post-IPO earnings announcement.	*CRSP*
Leverage	Total liabilities divided by total assets, both of which are measured as of the most recent fiscal year prior to the IPO.	*Compustat*
LnAge	The natural logarithm of the number of years between the IPO date and the founding date of the firm, retrieved from Professor Jay Ritter's IPO Founding Dates database at https://site.warrington.ufl.edu/ritter/ipo-data/.	*Professor Jay Ritter's IPO Founding Dates Data*
LnAnalystFollowing	The natural logarithm of the number of analysts issuing an earnings forecast for the first quarter after the IPO.	*I/B/E/S*
LnAnalystExperience	The natural logarithm of the average forecast experience (in years) among analysts prior to issuing their initial quarterly forecasts for the IPO firm of interest.	*I/B/E/S*
LnAssets	The natural logarithm of 1 plus the IPO firm's total assets *($millions)* as of the most recent fiscal year prior to the IPO.	*Compustat*

Variable	Definition	Source
LnDaysForecastTo1stEA	The natural logarithm of the number of days between an analyst's initial quarterly earnings forecast for the IPO firm and the first post-IPO quarterly earnings announcement, averaged across all analysts covering the firm.	*I/B/E/S*
LnProceeds	The natural logarithm of 1 plus the total number of shares *(millions)* offered during the IPO times the offer price.	*SDC*
LnR&D	The natural logarithm of 1 plus research and development expenditures *($millions)* scaled by total revenue measured as of the most recent fiscal year prior to the IPO.	*Compustat*
LnRevenue	The natural logarithm of 1 plus the IPO firm's total annual revenue, where total revenue *($millions)* is measured as of the most recent fiscal year prior to the IPO.	*Compustat*
LnTobin'sQ	The natural logarithm of the IPO firm's Tobin's Q. Tobin's Q is total assets plus the market value of equity minus book value of equity minus IPO proceeds, scaled by total assets. The market value of equity is measured as the number of shares outstanding after the IPO times the IPO offer price per share. The book value of equity is measured as of the most recent fiscal year prior to the IPO. The IPO proceeds are obtained from SDC.	*Compustat, SDC*
Loss	An indicator variable that equals 1 if the IPO firm reports a net loss in the most recent fiscal year prior to IPO, and 0 otherwise.	*Compustat*
Post_JOBS	An indicator variable that equals 1 if the equity offering date is after April 5, 2012, when the JOBS Act took effect, and 0 otherwise.	*SDC*
Post_PseudoEvent	An indicator variable that equals 1 if an EGC goes public after January 1, 2014, and 0 if an EGC goes public between April 6, 2012, and December 31, 2013.	*SDC*
ROA	Return on assets, calculated as net income divided by total assets as of the most recent fiscal year prior to the IPO.	*Compustat*
Ln_Stdv_Connections	The natural logarithm of the standard deviation of the number of *LinkedIn* connections among analysts affiliated with the underwriter(s) at the time of the IPO.	*LinkedIn*.com
SysVol	The slope coefficient from a firm-specific market model estimated over the period between the first day after the IPO and one day before the first post-IPO earnings announcement.	*CRSP*
Tech	An indicator variable that equals 1 if the IPO firm is a technology firm based on the Loughran and Ritter's (2004) classification, and 0 otherwise.	*Compustat*
TotVol	The standard deviation of daily raw returns over the period between the first day after the IPO and one day before the first post-IPO earnings announcement.	*CRSP*
VC_Backed	An indicator variable that equals 1 if the IPO is backed by venture capital, and 0 otherwise.	*SDC*

Table 1. Descriptive Statistics

Panel A reports descriptive statistics for firm-, offering-, and analyst-level characteristics during our sample period. The sample consists of 853 IPOs from 01/01/2004 to 12/31/2016. See the Appendix for variable definitions.

Panel A: Summary Statistics of Key Variables

Variable	N	Mean	Std. Dev.	P(25)	Median	P(75)
Assets ($millions)	853	374.877	908.455	39.476	89.646	338.597
Revenue ($millions)	853	163.650	206.054	25.485	81.789	224.319
Tobin's Q	853	2.251	6.835	0.805	1.167	2.293
ROA	853	-0.290	1.160	-0.356	-0.007	0.058
Leverage	853	0.366	0.585	0.016	0.191	0.518
Loss	853	0.524	0.500	0.000	1.000	1.000
Tech	853	0.226	0.418	0.000	0.000	0.000
R&D ($millions)	853	2.868	23.245	0.000	0.037	0.240
Filings8K	853	2.932	2.652	1.000	2.000	4.000
Proceeds ($millions)	853	151.809	185.542	64.000	96.000	163.462
Age	853	17.083	20.966	6.000	10.000	18.000
VC_Backed	853	0.536	0.499	0.000	1.000	1.000
Big4	853	0.692	0.462	0.000	1.000	1.000
Dispersion_All	853	0.433	1.105	0.076	0.166	0.377
Dispersion_Affiliated	660	0.418	2.731	0.052	0.143	0.326
Dispersion_Unaffiliated	378	0.436	1.037	0.049	0.153	0.384
AnalystFollowing	853	4.253	2.277	3.000	4.000	5.000
AnalystExperience	853	9.523	4.038	6.600	9.000	12.000
DaysForecastTo1stEA	853	57.057	29.267	36.000	55.714	78.167
TotVol	853	3.300	1.560	2.205	3.025	4.056
IdioVol	853	3.244	1.553	2.149	2.972	4.019
SysVol	853	0.695	0.923	0.163	0.613	1.176

Table 1. (Continued)

Panel B reports the univariate comparisons between EGCs and pseudo-EGCs during our sample period. The pseudo-EGC sample includes 540 IPOs between January 1, 2004, and April 5, 2012, by firms that went public before the JOBS Act and could have qualified for the EGC status under the JOBS Act (i.e., firms that are below the $1 billion annual revenue threshold). The EGC sample includes 313 IPOs between April 6, 2012, and December 31, 2016, by firms that qualify for the EGC status. A t-test is used for the sample mean comparison, and the Wilcox signed-rank test is used for sample median comparison. ***, **, * indicate statistical significance at the 1 %, 5%, and 10% levels, respectively. See the Appendix for variable definitions.

