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Going Public Privately: The Role of the Cost of Premature Disclosure in the IPO Process

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Abstract

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By Mengyao Cheng

The cost of premature disclosure is an unexamined disclosure cost distinct from typical proprietary information costs and compliance costs. I examine whether and to what degree the decrease in the cost of premature disclosure brought about by the confidential filing provision of the Jumpstart Our Business Startups Act of 2012 (JOBS Act) eases the IPO process, using the effect of reduced mandatory disclosure compliance costs brought about by the reduced disclosure provisions from the JOBS Act as a benchmark. I find that the confidential filing provision leads to a 56% higher rate of IPO issuance in the public filing stage, leading to a 54% increase in total IPO issuance and a 118% increase in proceeds post-JOBS Act. Reduced disclosure provisions did not affect the IPO process. The results suggest that firms consider costs of premature disclosure to be more important than compliance costs when going public.

# Going Public Privately: The Role of the Cost of Premature Disclosure in the IPO Process

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## I. Introduction

This study examines the role of the cost of premature disclosure in the IPO process. More specifically, I examine whether a decrease in the cost of premature disclosure eases the IPO process, using the Jumpstart Our Business Startups Act of 2012 (JOBS Act) as an empirical setting and the effect of decreased mandatory disclosure compliance costs as a benchmark. Premature disclosure refers to any disclosure that a firm makes before the information is ready to be released. In public filings for IPOs, firms are disclosing both the intent to go public as well as all information contained in the registration statement for the first time. Given the uncertainty in the IPO process, untimely public filings of the registration statement may represent premature disclosure of sensitive information. Premature disclosures can attract undesired attention and scrutiny from the media and other stakeholders, exposure of sensitive information, and costly reputational damage, especially if the firm withdraws from the IPO process after disclosure.

The cost of premature disclosure of information is an unexamined disclosure cost that is distinct from typical proprietary information costs and compliance costs. First, as implied in Healy and Palepu (2001), proprietary information refers to information that if revealed can be used by product market competitors to harm the disclosing firm. However, the intent to go public or the information contained in registration statements may not necessarily be used by product market competitors. Premature disclosure costs can arise from the disclosure of any type of information that firms are not yet ready to disclose, whether proprietary or non-proprietary.[1] Second, compliance costs refer to the explicit costs associated with disclosure, such as filing costs and auditor fees (i.e., Bushee

[1] If proprietary information is defined as any information that firms may not want others to know, then the costs of premature disclosure can be considered as a new type of proprietary information cost.

and Leuz 2005, Engel et al. 2007, Leuz et al. 2008, Iliev 2010). The costs firms incur from prematurely disclosing sensitive information are implicit costs on the firm arising from external negative consequences. For instance, as demonstrated by Groupon, heavy media scrutiny of financial information contained in registration statements can lead to reputational damage lasting for years.[2] Further, withdrawing from the IPO process after premature disclosure can lead to detrimental effects to the firm's reputation, higher chance of bankruptcy post-withdrawal, lower chance of returning to the equity markets, and higher cost of equity (Chen et al. 2010, Boeh and Dunbar 2013, Lian and Wang 2009).

The JOBS Act provides a unique setting to not only examine the impact of the costs of premature disclosure but also to compare the relative importance of the costs of premature disclosure to compliance costs, which have effects that are better understood in the literature. The JOBS Act is a rare type of regulation that relaxes, rather than strengthens, disclosure requirements. To create jobs by helping smaller, growing companies get easier access to capital through a less rigorous IPO process, the regulation creates a new category of issuers called Emerging Growth Companies (EGCs) and grants them reduced disclosure provisions and the ability to file draft registration statements confidentially with the SEC prior to filing a public registration statement (H.R.3606).[3]

The reduced disclosure provisions mainly decrease compliance costs for firms, whereas the confidential filing provision decreases costs related to premature disclosure.

[2] Groupon received much negative media attention (i.e., CNN, WSJ, Forbes) over its "unconventional accounting measures" throughout its endeavor to go public.

[3] Firms qualify as EGCs if they have less than $1 billion in revenue for the most recent fiscal year prior to filing for an IPO. While confidential filings can also be considered a form of reduced disclosure, for the purpose of this study, I reserve the term "reduced disclosure provisions" exclusively for the other provisions in the JOBS Act that specifically decrease the level and content of mandatory disclosures.

When firms choose to file confidentially, they are only delaying the disclosure of information for a period of time until they are ready to disclose publicly. During the confidential filing process, firms are able to learn from the SEC without outside interference. Firms are not making the decision to either disclose or not disclose nor are they choosing a disclosure level as in most voluntary disclosure decisions. When firms file the first public registration statement, all prior confidentially filed drafts also become public at the same time. Thus, the confidential filing process only prevents costs associated with prematurely disclosing sensitive information but does not change the content of that information.

Examining the effects of the confidential filing and reduced disclosure provisions can shed light not only on whether the cost of premature disclosure has an impact in general but also on how important the cost of premature disclosure is relative to another disclosure cost that the literature better understands. Decreases in both types of costs that the two provisions represent could have an impact on the IPO process. However, it is not clear whether the confidential filing and reduced disclosure provisions will have differential effects on the IPO process because the relative weights firms place on different types of disclosure costs in general, and on compliance costs and costs of premature disclosure in particular, are little understood. Prior studies document the importance of mandatory disclosure compliance costs on the decision for firms to go dark or go private (Bushee and Leuz 2005, Engel et al. 2007, Leuz et al. 2008), but there is little discussion on the costs of premature disclosure in the academic literature.

Prior literature also shows that managers have different preferences for when they disclose good news versus bad news, but their preferences for the timing of an entire

portfolio of mandated disclosures remains to be studied (Frankel et al. 1995, Yermack 1997, Aboody and Kasznik 2000, Lang and Lundholm 2000, Kothari et al. 2009). In the case of IPOs, the portfolio of information includes financial and material information in the registration statements as well as the intent to go public itself. The information content can be good, bad, or neutral. Any of the information disclosed too early, however, can lead to media scrutiny, reputational damage, or proprietary information loss to competitors in product markets (Verrecchia 2001, Dye 2001). Despite a lack of discussion in the literature on the cost of premature disclosure, the confidential filing provision brought about by the JOBS Act has been prevalent in the media, showing the importance of this unexamined disclosure cost.[4]

I empirically evaluate the importance of the costs of premature disclosure by examining the effect of the confidential filing provision on easing the IPO process, using the effect of the reduced disclosure provisions as a benchmark. If the provisions of the JOBS Act make the IPO process easier and more appealing, then more firms will file for IPOs and more of the IPOs filed will be successfully issued. I conduct two complementary sets of tests using data on IPOs issued and withdrawn in the US and in other countries around the JOBS Act enactment. The first set of tests examines important aspects of IPO activity from the public filing stage to IPO issuance in a difference-in-differences (DID) design at the country-level. These measures include number of firms entering the public filing stage, likelihood of successful IPO issuance during the public filing stage, as well as IPO issuance number and proceeds.

[4] Discussions on confidential filings have appeared in much mainstream media, including CNBC, New York Times Dealbook, CNN, and Wall Street Journal, among others.

To identify the effect of the confidential filing provision by disentangling it from the effect of the reduced disclosure provisions, I take advantage of two sub-categories of firms within the EGC group. Both reduced disclosure and confidential filing provisions have already been introduced separately to different categories of IPO issuers before JOBS. As discussed in detail in the next section, within the category of Emerging Growth Companies (EGCs), domestic IPOs that also qualify as Smaller Reporting Companies (SRCs) gain only confidential filing from the JOBS Act, and foreign private IPOs that are not SRCs gain only reduced disclosure from the JOBS Act.[5] The DID results leveraging these two categories of companies indicate that while the confidential filing provision does not affect the total number of IPOs entering the public filing stage, it leads to a 56% increase in IPO issuance rates, resulting in a 54% increase in IPO issuance number and 118% increase in proceeds. In contrast, reduced disclosures have no effect on the IPO process. The results are robust to different specifications, including difference-in-difference-in-differences (DIDID) models, which further addresses possible differences between the US and other countries. This first set of results suggests that the confidential filing provision of the JOBS Act eases the IPO process while the reduced disclosure provisions do not.