Panel B: Univariate Comparison between Pseudo-EGC Firms and EGC Firms

	Pre-JOBS Pseudo-EGCs (N=540)		**Post-JOBS EGCs** (N=313)		**Test of Differences EGC minus Pseudo-EGC**	
Variable	**Mean**	**Median**	**Mean**	**Median**	**Mean**	**Median**
Assets ($millions)	346.163	97.777	428.703	82.223	82.541	-15.554
Revenue ($millions)	174.457	90.000	143.405	70.085	-31.052 **	-19.915 ***
Tobin'sQ	1.729	1.023	3.242	1.556	1.513 **	0.533 ***
ROA	-0.170	0.005	-0.516	-0.103	-0.347 ***	-0.108 ***
Leverage	0.360	0.209	0.376	0.155	0.016	-0.054
Loss	0.465	0.000	0.633	1.000	0.168 ***	1.000 ***
Tech	0.274	0.000	0.135	0.000	-0.139 ***	0.000
R&D ($millions)	2.679	0.013	3.246	0.115	0.568	0.102 ***
Filings8K	2.772	2.000	3.232	3.000	0.460 **	1.000 **
Proceeds ($millions)	153.459	95.550	148.727	96.000	-4.731	0.450
Age	18.554	10.000	14.303	10.000	-4.251 ***	0.000
VC_Backed	0.502	1.000	0.599	1.000	0.097 ***	0.000
Big4	0.733	1.000	0.616	1.000	-0.117 ***	0.000
Dispersion_All	0.417	0.166	0.464	0.166	0.047	0.000
Dispersion_Affiliated	0.310	0.146	0.636	0.152	0.325 ***	0.006
Dispersion_Unaffiliated	0.452	0.137	0.403	0.155	-0.048	0.018
AnalystFollowing	4.267	4.000	4.228	4.000	-0.038	0.000
AnalystExperience	8.705	8.500	11.053	11.000	2.348 ***	2.500 ***
DaysForecastTo1stEA	51.761	51.292	66.952	70.000	15.191 ***	18.708 ***
TotVol	3.132	2.895	3.615	3.398	0.483 ***	0.503 ***
IdioVol	3.078	2.816	3.555	3.358	0.477 ***	0.542 ***
SysVol	0.642	0.592	0.795	0.718	0.154 **	0.125 *

Table 2. Analysis of Analyst Forecast Dispersion before and after the JOBS Act

This table presents the OLS regression analysis of the impact of the JOBS Act on analyst forecast dispersion among IPO firms. We require at least two analyst forecasts to calculate forecast dispersion. Columns (1) through (3) report the results when the dependent variable is the forecast dispersion among all analysts (*Dispersion_All*), the forecast dispersion among only the affiliated analysts (*Dispersion_Affiliated*), and the forecast dispersion among the unaffiliated analysts (*Dispersion_Unaffiliated*). All regressions include industry, stock exchange, and year fixed effects. ***, **, * indicate statistical significance at the 1 %, 5%, and 10% levels, respectively. See the Appendix for variable definitions.

Variable	**Dispersion_All**	**Dispersion_Affiliated**	**Dispersion_Unaffiliated**
	(1)	(2)	(3)
Post_JOBS	**0.962** **	**0.623** **	**0.088**
	(2.410)	**(2.160)**	**(0.140)**
LnAnalystFollowing	0.302 **	0.125	0.197
	(2.020)	(1.030)	(0.750)
LnAnalystExperience	0.169	0.041	-0.076
	(1.470)	(0.570)	(-0.460)
LnDaysForecastTo1stEA	-0.331 ***	-0.001	-0.002
	(-4.400)	(-0.020)	(-0.010)
LnAssets	0.035	-0.002	-0.008
	(0.610)	(-0.050)	(-0.070)
LnRevenue	-0.008	0.014	0.164 *
	(-0.180)	(0.460)	(1.800)
LnTobin'sQ	-0.001	0.015	-0.339
	(-0.010)	(0.200)	(-1.390)
ROA	0.010	-0.006	-0.206
	(0.180)	(-0.150)	(-1.490)
Leverage	-0.079	-0.088	0.002
	(-0.810)	(-1.390)	(0.010)
Loss	0.222 *	0.138 *	0.387 *
	(1.790)	(1.760)	(1.940)
Tech	-0.223	0.032	-0.369
	(-1.540)	(0.350)	(-1.520)
LnAge	-0.084	0.028	-0.178
	(-1.060)	(0.530)	(-1.250)
VC_Backed	-0.129	0.002	0.117
	(-0.930)	(0.030)	(0.500)
Filings8K	0.002	0.001	0.013
	(0.110)	(0.040)	(0.400)
Industry/Exchange/Year FE	**Yes**	**Yes**	**Yes**
Observations	853	660	378
Adjusted R-squared	28.38%	46.65%	49.83%

Table 3. Analysis of the Impact of Analyst Forecast Dispersion on Post-IPO Return Volatility

This table presents the results of OLS regressions of post-IPO return volatility on analyst forecast dispersion before and after the JOBS Act. Columns (1) through (3) report the analysis based on the forecast dispersion of all analysts who initiate a quarterly forecast before the first post-IPO earnings announcement date. Columns (4) through (6) report the analysis based on the forecast dispersion of affiliated analysts who initiate a quarterly forecast before the first post-IPO earnings announcement date. Columns (7) through (9) report the analysis based on the forecast dispersion of unaffiliated analysts who initiate a quarterly forecast before the first post-IPO earnings announcement date. ***, **, * indicate statistical significance at the 1 %, 5%, and 10% levels, respectively. See the Appendix for variable definitions.

	TotVol	**IdioVol**	**SysVol**	**TotVol**	**IdioVol**	**SysVol**	**TotVol**	**IdioVol**	**SysVol**
	IV: Dispersion_All			*IV: Dispersion_Affiliated*			*IV: Dispersion_Unaffiliated*		
Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Post_JOBS*Dispersion	**0.194**	**0.196**	**-0.052**	**0.591 *****	**0.596 *****	**0.122**	**0.074**	**0.057**	**0.045**
	(1.420)	**(1.430)**	**(-0.550)**	**(3.310)**	**(3.360)**	**(1.060)**	**(0.330)**	**(0.250)**	**(0.290)**
Post_JOBS	0.138	0.120	0.141	-0.008	-0.034	0.106	0.169	0.247	-0.003
	(1.100)	(0.950)	(1.610)	(-0.060)	(-0.230)	(1.120)	(0.800)	(1.150)	(-0.020)
Dispersion	0.100 *	0.112 *	0.083 *	0.027	0.020	0.012	0.043	0.026	0.039
	(1.730)	(1.860)	(2.000)	(0.310)	(0.230)	(0.220)	(0.500)	(0.300)	(0.660)
LnAssets	-0.182 **	-0.171 **	-0.116 **	-0.167 **	-0.141 *	-0.147 ***	-0.298 **	-0.298 **	-0.013
	(-2.710)	(-2.540)	(-2.500)	(-2.150)	(-1.820)	(-2.920)	(-2.270)	(-2.230)	(-0.140)
LnRevenue	-0.080	-0.096	0.000	-0.088	-0.127	-0.009	0.086	0.094	-0.135
	(-1.000)	(-1.200)	(0.010)	(-0.910)	(-1.320)	(-0.150)	(0.580)	(0.630)	(-1.330)
LnTobin'sQ	0.193	0.166	0.021	0.088	0.056	0.022	0.225	0.152	0.269
	(1.380)	(1.180)	(0.220)	(0.550)	(0.350)	(0.210)	(0.800)	(0.530)	(1.380)
ROA	0.176 **	0.166 **	0.081 *	0.143 *	0.136 *	0.063	0.011	-0.003	0.230
	(2.600)	(2.450)	(1.740)	(1.730)	(1.650)	(1.170)	(0.040)	(-0.010)	(1.160)
Tech	-0.575 ***	-0.564 ***	-0.138	-0.601 ***	-0.580 ***	-0.198 *	-0.595 **	-0.596 **	-0.321 *
	(-3.690)	(-3.580)	(-1.270)	(-3.450)	(-3.310)	(-1.730)	(-2.190)	(-2.110)	(-1.670)
LnR&D	0.078	0.076	0.013	0.021	0.002	-0.050	0.244	0.267	-0.185
	(0.710)	(0.700)	(0.180)	(0.160)	(0.010)	(-0.600)	(1.190)	(1.290)	(-1.310)
LnProceeds	0.171 *	0.142	0.070	0.168	0.138	0.080	0.006	0.022	-0.112
	(1.870)	(1.540)	(1.110)	(1.540)	(1.250)	(1.120)	(0.040)	(0.150)	(-1.100)
LnAge	-0.212 **	-0.196 **	-0.039	-0.242 **	-0.218 **	-0.018	-0.074	-0.070	0.100
	(-2.700)	(-2.500)	(-0.720)	(-2.580)	(-2.340)	(-0.290)	(-0.570)	(-0.530)	(1.110)
Big4	-0.013	-0.011	0.018	-0.054	-0.052	0.061	0.070	0.116	0.044
	(-0.110)	(-0.090)	(0.230)	(-0.410)	(-0.400)	(0.730)	(0.360)	(0.580)	(0.330)
VC_Backed	0.451 ***	0.463 ***	0.034	0.495 ***	0.506 ***	0.059	0.660 ***	0.768 ***	-0.106
	(3.340)	(3.400)	(0.360)	(3.200)	(3.280)	(0.580)	(2.910)	(3.320)	(-0.670)
Industry/Exchange FE	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
Observations	853	853	853	660	660	660	378	378	378
Adjusted R-squared	29.81%	30.04%	6.52%	28.33%	28.85%	9.80%	33.59%	34.21%	12.85%

Table 4. Analysis of Analyst Forecast Dispersion and Return Volatility after Seasoned Equity Offerings (SEOs) around the JOBS Act

Panel A reports the univariate comparisons between SEOs in the pre-JOBS period and those in the post-JOBS period. The pre-JOBS sample includes 1,066 SEOs between January 1, 2004, and April 5, 2012, by firms with less than $1 billion annual revenue prior to the offering. The post-JOBS sample includes 865 SEOs between April 6, 2012, and December 31, 2016, by firms with less than $1 billion annual revenue prior to the offering. A t-test is used for the sample mean comparison, and the Wilcox signed-rank test is used for sample median comparison. ***, **, * indicate statistical significance at the 1 %, 5%, and 10% levels, respectively. See the Appendix for variable definitions.