My second set of tests examines the firm-level effects of the reduced disclosure and confidential filing provisions using detailed, hand-collected data on US IPOs. These tests complement country-level analyses in two important ways. First, country-level analyses

[5] Prior to the JOBS Act, Smaller Reporting Companies (SRCs) as established with SEC Release No. 33-8876 already enjoy similar reduced disclosure requirements as those now granted to Emerging Growth Companies (EGCs), and Foreign Private Issuers (FPIs) as defined in Rule 405 of Regulation C under the Securities Act could already file draft registration statements confidentially (SEC 2014). The categories of SRC, FPI, and EGC are distinct but not mutually exclusive. Companies qualify as SRCs if they have less than $75 million in public float or less than $50 million in revenue in the most recent fiscal year. In general, companies qualify as FPIs if they are foreign companies seeking to go public in the US.

are based on the assumption that EGC-qualified firms indeed file as EGCs and use the provisions of confidential filing and reduced disclosures. This assumption is validated by the data. In particular, for issued IPOs in the post-JOBS period, 92% of EGC-qualified firms filed as EGCs, 83% of EGCs submitted draft registration statements confidentially, and 100% of EGCs used some form of reduced disclosure. Second, using specific measures of confidential filings and reduced disclosures, the firm-level analysis provides more direct evidence for the links between the provisions and IPO characteristics. The results from logit regressions with a propensity score matched sample show that higher IPO issuance rate for EGCs is achieved through the use of the confidential filing provision only. This second set of results confirms the findings at the country-level. Further analyses focusing on costs and benefits of issued IPOs find that EGCs have shorter IPO durations from the first public filing to issuance date and greater underpricing due to confidential filings. However, the results show no evidence of changes in employment growth, IPO expenses, gross spreads, or post-IPO abnormal stock returns. Taken together, the results imply that when making the decision to go public, firms consider the costs of premature disclosures to be more important than compliance costs.[6] The results also show that when making disclosure decisions, firms consider timing as important even when the content is the same.

This study contributes to the literature by first documenting the importance of the cost of premature disclosure in the IPO process. As Lang and Sul (2014) suggest, more evidence on the costs of disclosure, instead of benefits, is needed. While compliance costs are already known to be important (Bushee and Leuz 2005, Engel et al. 2007, Leuz et al. 2008, Iliev 2010), the impact of the costs of premature disclosure in the IPO setting

[6] In other decision-making settings, firms may weigh the costs differently.

can add to such discussion. Second, in the academic literature, there is little empirical evidence on how firms weigh different types of disclosure costs relative to one another (Healy and Palepu 2001, Beyer et al. 2010). My findings provide the first relevant evidence of such considerations in the IPO setting. From a policy-making perspective, while confidential filings and reduced disclosure provisions have already existed prior to JOBS, there is little evidence on the effectiveness of the provisions. My findings suggest that the confidential filing provision is more helpful in the going public process.

While the focus of this study is to examine the impact of the cost of premature disclosure by using the JOBS Act as a natural setting, the results still complement other contemporaneous studies related to the JOBS Act by examining both issued and withdrawn IPOs and by documenting that it is the confidential filing provision that leads to an increase in IPO issuance rates in the public filing stage, thus leading to an increase in IPO volume post-JOBS.[7] In addition, the study adds to the literature on the effects of regulation (i.e. Piotroski and Srinivasan 2007; Bushee and Leuz 2005; Litvak 2007; Engel et al. 2007; Doidge et al. 2009), and in particular, the effects of relaxed disclosure requirements. Finally, this study contributes to the literature on IPOs by determining how changes in disclosure costs affect the IPO process (Ritter and Welch 2002).

[7] A contemporaneous paper, Dambra et al. (2014), does not compare the relative effects of confidential filing and reduced disclosure provisions on IPO activity. While in their Table 5, the probit analysis (of issued US IPOs only) shows that an issued IPO in the US post-JOBS is more likely to be from R&D-intensive firms or from biotech/pharmaceutical or more concentrated industries, they actually also show in Table 8 that the use of the confidential filing provision is unrelated to R&D-intensity or membership in the biotech/pharmaceutical industry. They provide no evidence on whether the use of the provisions changes with industry concentration. Three other contemporaneous papers, Barth et al. (2014), Chaplinsky et al. (2014), and Gupta and Israelson (2014), all find that the JOBS Act increases information asymmetry in firms that take advantage of the provisions. Overall, none of these contemporaneous papers compares the confidential filing and reduced disclosure provisions of the JOBS Act, and none examines the IPO process from the public filing stage to issuance.

The rest of the paper is organized as follows: Section II provides institutional background and develops hypotheses, Section III describes the data and sample, Sections IV and V detail the empirical analyses and results, and Section VI concludes.

## II. Institutional Background and Hypotheses

### *The JOBS Act*

On April 5, 2012, the Jumpstart Our Business Startups Act (JOBS Act) was signed into law with the purpose of increasing "American job creation and economic growth by improving access to the public capital markets for emerging growth companies" (H.R.3606). To do so, the Act creates a category of issuers called Emerging Growth Companies (EGCs) and relaxes certain disclosure requirements associated with filing an IPO for this group.[8] The EGC category includes firms with less than $1 billion in revenue as of the most recent fiscal year prior to filing, and the classification holds until (i) five years after IPO, (ii) the company surpasses the $1 billion revenue mark, (iii) the company issues more than $1 billion in non-convertible debt, or (iv) until the company is deemed to be a "large accelerated filer", whichever comes first.

Under the relaxed IPO requirements of the JOBS Act, EGCs are subject to less stringent disclosure requirements. First, EGCs only have to submit two, instead of three, years of audited financial statements and two, instead of five, years of selected financial data required in registration statements. Further, the Compensation Discussion and Analysis (CD&A) requirement in registration statements and subsequent annual reports is

[8] The JOBS Act also proposes other measures to increase the accessibility of capital for smaller, growing companies such as legalizing equity-based crowdfunding, allowing for general solicitations in Regulation D offerings, raising the limit of Regulation A offerings, and raising the cap on the number of private shareholders from 500 to 2000.

waived as long as the firm remains an EGC, and the firm only needs to disclose compensation for the top three, instead of top five, executives. EGCs also do not need auditor attestation over their internal controls, and they may follow the same effective compliance dates as private companies do for new or revised accounting standards.

Importantly, companies did not have the option to file draft registration statements prior to the JOBS Act. Instead, they directly filed their registration statements (i.e., Form S-1), which become public once filed. Post-JOBS, all filings of draft registration statements with the SEC are confidential and are not considered filings of Form S-1. These drafts only become public if the firm progresses far enough in the IPO registration process to file a Form S-1; otherwise, the filings remain confidential. However, Form S-1, as well as all of the drafts submitted confidentially prior to the public filing, must become public at least 21 days before the company starts its road show. [9]

***Recent related regulations***

The confidential filing and reduced disclosure provisions are actually not completely new filing practices. In December 2007, the SEC issued the Smaller Reporting Company Regulatory Relief and Simplification rule (SEC Release 33-8876), which provided disclosure relief to Smaller Reporting Companies (SRCs), which have less than $75 million in public equity float or less than $50 million in revenues in the previous year if public equity float is not calculable. This rule was passed in response to the concern that complying with Sarbanes-Oxley presented costs too heavy for smaller firms to bear (Engel et al. 2007).

[9] If a firm decides not to have a road show, confidentially filed documents must become public at least 21 days before the date on which the IPO is expected to be approved by the SEC and become official.

Under this rule, SRCs are permitted, but not required, to choose what they want to disclose from a list of 12 non-financial disclosure item requirements. In this way, they may comply on an "a la carte" basis each quarter, and there is no need to comply with the same disclosure requirements each time. The items available to choose from include description of business, disclosures about market risk, discussions on executive compensation, reviews of related person transactions, and reports of corporate governance, among others.