Panel A: Univariate Comparison between Pre-JOBS and Post-JOBS SEO Firms

	Pre-JOBS SEOs (N=1,066)		**Post-JOBS SEOs** (N=865)		**Test of Differences Post-JOBS minus Pre-JOBS**	
SEO Sample Variable	**Mean**	**Median**	**Mean**	**Median**	**Mean**	**Median**
Assets	407.657	207.248	598.742	213.736	191.085 ***	6.488
Revenue	206.160	112.516	189.571	83.717	-16.589 *	-28.799 ***
Tobin'sQ	0.568	0.502	0.617	0.455	0.049 *	-0.047 *
ROA	-0.173	-0.013	-0.320	-0.084	-0.147 ***	-0.072 ***
Leverage	0.247	0.190	0.236	0.175	-0.011	-0.016
Loss	0.557	1.000	0.661	1.000	0.104 ***	0.000
Tech	0.206	0.000	0.127	0.000	-0.079 ***	0.000
R&D	4.691	0.023	15.075	0.055	10.384 ***	0.031
Filings8K	3.549	3.000	3.545	3.000	-0.004	0.000
Proceeds	94.700	75.000	131.279	100.000	36.579 ***	25.000 ***
Age	20.530	14.000	17.795	12.000	-2.735 ***	-2.000 ***
Big4	0.519	1.000	0.441	0.000	-0.078 ***	-1.000 ***
Dispersion_All	0.342	0.117	0.529	0.154	0.187 **	0.037
Dispersion_Affiliated	0.264	0.103	0.374	0.129	0.110	0.026
Dispersion_Unaffiliated	0.342	0.112	0.564	0.146	0.222 **	0.034
AnalystFollowing	4.319	4.000	5.445	4.000	1.126 ***	0.000
AnalystExperience	7.516	7.225	9.845	9.167	2.329 ***	1.942 ***
DaysForecastTo1stEA	58.204	58.000	63.341	63.000	5.137 ***	5.000 ***
TotVol	2.972	2.606	3.280	2.943	0.308 ***	0.337 ***
IdioVol	2.734	2.383	3.107	2.725	0.373 ***	0.342 ***
SysVol	1.139	1.132	1.396	1.277	0.257 ***	0.144 ***

Table 4. (Continued)

Panel B presents the OLS regression analysis of the differences in analyst forecast dispersion for SEO firms around the JOBS Act. We require at least two analyst forecasts to calculate forecast dispersion. Column (1) reports the results when the dependent variable is the forecast dispersion among all analysts using their first quarterly earnings forecasts issued between the SEO date and the first post-SEO earnings announcement date (*Dispersion_All*). Column (2) reports the analysis based on the forecast dispersion of affiliated analysts using their first quarterly earnings forecasts issued between the SEO date and the first post-SEO earnings announcement date (*Dispersion_Affiliated*) . Column (3) reports the analysis based on the forecast dispersion of unaffiliated analysts using their first quarterly earnings forecasts issued between the SEO date and the first post-SEO earnings announcement date (*Dispersion_Unaffiliated*). All regressions include industry, stock- exchange, and year fixed effects. ***, **, * indicate statistical significance at the 1 %, 5%, and 10% levels, respectively.

Panel B: Analysis of Analyst Forecast Dispersion for SEO Firms around the JOBS Act

SEO Sample Variable	**Dispersion_All**	**Dispersion_Affiliated**	**Dispersion_Unaffiliated**
	(1)	(2)	(3)
Post_JOBS	**0.136**	**0.139**	**0.131**
	(0.560)	**(0.290)**	**(0.330)**
LnAnalystFollowing	-0.016	0.238	-0.230
	(-0.200)	(1.010)	(-1.630)
LnAnalystExperience	0.058	-0.145	0.075
	(0.710)	(-1.160)	(0.590)
LnDaysForecastTo1stEA	-0.026	0.011	0.012
	(-0.350)	(0.100)	(0.110)
LnAssets	0.002	-0.040	-0.015
	(0.050)	(-0.580)	(-0.190)
LnRevenue	0.016	0.076	0.031
	(0.570)	(1.650)	(0.650)
LnTobin'sQ	0.092	0.319	0.143
	(0.600)	(1.400)	(0.510)
ROA	0.046	0.403 *	0.103
	(0.690)	(1.730)	(0.990)
Leverage	-0.179	-0.477 **	-0.241
	(-1.170)	(-2.070)	(-0.910)
Loss	0.228 **	0.414 ***	0.279 *
	(2.510)	(2.810)	(1.740)
Tech	-0.046	-0.070	0.150
	(-0.400)	(-0.360)	(0.780)
LnAge	0.015	0.047	-0.029
	(0.280)	(0.500)	(-0.320)
Filings8K	0.029 *	0.000	0.048 *
	(1.910)	(0.010)	(1.910)
Industry/Exchange/Year FE	**Yes**	**Yes**	**Yes**
Observations	1,931	744	1,415
Adjusted R-squared	32.37%	32.54%	27.55%

Table 4. (Continued)

Panel C presents the results of the OLS regression of analyst forecast dispersion on post-SEO return volatility around the JOBS Act. Columns (1) through (3) report the analyses based on the forecast dispersion of all analysts using their first quarterly earnings forecasts issued between the SEO date and the first post-SEO earnings announcement date. Columns (4) through (6) report the analyses based on the forecast dispersion of affiliated analysts using their first quarterly earnings forecasts issued between the SEO date and the first post-SEO earnings announcement date. Columns (7) through (9) report the analyses based on the forecast dispersion of unaffiliated analysts using their first quarterly earnings forecasts issued between the SEO date and the first post-SEO earnings announcement date. All regression analyses include industry and stock exchange fixed effects. ***, **, * indicate statistical significance at the 1 %, 5%, and 10% levels, respectively.

Panel C: Effects of Analyst Forecast Dispersion on Post-SEO Return Volatility

	TotVol	**IdioVol**	**SysVol**	**TotVol**	**IdioVol**	**SysVol**	**TotVol**	**IdioVol**	**SysVol**
	IV: Dispersion_All			*IV: Dispersion_Affiliated*			*IV: Dispersion_Unaffiliated*		
SEO Sample Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Post_JOBS*Dispersion	**-0.001**	**0.041**	**-0.092**	**-0.176**	**-0.182**	**0.137**	**-0.002**	**0.038**	**-0.089 ** **
	(-0.010)	**(0.780)**	**(-1.270)**	**(-1.400)**	**(-1.540)**	**(1.290)**	**(-0.050)**	**(0.740)**	**(-2.390)**
Post_JOBS	0.067	0.106	0.208 ***	0.243 **	0.336 ***	0.110	-0.024	0.050	0.178 ***
	(0.900)	(1.460)	(3.640)	(2.180)	(3.170)	(1.160)	(-0.260)	(0.560)	(2.780)
Dispersion	0.053	0.033	0.060 **	0.209 **	0.197 **	-0.111	0.056	0.028	0.060 **
	(1.430)	(0.950)	(2.170)	(2.070)	(2.070)	(-1.300)	(1.410)	(0.760)	(2.250)
LnAssets	-0.013	-0.065	0.013	-0.031	-0.040	0.021	-0.014	-0.065	-0.001
	(-0.230)	(-1.210)	(0.310)	(-0.360)	(-0.490)	(0.290)	(-0.220)	(-1.020)	(-0.010)
LnRevenue	-0.187 ***	-0.183 ***	-0.009	-0.215 **	-0.231 ***	-0.021	-0.159 **	-0.164 **	0.006
	(-3.310)	(-3.350)	(-0.200)	(-2.450)	(-2.780)	(-0.280)	(-2.250)	(-2.450)	(0.130)
LnTobin'sQ	0.366 **	0.449 ***	-0.135	0.388 **	0.435 **	0.052	0.560 ***	0.622 ***	-0.060
	(2.620)	(3.320)	(-1.280)	(2.100)	(2.500)	(0.330)	(3.020)	(3.500)	(-0.470)
ROA	-0.495 ***	-0.403 ***	-0.358 ***	-0.363	-0.189	-0.361 *	-0.530 ***	-0.461 ***	-0.234 **
	(-4.300)	(-3.650)	(-4.150)	(-1.470)	(-0.820)	(-1.750)	(-3.850)	(-3.540)	(-2.510)
Tech	-0.244 **	-0.230 *	-0.178 *	-0.356 **	-0.302 *	-0.251 *	-0.156	-0.186	-0.081
	(-1.970)	(-1.910)	(-1.890)	(-2.040)	(-1.840)	(-1.710)	(-1.010)	(-1.260)	(-0.760)
LnR&D	-0.116 *	-0.105 *	-0.049	-0.139	-0.140	-0.086	-0.061	-0.072	0.022
	(-1.780)	(-1.660)	(-1.000)	(-1.390)	(-1.490)	(-1.030)	(-0.750)	(-0.920)	(0.390)
LnProceeds	-0.116 **	-0.123 **	0.077 **	-0.125	-0.150 *	0.116	-0.088	-0.092 *	0.063 *
	(-2.540)	(-2.780)	(2.210)	(-1.440)	(-1.790)	(1.560)	(-1.630)	(-1.760)	(1.690)
LnAge	-0.053	-0.081	0.022	-0.142 *	-0.148 *	-0.095	-0.071	-0.119 *	0.010
	(-1.000)	(-1.540)	(0.520)	(-1.790)	(-1.880)	(-1.340)	(-1.040)	(-1.790)	(0.200)
Big4	-0.129 *	-0.126 *	0.070	0.113	0.091	-0.094	-0.210 **	-0.186 **	0.034
	(-1.780)	(-1.770)	(1.260)	(1.050)	(0.890)	(-1.020)	(-2.290)	(-2.120)	(0.540)
Industry/Exchange FE	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
Observations	1,931	1,931	1,931	744	744	744	1,415	1,415	1,415
Adjusted R-squared	21.39%	23.63%	8.94%	20.98%	24.32%	7.89%	21.93%	25.49%	7.99%

Table 5. Robustness Test Using a Propensity-Score-Matched (PSM) Sample

Panel A reports the univariate comparisons between the EGC sample and a PSM control sample. The PSM sample is constructed by estimating a logit model that predicts the probability of going public in the post-JOBS period as a function of *LnRevenue*, *LnAssets*, *LnTobin'sQ*, *Loss*, and *Tech*. Each post-JOBS EGC firm is matched (without replacement) to a single pre-JOBS IPO firm in the same Fama-French 12-industry classification that has the smallest absolute difference in propensity scores. The PSM sample labeled as the pre-JOBS pseudo-EGC sample includes 351 IPOs between January 1, 2004, and April 5, 2012, by firms that went public before the JOBS Act and had less than $1 billion annual revenue prior to IPO. The post-JOBS EGC sample includes 351 IPOs between April 6, 2012, and December 31, 2016, with less than $1 billion annual revenue prior to IPO. A t-test is used for the sample mean comparison, and the Wilcox signed-rank test is used for sample median comparison. ***, **, * indicate statistical significance at the 1 %, 5%, and 10% levels, respectively. See the Appendix for variable definitions.