Similarly, Foreign Private Issuers (FPIs) were already allowed to submit initial registration statements to the SEC confidentially before the JOBS enactment.[10] An FPI is any foreign issuer other than a foreign government, unless (i) more than 50% of the outstanding voting securities of the issuer are directly or indirectly owned by US residents and if the majority of the executive officers are US citizens or residents, (ii) more than 50% of the issuer's assets are located in the US, or (iii) the business of the issuer is administered mainly in the US (SEC 2014). Compared to their American counterparts, FPIs are also granted other concessions such as a longer period for filing annual reports, alternatives for audit committee requirements, and no requirement to reconcile financial statements prepared under IFRS to US GAAP.

The SRC, FPI, and EGC categories are all distinct from one another but are not mutually exclusive. A company that qualifies as a SRC also qualifies as an EGC, and a FPI can qualify as both a SRC and as an EGC. While SRCs have been allowed to use reduced disclosures similar to what EGCs are entitled to, confidential submission of draft

[10] Effective on December 8, 2011, the SEC's Corporation Finance Division prohibits confidential filings for FPIs, except for ADRs or foreign companies seeking listing in the US and elsewhere simultaneously. Thus, for the period between December 9, 2011 and April 4, 2012, some FPIs may not qualify for confidential filings. There are five such FPI IPOs in my sample, and excluding these IPOs does not affect the results of the study.

registration statements was not allowed for them until the enactment of the JOBS Act.[11] Similarly, while FPIs have been allowed to submit draft registration statements confidentially, they did not enjoy reduced disclosure requirements systematically. Thus, for EGCs that are also domestic SRCs, the new provision that the JOBs Act brings to them is confidential filings. For the FPIs that qualify as EGCs but not as SRCs, the new provision that the JOBS Act brings to them is mainly reduced disclosures.

***Hypotheses***

When evaluating the option to go public, firms weigh the costs and benefits associated with going and staying public against the costs and benefits of remaining private (Engel et al. 2007). On one hand, a decrease in the cost of premature disclosure should tilt the scale in favor of going public for firms on the public/private margin. During the confidential filing process, companies can communicate with the SEC, who is the sole gatekeeper for the approval of registration statements, without any outside interferences. This process could potentially allow companies to focus registration statement revisions on issues that the SEC finds important, as opposed to those that other parties such as the media might care more about. Further, firms that are more likely to have sensitive information are also more likely to withdraw their IPO attempts after filing a registration statement (Busaba et al. 2001), though public withdrawals are associated with negative consequences (Chen et al. 2010, Boeh and Dunbar 2013, Lian and Wang 2009). The confidential filing provision of the JOBS Act helps protect not only proprietary information but also non-proprietary information for longer, decreasing both

[11] EGCs can keep their EGC status for no more than five years, and once a company loses its EGC status, it cannot regain the status again in the future, even if it qualifies for the category again. However, SRC status can be regained any time a company meets qualifications again, but the re-entry qualifications are more stringent than those of initial qualification for the SRC status.

the likelihood of premature disclosure of sensitive information and the likelihood of public withdrawal.

On the other hand, the confidential filing provision reduces the duration of time that information about a firm is publicly available before IPO issuance, potentially leaving only less than one month for investors to review a firm's books. The decrease in time could exacerbate the information asymmetry between investors and managers, making it difficult for investors to evaluate the profitability of a firm (Beyer et al. 2010). This uncertainty may not be ideal when managers are hoping to raise money from the public. In fact, prior literature finds that increased voluntary disclosure is associated with decreased information asymmetry and lower cost of capital in equity offerings (Leone et al. 2007, Shroff et al. 2013), and that among firms with the highest first-day initial returns, those with more pre-IPO news disclosures are less underpriced (Schrand and Verrecchia 2002). When firms redact information from SEC filings to avoid loss of sensitive information to product market competitors, adverse selection increases (Verrecchia and Weber 2006). Firms might also want to opt out of the confidential filing provision to signal their quality to the market, as there is some evidence that when listing requirements are lower at an exchange, firms that choose to list on the exchange are of worse quality (Gerakos et al. 2013). However, disclosure at a voluntarily high level may not be perceived to be as credible relative to disclosures mandated to be at that same level (Stulz 2009, Cheng et al. 2013).

If the decrease in the cost of premature disclosure brought about by the confidential filing provision makes the IPO on-ramp process easier and more efficient for firms, then there should be changes in the IPO process at each stage. For instance, an easier IPO

process should lead to an increase in the number of firms that file confidentially, leading to an increase in the number of firms that file publicly, resulting in final increases in IPO issuance numbers and proceeds. While the number of firms filing confidentially is unobservable, any successfully issued IPO must go through the public filing stage.[12] Further, because firms entering the public filing stage after filing confidentially should be more certain of issuance after gaining a better understanding of the IPO process, the number of public withdrawals should decrease and the likelihood of successful issuance should increase. Thus, I examine the number of IPOs publicly filed as well as IPO issuance rates in the public stage, defined as the proportion of IPOs successfully issued out of total IPOs publicly filed (i.e., Busaba et al. 2001). An increase in the number of firms entering the public filing stage or in the likelihood of successful IPO issuance leads to increases in IPO issuance numbers and proceeds, which are important aspects of IPO activity (i.e., Ritter and Welch 2002, Gao et al. 2013).

Nevertheless, the cost of premature disclosure is simply one dimension of the cost-benefit analysis of the going public decision, and the literature provides little guidance on the importance of this cost. As a result, to what degree the confidential filing provision eases the IPO process remains to be studied. In addition, because there are reasons for firms to both use and not use the confidential filing provision, I state the hypothesis on whether the confidential filing provision eases the IPO process in the null form below:

*H1: Confidential filing does not have an effect on number of US IPOs publicly filed, US IPO issuance rates in the public stage, or number and proceeds of US issued IPOs.*

[12] In addition, compared to the confidential filing stage, the public stage is more costly in terms of not only monetary expenses but also public scrutiny, managerial time and distraction, as well as negative publicity if the IPO is withdrawn from public filing.

To better evaluate the importance of the impact of a decrease in the cost of premature disclosure, I compare the effect of the confidential filing provision on the IPO process with the effect of the reduced disclosure provisions on the IPO process. The reduced disclosure provisions from the JOBS Act decrease compliance costs, the effects of which are better understood in the literature. For instance, when Over-The-Counter Bulletin Board (OTCBB) firms had to comply with reporting obligations under the 1934 Securities Exchange Act, many smaller firms were forced off the OTCBB due to the significant disclosure costs (Bushee and Leuz 2005). Then, with the passage of SOX, the costs of becoming and remaining a public company became even higher. In fact, post-SOX, the rate of going-private transactions increased (Engel et al. 2007), and many firms went dark due to increased compliance costs imposed by SOX (Leuz et al. 2008).

From a policy perspective, there is also no clear guidance on which provision should be considered more important by firms in the IPO setting. Pre-JOBS, confidential filings have already been available to Foreign Private Issuers and reduced disclosures have already been available to Smaller Reporting Companies. The return of these provisions together in the JOBS Act signals that legislators believe both to be effective, though there is little relevant empirical evidence. Yet, these provisions have never been provided to the same group of companies at the same time prior to the JOBS Act, making a comparison difficult until now.

Because it is unclear whether the cost of premature disclosure and compliance costs affect the IPO process to different degrees, I also state my hypothesis on the relative importance of the confidential filing and reduced disclosure provisions from the JOBS Act on the IPO process in the null form below:

*H2: Confidential filing and reduced disclosure provisions do not have differential effects on number of US IPOs publicly filed, US IPO issuance rates in the public stage, or number and proceeds of US issued IPOs.*

## III. Sample and Data

### *Sample*

The sample of issued IPOs contains all 5,965 IPOs publicly filed between December 2009 and July 2014 that are already issued as of July 31, 2014 from Thomson Financial's SDC database. The sample period allows balanced time windows before and after the JOBS Act while also mitigating possible confounding effects from the recent financial crisis as well as from the passage of SEC Rule #33-8876: Smaller Reporting Company Regulation and Simplification. Effective February 4, 2008, the Rule allows Smaller Reporting Companies (SRCs) to use reduced disclosure requirements similar to those granted in the JOBS Act. Following the procedures used by prior studies such as Doidge et al. (2013) and Ritter and Welch (2002), among others, I consolidate transactions of the same IPO and exclude the following IPOs: offer prices below $5 per share (i.e., penny stocks as defined by the SEC); those with no offer price information; closed-end funds (including REITS); financial institutions (SIC codes 60-63 and 67); unit offers; and limited partnerships.[13] To make the comparison of IPO activities between the US and other countries meaningful, I focus on IPO-active countries outside the US that have at least 20 issued IPOs after the eliminations. The final sample consists of 1,375 issued

[13] The results are similar when financial firms are included.