Panel A: Univariate Comparison between Matched Pre-JOBS IPOs and Post-JOBS IPOs

	Pre-JOBS Pseudo-EGCs (N=351)		**Post-JOBS EGCs** (N=351)		**Test of Differences EGC minus Pseudo-EGC**	
PSM Sample Variable	**Mean**	**Median**	**Mean**	**Median**	**Mean**	**Median**
LnRevenue	3.701	4.082	3.466	4.104	-0.235	0.022
LnAssets	4.674	4.377	4.544	4.381	-0.130	0.004
LnTobin'sQ	0.942	0.786	1.070	0.885	0.128	0.099
Loss	0.598	1.000	0.604	1.000	0.006	0.000
Tech	0.179	0.000	0.162	0.000	-0.017	0.000

Table 5. (Continued)

Panel B presents the results of the OLS regression analysis on the impact of the JOBS Act on analyst forecast dispersion using the propensity-score-matched sample. Columns (1) through (3) report the analysis based on the forecast dispersion of all analysts who initiate a quarterly forecast before the first post-IPO earnings announcement date (*Dispersion_All*). Columns (4) through (6) report the analysis based on the forecast dispersion of affiliated analysts who initiate a quarterly forecast before the first post-IPO earnings announcement date (*Dispersion_Affiliated*). Columns (7) through (9) report the analysis based on the forecast dispersion of unaffiliated analysts who initiate a quarterly forecast before the first post-IPO earnings announcement date (*Dispersion_Unaffiliated*). All regressions include industry, stock exchange, and year fixed effects. ***, **, * indicate statistical significance at the 1 %, 5%, and 10% levels, respectively. See the Appendix for variable definitions.

Panel B: Analysis of Analyst Forecast Dispersion before and after the JOBS Act

PSM Sample Variable	**Dispersion_All**	**Dispersion_Affiliated**	**Dispersion_Unaffiliated**
	(1)	(2)	(3)
Post_JOBS	**0.565**	**0.777 ****	**0.105**
	(1.370)	**(2.070)**	**(0.130)**
LnAnalystFollowing	0.308 *	0.192	0.380
	(1.920)	(1.080)	(1.280)
LnAnalystExperience	0.204 *	0.064	-0.044
	(1.730)	(0.640)	(-0.210)
LnDaysForecastTo1stEA	-0.174 **	0.018	-0.185
	(-2.100)	(0.280)	(-0.980)
LnAssets	0.014	-0.009	0.031
	(0.230)	(-0.170)	(0.220)
LnRevenue	0.010	0.035	0.037
	(0.210)	(0.840)	(0.370)
LnTobin'sQ	-0.007	-0.007	-0.216
	(-0.050)	(-0.060)	(-0.890)
ROA	0.015	-0.071	-0.201
	(0.230)	(-0.890)	(-1.510)
Leverage	-0.029	-0.079	-0.043
	(-0.290)	(-0.940)	(-0.160)
Loss	0.267 *	0.071	0.192
	(1.950)	(0.600)	(0.840)
Tech	-0.063	0.083	-0.408
	(-0.430)	(0.690)	(-1.420)
LnAge	-0.033	-0.009	-0.191
	(-0.340)	(-0.110)	(-0.930)
VC_Backed	0.044	0.070	0.098
	(0.270)	(0.510)	(0.330)
Filings8K	-0.003	-0.003	0.022
	(-0.120)	(-0.120)	(0.540)
Industry/Exchange/Year FE	**Yes**	**Yes**	**Yes**
Observations	702	464	298
Adjusted R-squared	43.04%	58.76%	64.55%

Table 5. (Continued)

Panel C reports the results of OLS regressions of post-IPO return volatility on analyst forecast dispersion before and after the JOBS Act using the propensity-score-matched sample. Columns (1) through (3) report the analysis of the impact of forecast dispersion among all analysts on return volatility. Columns (4) through (6) report the analysis of the impact of forecast dispersion of affiliated analysts on return volatility. Columns (7) through (9) report the analysis of the impact of forecast dispersion of unaffiliated analysts on return volatility. ***, **, * indicate statistical significance at 1 %, 5%, and 10% levels, respectively. See Appendix for variable definitions.