IPOs (579 in the US), representing 11 countries and 66 two-digit, 213 three-digit SIC code industries.[14]

To examine the IPO process from the public filing stage to issuance, I also extract all IPOs filed between December 2009 and July 2014 that are withdrawn as of July 31, 2014 from Thomson Financial's SDC database. Following the same sample selection procedures as for issued IPOs, I obtain a final sample of 390 IPO withdrawals in the same sample period from the same countries, including 188 from the US and representing 56 two-digit and 140 three-digit SIC code industries.[15]

***Descriptive statistics***

Table 1 presents the distribution of the sample of issued and withdrawn IPOs. The IPOs are classified into four categories based on sales revenue before the IPO is issued or withdrawn. The pre- and post- JOBS classifications are based on the date of the first public registration statement filed relative to the JOBS enactment date (April 5, 2012). IPOs with sales revenue below $1 billion qualify as Emerging Growth Companies (EGCs), and IPOs with sales revenue below $50 million qualify as Smaller Reporting Companies (SRCs).

Table 1 reveals a few patterns. First, 93% of issued IPOs and 97% of withdrawn IPOs are EGC-qualified. Second, from the pre-JOBS period to the post-JOBS period, the number of EGC-qualified issued IPOs increases from 222 to 290 in the US but decreases from 510 to 251 in the other countries. Meanwhile, the number of EGC-qualified

[14] Of the 1,375 IPOs, 28 are listed in Brazil, 45 in Canada, 191 in China, 79 in France, 173 in Japan, 36 in Poland, 160 in South Korea, 20 in Taiwan, 22 in UK, 579 in US, and 42 in Germany. The main results of this study remain unchanged when the 20-IPO threshold is lowered or raised, and when the sample is limited to IPOs in G7 countries only.

[15] The database covers only IPO withdrawals from public filings. The SEC does not consider confidentially filed IPOs as formal filings, and documents confidentially submitted remain confidential at the SEC after withdrawal from the confidential process.

withdrawn IPOs decreases following JOBS in both US and other countries. Third, IPO issuance rate, defined as the number of IPOs issued divided by the sum of the number of IPOs issued and the number of IPOs withdrawn, increases from pre-JOBS to post-JOBS for EGC-qualified IPOs, and the increase is greater for the US than for other countries.

## IV. Country-Level Analysis of IPOs Surrounding JOBS Enactment

### *Difference-in-differences (DID) model*

To examine the effect of the confidential filing and reduced disclosure provisions, I first examine the overall effect of the JOBS Act enactment as a starting point. To this end, I implement a difference-in- differences (DID) shock-based empirical design at the country-level. The model compares the difference between a US IPO category (i.e., EGC-qualified) and non-US IPOs in the same category before and after the JOBS Act. The DID empirical model is specified below:

$$DepVar_{it} = \beta_0 + \beta_1 US_i + \beta_2 Post_t + \beta_3 Post_t \times US_i + \beta_c Controls_{it} + \varepsilon_{it}, \qquad (1)$$

where *i* is the index for countries, and *t* is the index for 30-day time intervals surrounding April 5, 2012. The dependent variable (*DepVar*) is measured for each country and 30-day interval combination surrounding the JOBS enactment. Specifically, the dependent variable is *Ln(1+ Number of filed IPOs), Ln(1+ IPO issuance rate), Ln(1+Number of issued IPOs),* or *Ln(1+Total proceeds of issued IPOs). Number of filed IPOs* is the number of firms that enter the public filing stage with an outcome, i.e., issued or withdrawn. *IPO issuance rate* is the ratio of *Number of issued IPOs* to (1+*Number of filed IPOs*). *US* is equal to 1 for the United States and 0 for all other countries. *Post* is

equal to 1 for IPOs in 30-day intervals starting on or after April 5, 2012, and 0 otherwise.[16]

As Doidge et al. (2009) suggest, country-level economy and capital market development can affect IPO activities. Thus, I include the following control variables: *GNP/capita* (GNP per capita), *Market/GDP* (ratio of stock market capitalization), *GDPgrowth* (GDP growth rate), and *N_firms* (number of listed firms of the country), which are all measured at the year prior to the IPO and collected for each country and each year from the World Bank WBI database. The model also includes country- and year- fixed effects to further mitigate the effects of unobserved heterogeneity across countries and time.

Because the JOBS Act provisions are intended to ease the IPO process for EGCs, I first apply model (1) to the category of EGC-qualified IPOs in the US and in the other countries. In the model, the change in the category of US EGC-qualified IPOs from pre-JOBS to post-JOBS is captured by $\beta_2 + \beta_3$. Meanwhile, the change in the category of EGC-qualified IPOs in non-US countries from pre-JOBS to post-JOBS is captured by $\beta_2$. Thus, the DID effect of the JOBS Act on US EGC-qualified IPOs is estimated by $\beta_3$.

While OLS regressions can be used to estimate model (1), an econometric issue exists because some countries do not have IPOs in certain intervals. If a country does not issue any IPOs in a particular interval as a result of rational choice, the dependent variables of model (1) are left-censored, and the OLS estimator is inconsistent. Therefore, I use Tobit regressions to estimate model (1), and specification tests that check the normality and homoscedasticity ensure that the Tobit regressions of model (1), as well as all other Tobit

[16] To illustrate, for the US in the first 30 days after JOBS, there is one observation (4 IPOs) for the EGC-qualified category.

regressions reported later in this study, are all appropriately specified (Tobin 1958, Cameron and Trivedi 2010).

Table 2 presents the Tobit results of model (1) in four columns.[17] Specifically, $\beta_3$ is positively significant for three out of the four dependent variables: 0.267 ($p<0.01$) for IPO issuance rate, 0.449 ($p<0.01$) for number of IPOs issued, and 1.821 ($p<0.01$) for proceeds of issued IPOs. The results are economically significant, as the Tobit estimates suggest that the JOBS Act leads to a 62% increase in IPO issuance rates, as well as a 49% increase in the number of IPOs and a 182% increase in total proceeds of issued IPOs.[18,19]

***Confidential filings versus reduced disclosures***

The analyses thus far show that the JOBS Act eases the IPO process. To compare the effects of the confidential filing and reduced disclosure provisions on the IPO process, I separately apply model (1) first to the category of EGCs that also qualify as domestic Smaller Reporting Companies (SRCs) and then to the category of Foreign Private Issuers (FPIs) that qualify as EGCs but do not qualify as SRCs. As illustrated in Figure 1, the

[17] The results in these columns, as well as those in other places reported in this paper, are based on robust standard errors.

[18] The issue raised in Ai and Norton (2003) does not apply to the Tobit model because in this study, the variable of interest is the latent variable y*, which equals the observed dependent variable y when y* is positive. For the latent dependent variable, Tobit regressions are linear models and its coefficients are interpreted the same way as OLS coefficients, though the effect is on the latent variable y* instead of the observed variable y (variable with econometric issue, in this case left-censoring at zero). For instance, since the dependent variable in column (3) is Ln(1+ number of issued IPOs), percentage change in number of issued IPOs is 0.449*[(1+number of issued IPOs)/number of issued IPOs]. The mean number of EGC qualified IPOs over the 30-day intervals pre-JOBS is about 10 for the US, so the estimated percentage change in the issuance number of US EGC qualified IPOs is about 0.449*[(1+10)/10]= 49% for the latent variable of number of issued IPOs. Similarly, the marginal DID effects of JOBS on the observed IPO issuance rate (0.170, $p<0.01$), IPO issuance number (0.289, $p<0.01$), and proceeds (1.149, $p<0.01$), are positively significant, respectively, and the corresponding percentage changes in these observed dependent variables are 39%, 32%, and 115%,respectively. The marginal DID effect of JOBS on the observed number of IPOs publicly filed is also insignificant.

[19] For comparison purposes, I also use OLS regressions to estimate model (1). The OLS results show that $\beta_3$ is positively significant for IPO issuance rates (0.188, $p<0.01$), the number of issued IPOs (0.245, $p<0.01$), and total proceeds of issued IPOs (0.969, $p<0.05$), but insignificant for the total number of IPOs publicly filed. These results are similar to (albeit weaker than) the Tobit results in Table 2. Indeed, relative to the Tobit estimator, the OLS estimator of the slope coefficients are downwardly biased (Amemiya 1973).

only new provision the JOBS Act brings to the category of EGCs that are also domestic SRCs is confidential filing, and the only new provision the JOBS Act brings to the category of Foreign Private Issuers (FPIs) that qualify as EGCs but do not qualify as SRCs is reduced disclosure. As such, the comparison of EGCs that are also domestic SRCs across US and non-US countries identifies the effect of confidential filings, whereas the comparison of FPIs that qualify as EGCs but not SRCs across US and non-US countries identifies the effect of reduced disclosure requirements.

Table 3 presents the Tobit results from comparing the category of EGCs that also qualify as domestic Smaller Reporting Companies (SRCs) across US and non-US countries. In this comparison $\beta_3$ captures the DID effect of confidential filings. The results indicate that $\beta_3$ is significantly positive for IPO issuance rates (0.241, $p<0.01$), the number of issued IPOs (0.495, $p<0.01$), and total proceeds of issued IPOs (1.177, $p<0.10$) but is insignificant for total number of IPOs publicly filed. The results suggest that the confidential filing provision increases IPO issuance rates by 56%, IPO issuance number by 54%, and total proceeds of IPOs issued by 118%. Table 2 shows that the JOBS Act does ease the IPO process, and Table 3 adds that the confidential filing provision contributes to the effect.

Next, I examine the effect of reduced disclosure provisions by applying model (1) to the category of Foreign Private Issuers (FPIs) that qualify as EGCs but do not qualify as SRCs and present the results in Table 4. In this case, $\beta_3$ of model (1) captures the effect of reduced disclosures. The results show that $\beta_3$ is insignificant in all columns, suggesting that reduced disclosure provisions do not affect the IPO activity measures. Combined with Tables 2 and 3, the results suggest that it is the confidential filing

provision, and not the reduced disclosure provisions, of the JOBS Act that leads to an increase in IPO issuance rates, which in turn increases the number and total proceeds of issued IPOs.[20]

***Difference-in-difference-in-differences (DIDID) model***

The DID model above compares the difference between a US IPO category (i.e., EGC-qualified) and non-US IPOs in the same category before and after the JOBS Act, but the same category of IPOs may be inherently different across countries. As Atanasov and Black (2014) suggests, a third difference can be calculated to mitigate this concern.[21] Specifically, if a DID model is applied to the category of EGC-qualified IPOs, the effect of the JOBS enactment estimated may contain a portion that is attributable to the difference between US and other countries. However, IPOs that do not qualify as EGCs are likely to be subject to the same cross-country differences. By including this category of IPOs as another benchmark, a DIDID mitigates the effect of the cross-country difference. The DIDID empirical model is specified below:

$$DepVar_{it} = \beta_0 + \beta_1 US_i + \beta_2 Post_t + \beta_3 Post_t \times US_i + \beta_4 EGC\_q_{it} + \beta_5 EGC\_q_{it} \times US_i$$
$$+ \beta_6 EGC\_q_{it} \times Post_t + \beta_7 EGC\_q_{it} \times Post_t \times US_i + \beta_c Controls_{it} + \varepsilon_{it}, \qquad (2)$$

where *EGC_q* is equal to 1 for the EGC-qualified category, and 0 otherwise, and the other variables are the same as in model (1). For each country-interval, two observations

[20] I also apply model (1) to the category of foreign SRCs and find no effect of the JOBS Act for any of the four dependent variables, suggesting that when no new provision is brought about by the JOBS Act there is no JOBS effect. In addition, when applying model (1) to domestic IPOs that qualify as EGCs but not as SRCs, I find $\beta_3$ to be positively significant for IPO issuance rates (0.245, $p<0.01$), number of issued IPOs (0.368, $p<0.10$), and total proceeds of issued IPOs (2.564, $p<0.01$) but insignificant for the number of IPOs publicly filed. The results suggest that when both confidential filings and reduced disclosures provisions are brought about by the JOBS Act, the JOBS effect is similar to the situation when only the confidential filing provision is added.

[21] An example of DIDID is Litvak (2007), which examines the effect of SOX in a DIDID framework.

are included in the analysis: one for the category of EGC-qualified IPOs (with *EGC_q*=1) and one for the category of non-EGC-qualified IPOs (with *EGC_q* = 0).

In model (2), the DID effect of the JOBS Act on US EGC-qualified IPOs, relative to non-US EGC-qualified IPOs, is captured by $\beta_3 + \beta_7$. The DID effect of JOBS on US non-EGC-qualified IPOs, relative to non-US, non-EGC-qualified IPOs, is captured by $\beta_3$. Thus, the DIDID effect of the JOBS Act on US EGC-qualified IPOs is estimated by $\beta_7$. Figure 2 presents interpretations of the coefficients in model (2) in detail.

Untabulated Tobit results of model (2) indicate that $\beta_7$ is positively significant for all four dependent variables: 0.538 ($p<0.01$) for number of IPOs publicly filed, 0.324 ($p<0.01$) for IPO issuance rates, as well as 0.697 ($p<0.05$) for number of IPO issued and 2.877 ($p<0.10$) for proceeds of issued IPOs. To further evaluate the effects of confidential filing and reduced disclosure provisions, I first replace the EGC-qualified category in model (2) with the category of IPOs that qualify as domestic Smaller Reporting Companies (SRCs) and find that $\beta_7$ is positively significant for all four dependent variables. I then replace the EGC-qualified category in model (2) with Foreign Private Issuers (FPIs) that qualify as EGCs but do not qualify as SRCs and find that $\beta_7$ is insignificant for all four dependent variables. Taken together, the DIDID results confirm the DID results that the confidential filing provision, but not the reduced disclosure provisions, of the JOBS Act enhances IPO issuance rates, which boosts IPO issuance numbers and proceeds. In addition, the DIDID results suggest that the JOBS Act also leads to an increase in the number of IPOs entering the public filing stage, which is again attributable to confidential filings only.

***Sensitivity checks***

I also conduct a series of sensitivity tests to examine the robustness of the results. First, following Atanasov and Black (2014), I address the pre-JOBS time trend issue by limiting the analysis to observations before JOBS and create a placebo event in the middle of the pre-JOBS period. The placebo event shows no effect on IPO activities. Second, the results are similar when 10-day and 60-day intervals are used instead of 30-day intervals. Third, when all non-US countries are combined together as the benchmark, with country-level measures of economy and stock market development averaged, the results remain unchanged. Fourth, the results are similar after excluding IPOs that are filed before but issued after JOBS enactment. Fifth, I extend the analysis to all countries with an issued IPO during my sample period, and the results are qualitatively unchanged.

Finally, because there is a pipeline of IPO transactions throughout the JOBS Act's legislative process, I use a few different classifications of pre- and post-JOBS IPOs and find the results to be robust. For instance, the results remain unchanged when I exclude the period of 119 days from December 8, 2011 (when the bill was introduced) to April 5, 2012 (when JOBS was enacted) or when I exclude the 120 days before and 120 days after April 5, 2012. In addition, IPOs filed after December 8, 2011 but before April 5, 2012 can retroactively gain EGC status. When I use December 8, 2011 as the pre- and post-JOBS cut-off date instead, the results are similar. Finally, when I classify IPOs into pre- and post-JOBS periods based on the date of issuance or date of the earlier of initial confidential and initial public filing instead of the date of public filing, the results remain qualitatively unchanged. The results of the sensitivity checks show that the country-level results reported above are robust.