Panel C: Effects of Analyst Forecast Dispersion on Post-IPO Return Volatility

	TotVol	**IdioVol**	**SysVol**	**TotVol**	**IdioVol**	**SysVol**	**TotVol**	**IdioVol**	**SysVol**
	IV: Dispersion_All			*IV: Dispersion_Affiliated*			*IV: Dispersion_Unaffiliated*		
PSM Sample Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Post_JOBS*Dispersion	**0.280**	**0.300**	**-0.092**	**0.862 *****	**0.860 *****	**0.149**	**0.251**	**0.200**	**-0.173**
	(1.490)	**(1.600)**	**(-0.720)**	**(4.020)**	**(4.010)**	**(1.070)**	**(0.710)**	**(0.570)**	**(-0.740)**
Post_JOBS	0.134	0.114	0.183 *	-0.078	-0.099	0.081	0.252	0.331	0.124
	(0.860)	(0.720)	(1.690)	(-0.450)	(-0.560)	(0.700)	(0.930)	(1.190)	(0.680)
Dispersion	0.199 **	0.199 **	0.066	0.036	0.029	0.029	0.144	0.131	0.034
	(2.460)	(2.460)	(1.190)	(0.380)	(0.310)	(0.460)	(1.160)	(1.060)	(0.420)
LnAssets	-0.212 **	-0.206 **	-0.124 **	-0.240 **	-0.220 **	-0.161 **	-0.225	-0.232	-0.199 *
	(-2.390)	(-2.310)	(-2.020)	(-2.380)	(-2.170)	(-2.440)	(-1.250)	(-1.280)	(-1.660)
LnRevenue	-0.074	-0.094	0.017	-0.045	-0.087	-0.015	0.120	0.112	0.013
	(-0.710)	(-0.890)	(0.240)	(-0.350)	(-0.670)	(-0.180)	(0.610)	(0.570)	(0.100)
LnTobin'sQ	0.108	0.099	0.026	-0.113	-0.134	0.032	0.482	0.395	0.358
	(0.580)	(0.530)	(0.200)	(-0.500)	(-0.600)	(0.220)	(1.330)	(1.080)	(1.480)
ROA	0.178	0.160	0.105	0.023	-0.017	0.253	0.211	0.152	0.343
	(1.570)	(1.410)	(1.350)	(0.090)	(-0.070)	(1.550)	(0.530)	(0.370)	(1.280)
Tech	-0.675 ***	-0.656 ***	-0.186	-0.690 ***	-0.658 ***	-0.288 **	-0.563	-0.500	-0.321
	(-3.450)	(-3.290)	(-1.370)	(-3.230)	(-3.030)	(-2.030)	(-1.530)	(-1.320)	(-1.290)
LnR&D	0.102	0.086	0.035	0.069	0.035	-0.022	0.247	0.249	-0.100
	(0.790)	(0.670)	(0.400)	(0.460)	(0.230)	(-0.230)	(1.000)	(1.000)	(-0.610)
LnProceeds	0.129	0.108	0.084	0.186	0.179	0.018	-0.063	-0.010	0.001
	(1.010)	(0.840)	(0.950)	(1.260)	(1.190)	(0.180)	(-0.290)	(-0.040)	(0.000)
LnAge	-0.203 *	-0.196 *	-0.011	-0.259 *	-0.249 *	0.035	-0.104	-0.123	0.107
	(-1.790)	(-1.720)	(-0.140)	(-1.970)	(-1.890)	(0.410)	(-0.520)	(-0.610)	(0.810)
Big4	-0.063	-0.066	0.007	-0.179	-0.180	0.042	-0.080	-0.020	0.088
	(-0.420)	(-0.440)	(0.070)	(-1.040)	(-1.050)	(0.380)	(-0.320)	(-0.080)	(0.530)
VC_Backed	0.422 **	0.401 **	0.031	0.432 *	0.430 *	0.035	0.738 **	0.818 **	-0.168
	(2.150)	(2.020)	(0.230)	(1.930)	(1.910)	(0.240)	(2.190)	(2.410)	(-0.750)
Industry/Exchange FE	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
Observations	702	702	702	464	464	464	298	298	298
Adjusted R-squared	31.76%	31.62%	8.30%	30.88%	30.68%	12.38%	39.61%	40.71%	25.21%

Table 6. Robustness Test Using a Pseudo-Event within the Post-JOBS Period

Panel A presents the OLS regression results on the impact of a pseudo-event on analyst forecast dispersion for EGCs during the post-JOBS period. Columns (1) through (3) report the results when the dependent variable is the forecast dispersion among all analysts (*Dispersion_All*), the forecast dispersion among only the affiliated (*Dispersion_Affiliated*), and the forecast dispersion among the unaffiliated analysts (*Dispersion_Unaffiliated*). All regressions include industry, stock exchange, and year fixed effects. ***, **, * indicate statistical significance at the 1 %, 5%, and 10% levels, respectively.

Panel A: Analysis of Analyst Forecast Dispersion around the Pseudo-Event

Pseudo-Event Sample Variable	**Dispersion_All**	**Dispersion_Affiliated**	**Dispersion_Unaffiliated**
	(1)	(2)	(3)
Post_PseudoEvent	**0.025**	**-0.116**	**-0.157**
	(0.190)	**(-0.860)**	**(-0.650)**
LnAnalystFollowing	0.287 *	0.246	0.749 **
	(1.670)	(1.120)	(2.240)
LnAnalystExperience	0.057	-0.059	-0.020
	(0.430)	(-0.440)	(-0.090)
LnDaysForecastTo1stEA	-0.040	0.024	-0.020
	(-0.370)	(0.230)	(-0.110)
LnAssets	-0.017	-0.063	-0.060
	(-0.230)	(-0.850)	(-0.430)
LnRevenue	0.032	0.046	0.050
	(0.500)	(0.650)	(0.430)
LnTobin'sQ	0.023	0.019	-0.262
	(0.120)	(0.100)	(-0.720)
ROA	0.015	-0.213	0.120
	(0.080)	(-0.960)	(0.360)
Leverage	0.054	-0.194	0.200
	(0.320)	(-0.980)	(0.750)
Loss	0.012	-0.199	0.488 *
	(0.070)	(-1.140)	(1.690)
Tech	-0.233	-0.107	-0.719 **
	(-1.240)	(-0.590)	(-2.010)
LnAge	-0.027	0.018	-0.004
	(-0.290)	(0.190)	(-0.030)
VC_Backed	-0.019	-0.016	0.196
	(-0.110)	(-0.080)	(0.640)
Filings8K	0.020	-0.006	0.017
	(0.860)	(-0.190)	(0.440)
Industry/Exchange/Year FE	**Yes**	**Yes**	**Yes**
Observations	313	254	216
Adjusted R-squared	5.07%	7.89%	28.83%

Table 6. (Continued)

Panel B presents the results of OLS regressions of post-IPO return volatility on analyst forecast dispersion before and after the pseudo-event. Columns (1) through (3) report the analyses using the forecast dispersion among all analysts (*Dispersion_All*). Columns (4) through (6) report the analyses using the forecast dispersion among affiliated analysts (*Dispersion_Affiliated*). Columns (7) through (9) report the analyses using the forecast dispersion among unaffiliated (*Dispersion_Unaffiliated*). All regression analyses include industry and stock exchange fixed effects. ***, **, * indicate statistical significance at the 1 %, 5%, and 10% levels, respectively.