## V. Firm-Level Analysis of US IPOs

The country-level analysis is based on the assumption that firms do in fact take advantage of the confidential filing and reduced disclosure provisions granted to them. This assumption may not hold for all firms, since the literature suggests that firms have incentives to disclose more than what is required (Healy and Palepu 2001). Furthermore, firm-level measures of confidential filings and reduced disclosures allow direct links to be tested between IPO activities and the firm's filing and disclosure choices. In this section, I provide firm-level empirical evidence on the effect of EGC status as well as prevalence and use of the confidential filing and reduced disclosure provisions.

***Data on EGC status, confidential filings and disclosure***

To examine whether firms actually file as EGCs, as well as whether and to what degree they use the JOBS Act provisions, I hand-collect a series of information from SEC IPO prospectuses

(i.e., Form S-1, amendments, or modified prospectus such as 424B3, etc.) and other SEC filings in the EDGAR database. The information collected includes: whether a company filed for an IPO as an EGC, whether the company used confidential filings and/or reduced disclosures, and whether it opts out of certain exemptions allowed by JOBS.

In the ensuing analysis, *EGC* is equal to 1 if an IPO is filed as an Emerging Growth Company, and 0 otherwise. *Cfiling* is equal to 1 if the company confidentially filed draft registration statements (DRS), and 0 otherwise. *Duration1* (*Duration2*) is the number of days from the initial public filing (initial filing, confidential or public) of the IPO to the date the IPO is issued.

The following five variables reflect the disclosure provisions companies use for their IPO filings: *2year_data* is equal to 1 if the company disclosed no more than two years of selected financial data in IPO filings, and 0 otherwise. *2year_audit* is equal to 1 if the company disclosed no more than two years of audited financial statements, and 0 otherwise. *3executives* is equal to 1 if the company named no more than three executives in compensation summary tables, and 0 otherwise. *2tables* is equal to 1 if the company disclosed no more than two compensation tables (including the summary compensation table), and 0 otherwise. *NoICAudit* is equal to 1 if the company did not provide auditor attested internal control report, and 0 otherwise. *Used* is equal to 1 if the company used any of the five reduced disclosure provisions above, and 0 otherwise. In addition, two variables are related to provisions firms will use post-IPO. *Delay_ACC* is equal to 1 if the company does not opt out of the provision to delay the adoption of new or revised accounting standards, and 0 otherwise. *Use_all* is equal to 1 if the company does not explicitly states in its prospectus that it will use only some, but not all, of the exemptions allowed by JOBS, and 0 otherwise.

Finally, to measure the use of all provisions of reduced disclosures, I calculate *N_exemp* as the sum of the seven variables related to disclosure exemptions defined above: (1) *2year_data*, (2) *2year_audit*, (3) *3executives*, (4) *2tables*, (5) *NoICAudit*, (6) *Delay_ACC*, and (7) *Use_all*. Since the maximum number of *N_exemp* is 7, I define *H_exemp* to be 1 if a firm uses more than 4 exemptions, and 0 otherwise. In subsequent analyses, I mainly use *H_exemp* to measure reduced disclosures, though the main results do not change when *N_exemp* is used instead.[22]

[22] The main results also remain qualitatively unchanged when *H_exemp* is replaced by (1) the seven individual disclosure variables, and (2) the three most frequently used disclosure provisions, i.e.,

***Data on IPO and firm characteristics***

Information on IPO and firm characteristics is mainly extracted from the SDC database and supplemented by COMPUSTAT, CRSP, SEC filings, and other sources indicated below. *Proceeds* are the total gross proceeds of the IPO in millions of dollars. *GrossSpread%* is gross spread as percent of the total gross proceeds of the IPO. *Expense%* is total IPO expenses, excluding gross spread, as a percentage of the total gross proceeds of the IPO. *Price* is the offer price of IPO in US dollars. *UnderPricing* is the return on the first trading day of the stock, measured as the close price on the first trading day minus the offer price, as percent of the offer price. *Retained%* is percent of shares outstanding that is retained by pre-IPO shareholders. *Primary* is equal to 1 if the offer includes primary shares only (i.e., pre-IPO shareholders are not selling), and 0 otherwise. *Specific* is equal to 1 if the company indicates specific use of IPO proceeds, and 0 otherwise. *VC* is equal to 1 if the IPO is venture capital-backed, and 0 otherwise. *TopUnderwriter* is equal to 1 if a bookrunner or lead underwriter of the IPO is top-ranked, as defined in Loughran and Ritter (2004). *Big4* is equal to 1 if the auditor of the company is a Big 4 accounting firm, and 0 otherwise.

The last group of variables concern firm characteristics. *Assets* is book value of total assets in millions of dollars. *Sales* is book value of sales revenue in millions of dollars. *ROA* is net income divided by total assets. *LEV* is total liabilities divided by total assets. *Age* is number of years from the date of the founding/incorporation of the firm to the date the IPO is issued. *HighTech* is equal to 1 for high-tech industries defined in the SDC database, and 0 otherwise. *Internet* is equal to 1 for internet industries as defined in

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*2year_audit*, *2tables*, and *NoICAudit*. Similarly, the main results do not change when number of confidential filings (*N_cf*) is used as the measure of confidential filing.

Ljungqvist and Wilhelm (2003), and 0 otherwise. *Unique* is equal to 1 for industries with two-digit SIC codes 34-40, and 0 otherwise.

***Descriptive statistics***

Panel A of Table 5 presents firm and IPO characteristics of issued and withdrawn IPOs. The results show that 82% of all issued IPOs filed after JOBS actually filed as EGCs, indicating the prevalence of EGCs post-JOBS. [23] The results also show that compared to IPOs filed pre-JOBS, IPOs filed post-JOBS have fewer assets, higher leverage, shorter durations, lower expenses, and notably, greater underpricing. For withdrawn IPOs, data on some variables are not available, and for variables such as expenses, only a small portion of firms have data available. Nevertheless, the results show that withdrawn IPOs filed after JOBS also have shorter durations.

Panel B of Table 5 presents filing and disclosure characteristics of issued and withdrawn EGC-qualified IPOs filed after JOBS enactment. The results for issued IPOs validate the assumption underlying country-level analyses that EGC-qualified IPOs actually file as EGCs and use confidential filings and reduced disclosures provisions. Indeed, 92% of issued EGC-qualified IPOs filed as EGCs, 83% filed confidentially, and 100% used at least one reduced disclosure provision during the IPO process. In addition, compared to withdrawn IPOs, issued IPOs are more likely to file as EGCs, to use confidential filings, to use the provision of no auditor-attested report of internal controls,

[23] 35 IPOs are filed before but issued after April 5, 2012 as EGCs, including one company that filed its public registration statement before April 5, 2012 but later filed two draft registration statements before its IPO filing became effective. Similarly 10 IPOs are filed before but withdrawn after April 5, 2012 as EGCs. These IPOs are not included in the 270 EGC IPOs issued or in the 40 EGC IPOs withdrawn. Main results in this paper are robust if IPOs filed before and issued/withdrawn after April 5, 2012 are excluded.

to use all (as opposed to just some of) the exemptions, and to use at least five of the seven disclosure exemptions.

Panel C of Table 5 provides Pearson correlations among the filing and disclosure variables for issued and withdrawn IPOs filed after JOBS. The results show that IPO issuance rate is positively associated with my measures of EGC status (*EGC*), confidential filings (*Cfiling*) and reduced disclosures (*H_exemp*). Confidential filing is correlated with reduced disclosures, but the correlation coefficients are all below 0.5, suggesting that confidential filings and reduced disclosures represent different concepts.

***IPO issuance rates***

To buttress the country-level findings that the JOBS Act promotes IPO issuance rates in the public filing stage through the confidential filing provision, I examine the effects of the JOBS Act on the likelihood of firm-level IPO issuance by directly linking IPO issuance likelihood to firms' EGC status and to their choices to use the confidential filing and reduced disclosure provisions. Specifically, I estimate the following logit models using issued and withdrawn IPOs that are filed after April 5, 2012:

$$Pr(IPO\_issued = 1)_i = \beta_0 + \beta_1 EGC_i + \beta_c Controls_i + \varepsilon_{it}, \qquad (3a)$$

$$Pr(IPO\_issued = 1)_i = \beta_0 + \beta_1 Cfiling_i + \beta_2 H\_exemp_i + \beta_c Controls_i + \varepsilon_{it}, \quad (3b)$$

where *i* is the index for IPOs, and *IPO_issued*, *EGC*, *Cfiling*, and *H_exemp* are defined as before. The set of *Controls* include the following firm characteristics and industry variables discussed above: *Ln(Assets)*, *LEV*, *ROA*, *Ln(1+ Age)*, *HighTech*, *Internet*, and *Unique*. In model (3a), $\beta_1$ captures the effect of EGC status on the firm's IPO issuance

rate, and in model (3b), $\beta_1$ ($\beta_2$) captures the effect of confidential filings (reduced disclosures).[24]

Table 6 presents the marginal effects of EGC status, confidential filings, and reduced disclosures on the probability of successfully issuing an IPO. The results in column (1) show that IPO issuance rate is 4.9 percentage points higher for EGCs than for non-EGCs. The results in column (2) show that IPO issuance rate is 11 percentage points higher for IPOs with confidential filings than for IPOs without confidential filings while reduced disclosure does not have a significant marginal effect on IPO issuance rates. As shown in columns (3) and (4), these results are robust after controlling for industry- and year- fixed effects.[25] Overall, firm-level IPO issuance rates confirm country-level findings that the JOBS Act leads to an increase in IPO issuance rate and that this increase is attributable to confidential filings but not to reduced disclosures. In addition to confirming country-level results, Table 6 also provides more direct evidence on the relationship between confidential filings and IPO issuance rates.

***Propensity score matching***

A shortcoming of models (3a) and (3b) is that filing as an EGC and using confidential filings and reduced disclosures are all choices that are likely endogenous. To address this concern, I use two propensity score matched samples to re-estimate models (3a) and (3b). The first sample is matched on the propensity to file as an EGC (i.e., *EGC* =1), which is

[24] Models (3a) and (3b) do not include IPO characteristics because the models involve withdrawn IPOs, and IPO characteristics are not available for most withdrawn IPOs.

[25] Columns (3) and (4) have fewer observations because in some cases industry- and year- fixed effects perfectly predict the probability of successfully issuing an IPO, and these cases are excluded from the analysis.

based on a probit model that uses all issued and withdrawn EGC-qualified IPOs filed after April 5, 2012.[26] The model is below:

$$Pr(EGC=1)_i = \beta_0 + \beta_1 Ln(Assets)_i + \beta_2 LEV_i + \beta_3 ROA_i + \beta_4 Ln(1+Age)_i + \beta_5 HighTech_i + \beta_6 Internet_i + \beta_7 Unique_i + \varepsilon_i, \quad (4a)$$

where *i* is the index for IPOs, and *EGC* and the other variables are defined as before.

Table 7, Panel A presents the results of model (4a) in column (1). The results show that larger IPOs and internet IPOs that qualify as EGCs are less likely to file as EGCs while firms with longer histories are more likely to file as EGCs. Based on the propensity scores from model (4a), each EGC IPO is matched with a non-EGC IPO with a propensity score that is closest to that of the EGC IPO. This process generates 280 EGCs and 280 non-EGCs that are matched with the EGCs.[27] T-test results in column (2) of Table 7 Panel A show that EGCs and the matched non-EGCs are not significantly different along all the independent variables in model (4a).

The second sample is matched on the propensity to receive four different levels of "treatments", each corresponding to four different values of *Treat* as defined below: 1) *Treat* =1 if *EGC*=1, *Cfiling*=0, and *H_exemp*=0; 2) *Treat* =2 if *EGC*=1, *Cfiling*=1, and *H_exemp*=0; 3) *Treat* =3 if *EGC*=1, *Cfiling*=0, and *H_exemp*=1; and 4) *Treat* =4 if *EGC*=1, *Cfiling*=1, and *H_exemp*=1. The following probit model is used to estimate the propensity to receive one of the four levels of "treatment", as opposed to having Treat=0

[26] I include IPOs filed before and after April 5, 2012 in the propensity matched sample because 92% of EGC-qualified IPOs issued after April 5, 2012 actually filed as EGCs, leaving insufficient choices of non-EGCs with similar propensities to be matched with EGCs.

[27] In constructing this matched sample and the matched sample based on model (4b) below to obtain closer matches, a non-EGC IPO can be matched to more than one EGC IPO, and each match is considered to be different. The results are similar if a non-EGC IPO is allowed to be matched to only one EGC IPO.

(i.e., EGC=0), using all issued and withdrawn IPOs that are EGC-qualified and filed after April 5, 2012:

$$Pr(Treat=j)_i = \beta_0 + \beta_1 Ln(Assets)_i + \beta_2 LEV_i + \beta_3 ROA_i + \beta_4 Ln(1+Age)_i + \beta_5 HighTech_i + \beta_6 Internet_i + \beta_7 Unique_i + \varepsilon_i, \quad (4b)$$

where *i* is the index for IPOs, j =1, 2, 3, or 4 correspond to the treatment levels above, and other variables are defined as before.

Table 7 Panel B presents the propensity score to receive the four different levels of treatment (as opposed to *Treat* = 0) in columns (3) to (6), respectively. Based on the results in each of the four columns, each IPO with *Treat=j* is matched with an IPO with *Treat=0* whose propensity to receive *Treat=j* is closest to the IPO with *Treat=j*. As a result, a total of 280 IPOs with *Treat>0* are matched with 280 IPOs with *Treat=0*. Column (7) of Panel A in Table 7 shows that the IPOs with *Treat>0* and the matching IPOs with *Treat=0* are not significantly different along the seven independent variables in model (4b).

Next, I re-estimate models (3a) and (3b) using the two matched samples and present the results in Panel B of Table 7. The results are generally consistent with the results presented in Table 6, confirming that IPO issuance rates are higher for EGCs, and in particular higher for EGCs that file confidential draft registration statements. Taken together, the results in Tables 6 and 7 show that the JOBS Act promotes IPO issuance rates for EGCs only through the confidential filing provision. These firm-level results not only triangulate well with country-level results but also provide empirical evidence of more direct links between the JOBS provisions and IPO activities.[28]

[28] In unreported additional analyses, I also find similar results when implementing other methods to mitigate the endogeneity concern. For instance, when I estimate treatment effects using inverse-probability-

Further, because the impact of disclosure costs may depend on firm size (i.e., Engel et al. 2007, Zhang 2007, Leuz et al. 2008, Iliev 2010), I split the sample into two subsamples based on the median value of pre-IPO assets. The results reported in Tables 6 and 7 hold in both subsamples, and the estimated effects of confidential filing are not significantly different across the two subsamples.

***Other costs and benefits***

The results show some important benefits of the JOBS Act, but other costs and benefits still remain unexamined. For instance, given that the ultimate goal of the JOBS Act according to regulators is to create jobs (H.R. 3606), does employment growth change? Also, does confidential filing cut IPO duration and leave less time for investors to digest the information in IPO documents as the media suggests? In what follows, I use the models specified below to obtain a more comprehensive evaluation of the JOBS Act:[29]

$$DepVar_i = \beta_0 + \beta_1 EGC_i + \beta_c Controls_i + \varepsilon_{it}, \quad (5a)$$

$$DepVar_i = \beta_0 + \beta_1 Cfiling_i + \beta_2 H\_exemp_i + \beta_c Controls_i + \varepsilon_{it}, \quad (5b)$$

where *i* is the index for IPOs, and the set of *Controls* include the IPO and firm characteristics presented in Panel A of Table 5 as well as industry- and year- fixed effects.