Panel B: Effects of Analyst Forecast Dispersion on Post-IPO Return Volatility

	TotVol	**IdioVol**	**SysVol**	**TotVol**	**IdioVol**	**SysVol**	**TotVol**	**IdioVol**	**SysVol**
	IV: Dispersion_All			*IV: Dispersion_Affiliated*			*IV: Dispersion_Unaffiliated*		
Pseudo Event Sample Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Post_PseudoEvent*Dispersion	**-0.073**	**-0.053**	**0.078**	**0.589**	**0.636**	**-0.087**	**0.198**	**0.291**	**-0.029**
	(-0.260)	**(-0.190)**	**(0.390)**	**(1.650)**	**(0.780)**	**(-0.370)**	**(0.280)**	**(0.400)**	**(-0.070)**
Post_PseudoEvent	0.437 *	0.376	-0.135	0.441	0.359	0.034	0.735 *	0.623	0.384
	(1.890)	(1.600)	(-0.800)	(1.580)	(1.250)	(0.180)	(1.690)	(1.350)	(1.470)
Dispersion	0.307	0.308	-0.019	0.333	0.296	0.160	0.169	0.113	0.158
	(1.440)	(1.440)	(-0.130)	(1.420)	(1.260)	(1.020)	(0.630)	(0.400)	(0.990)
LnAssets	-0.132	-0.097	-0.088	-0.234	-0.142	-0.243 **	-0.121	-0.074	-0.184
	(-0.980)	(-0.720)	(-0.900)	(-1.500)	(-0.880)	(-2.270)	(-0.440)	(-0.260)	(-1.140)
LnRevenue	-0.302 **	-0.342 **	-0.094	-0.321	-0.395 *	-0.025	-0.009	-0.042	0.098
	(-1.990)	(-2.210)	(-0.850)	(-1.570)	(-1.870)	(-0.180)	(-0.030)	(-0.130)	(0.550)
LnTobin'sQ	-0.179	-0.198	-0.094	-0.410	-0.418	-0.054	0.212	0.224	0.101
	(-0.690)	(-0.760)	(-0.500)	(-1.340)	(-1.360)	(-0.260)	(0.370)	(0.370)	(0.300)
ROA	0.119	0.094	0.110	-0.074	-0.114	0.366	0.476	0.405	0.828 **
	(0.910)	(0.720)	(1.180)	(-0.200)	(-0.310)	(1.490)	(0.890)	(0.720)	(2.600)
Tech	-0.667 **	-0.631 **	-0.213	-0.615 *	-0.577 *	-0.273	-0.289	-0.386	-0.235
	(-2.200)	(-2.040)	(-0.960)	(-1.830)	(-1.680)	(-1.200)	(-0.510)	(-0.610)	(-0.650)
LnR&D	-0.104	-0.116	-0.060	-0.039	-0.080	-0.029	-0.329	-0.386	0.153
	(-0.500)	(-0.550)	(-0.400)	(-0.140)	(-0.290)	(-0.160)	(-0.550)	(-0.620)	(0.430)
LnProceeds	0.108	0.058	0.005	0.224	0.171	0.013	-0.434	-0.409	-0.439 **
	(0.570)	(0.300)	(0.040)	(0.930)	(0.680)	(0.080)	(-1.370)	(-1.190)	(-2.260)
LnAge	-0.084	-0.072	0.059	0.038	0.034	0.126	-0.044	-0.065	0.154
	(-0.500)	(-0.430)	(0.490)	(0.190)	(0.170)	(0.950)	(-0.150)	(-0.220)	(0.900)
Big4	0.125	0.126	0.051	0.002	0.031	0.117	0.069	0.086	-0.036
	(0.580)	(0.580)	(0.330)	(0.010)	(0.120)	(0.700)	(0.180)	(0.210)	(-0.150)
VC_Backed	0.733 **	0.676 **	-0.032	0.522	0.560	-0.072	1.091 **	1.219 **	-0.342
	(2.530)	(2.300)	(-0.150)	(1.500)	(1.610)	(-0.310)	(2.080)	(2.200)	(-1.090)
Industry/Exchange FE	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
Observations	313	313	313	254	254	254	216	216	216
Adjusted R-squared	38.24%	36.96%	11.62%	43.38%	41.71%	22.52%	46.00%	46.66%	38.88%

Table 7. Variations in Affiliated Analysts' Soft Skills and Their Forecast Dispersion

This table presents the OLS regression results on the impact of variations in affiliated analysts' soft skills (measured through the standard deviation in the number of *LinkedIn* connections) on the dispersion of their earnings forecasts. The regression includes industry, stock exchange, and year fixed effects. ***, **, * indicate statistical significance at the 1 %, 5%, and 10% levels, respectively. See the Appendix for variable definitions.

Variable	**Dispersion_Affiliated**
Post_JOBS*Ln_Stdv_Connection	**0.221 ****
	(1.990)
Post_JOBS	-0.435
	(-0.720)
Ln_Stdv_Connection	-0.080
	(-1.300)
LnAnalystFollowing	0.120
	(0.910)
LnAnalystExperience	0.044
	(0.580)
LnDaysForecastTo1stEA	0.001
	(0.030)
LnAssets	0.010
	(0.250)
LnRevenue	0.013
	(0.420)
LnTobin'sQ	0.029
	(0.320)
ROA	0.002
	(0.070)
Leverage	-0.129
	(-1.270)
Loss	0.144 *
	(1.780)
Tech	0.023
	(0.240)
LnAge	0.036
	(0.630)
VC_Backed	0.015
	(0.160)
Filings8K	-0.001
	(-0.050)
Industry/Exchange/Year FE	**Yes**
Observations	584
Adjusted R-squared	24.97%