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weighting and regression adjustment methods, the results indicate that the average treatment effect (ATE) and the average treatment effect on treated (ATT) are both significant for *Treat*=2 and *Treat*=4, and insignificant for *Treat*=1 and *Treat*=3, suggesting that confidential filings have positive significant effects on IPO issuance rates while reduced disclosures and EGC status without using confidential filings or reduced disclosures, do not have effects on IPO issuance rates. 2SLS and 3SLS estimations of linear probability models using peer firm choices of EGCs and use of confidential filing and reduced disclosure provisions also yield similar results. Furthermore, the results remain unchanged when I further control for whether a firm made a public announcement during the confidential filing process, whether the SEC granted confidential treatment orders to parts of the firm's IPO filings, and whether the IPO firm had analyst following or institutional ownership before IPO issuance.

[29] Dharmapala and Khanna (2014) evaluate the overall effect of the JOBS Act by examining stock market reactions of firms that went public after December 8, 2011 but still qualify for EGC status retroactively. However, these firms would not be able to submit confidential drafts of registration statements. Thus, their method may not be extended to compare the overall effects of confidential filings.

I first consider annualized growth rates in employee numbers (*EmpGrowth*), calculated over the interval from the IPO date to the first post-IPO date that the number of employees is reported in COMPUSTAT, and *Ln(Duration1).* I then consider the following IPO characteristics defined before as dependent variables: *Ln(1+ Proceeds), Ln(1+Expense%), Ln(1+GrossSpread%), Ln(100+Underpricing).* In addition, I examine the effect of the JOBS Act provisions on post-IPO stock performance to evaluate the longer-term effects of the regulation. If the provisions create information asymmetry that is later revealed, it may be captured in post-IPO stock performance. Thus, I examine *CAR*, defined as the sum of daily value-weighted market-adjusted abnormal returns of the stock over the first 180 trading days and *VOLAT*, defined as the standard deviation of daily value-weighted market-adjusted abnormal returns of the stock over the first 180 trading days.

To mitigate confounding effects, I use the propensity score matched samples to estimate models (5a) and (5b). Because the number of observations available varies from one dependent variable to another, I use model (4b) to obtain a propensity score matched sample for each dependent variable separately.[30] For each matched sample, I test the difference between the treated IPOs and untreated IPOs and find that the two groups are not significantly different along the variables in model (4b).

Table 8 presents the results of models (5a) and (5b) in Panels A and B, respectively. The results show that post-IPO growth in the number of employees does not differ across EGCs and non-EGCs or across different levels of the use of the JOBS provisions, implying that the JOBS Act does not have an effect on job creation for IPO firms over my sample period, although that is the ultimate goal of the JOBS Act according to

[30] For instance, many firms do not have number of employees reported in COMPUSTAT.

regulators. In contrast, Panel A shows that EGCs have shorter IPO durations and higher IPO underpricing. The results in Panel B show that IPOs with confidential filings have shorter IPO durations and higher IPO underpricing while reduced disclosures does not result in the same effects. The finding that confidential filings are associated with shorter IPO duration and greater underpricing is consistent with the interpretation that although managers find the provision as a useful tool to avoid undesired public scrutiny, investors may not have enough time to examine the IPO documents, resulting in greater information asymmetry reflected in greater underpricing.[31] Thus, these results suggest that the use of confidential filings is associated with both benefits and costs.

## VI. Conclusion

This paper examines whether a decrease in the cost of premature disclosure eases the IPO process, using the effect of a decrease in mandatory disclosure compliance costs as a benchmark. The JOBS Act provides a natural setting to not only evaluate the impact of the cost of premature disclosure, an unexamined disclosure cost, but also to gauge the impact against the effect of compliance cost, a better understood disclosure cost in the literature. Because disclosure concerns not only content but also timing, it is important to determine whether, how, and how much the cost of premature disclosure influences firms' decisions. Further, from a policy-making perspective, the confidential filing process is an unexamined disclosure practice that deserves attention.

Results from a difference-in-differences model show that the confidential filing provision of the JOBS Act increases the likelihood of successful IPO issuance in the

[31] Alternatively, the greater underpricing may be caused by higher litigation risk faced by the EGCs, especially confidential filers (Lowry and Shu 2002).

public filing stage, leading to greater IPO issuance number and proceeds. Reduced disclosure provisions, on the other hand, do not have an effect on the IPO process. Firm-level analyses using hand-collected data on EGCs confirm the same conclusions. Overall, the results suggest that firms consider the costs associated with premature disclosure of information to be more important than the costs of disclosure compliance when making the decision to go public. This paper provides the first relevant evidence on the impact of the cost of premature disclosure and a comparison of different types of disclosure costs in the IPO setting.

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**Table 1: Country-Level Descriptive Statistics of IPOs Issued and Withdrawn in Each Category**

| | US & Non-US IPOs | | | US IPOs | | | Non-US IPOs | | |
|---|---|---|---|---|---|---|---|---|---|
| **Number of IPOs Issued** | Total | Pre-JOBs | Post-JOBs | Total | Pre-JOBs | Post-JOBs | Total | Pre-JOBs | Post-JOBs |
| All IPOs | 1,375 | 777 | 598 | 579 | 251 | 328 | 796 | 526 | 270 |
| IPOs with sales ≥ $1 billion | 102 | 45 | 57 | 67 | 29 | 38 | 35 | 16 | 19 |
| IPOs with sales < $1 billion | 1,273 | 732 | 541 | 512 | 222 | 290 | 761 | 510 | 251 |
| IPOs with $50 million ≤ sales < $1 billion | 466 | 287 | 179 | 241 | 119 | 122 | 225 | 168 | 57 |
| IPOs with sales < $50 million | 807 | 445 | 362 | 271 | 103 | 168 | 536 | 342 | 194 |
| **Number of IPOs Withdrawn** | | | | | | | | | |
| All IPOs | 390 | 319 | 71 | 188 | 146 | 42 | 202 | 173 | 29 |
| IPOs with sales ≥ $1 billion | 11 | 9 | 2 | 10 | 8 | 2 | 1 | 1 | 0 |
| IPOs with sales < $1 billion | 379 | 310 | 69 | 178 | 138 | 40 | 201 | 172 | 29 |
| IPOs with $50 million ≤ sales < $1 billion | 29 | 26 | 3 | 24 | 22 | 2 | 5 | 4 | 1 |
| IPOs with sales < $50 million | 350 | 284 | 66 | 154 | 116 | 38 | 196 | 168 | 28 |
| **Number of IPOs Issued as Percent of Total Number of IPOs Issued and Withdrawn** | | | | | | | | | |
| All IPOs | 78% | 71% | 89% | 75% | 63% | 89% | 80% | 75% | 90% |
| IPOs with sales ≥ $1 billion | 90% | 83% | 97% | 87% | 78% | 95% | 97% | 94% | 100% |
| IPOs with sales < $1 billion | 77% | 70% | 89% | 74% | 62% | 88% | 79% | 75% | 90% |
| IPOs with $50 million ≤ sales < $1 billion | 94% | 92% | 98% | 91% | 84% | 98% | 98% | 98% | 98% |
| IPOs with sales < $50 million | 70% | 61% | 85% | 64% | 47% | 82% | 73% | 67% | 87% |

IPOs with an offer price below $5 per share, IPOs from closed end funds (including REITS) and financial institutions and REITS, unit offers, limited partnerships, and best-offer IPOs are excluded from the sample.

**Table 2: Country-Level Tobit Regression Analysis of IPO Activities: IPOs with Sales below $1 Billion**

| VARIABLES | (1) Ln(1+ Number of filed IPOs) | (2) Ln(1+ IPO issuance rate) | (3) Ln(1+ Number of issued IPOs) | (4) Ln(1+ Total proceeds of issued IPOs) |
|---|---|---|---|---|
| US | 3.218*** | 0.583** | 3.066*** | 8.634** |
| | (0.943) | (0.274) | (1.021) | (3.694) |
| Post | -0.150 | -0.031 | -0.122 | -0.445 |
| | (0.281) | (0.109) | (0.296) | (1.142) |
| Post × US | 0.168 | 0.267*** | 0.449*** | 1.821*** |
| | (0.160) | (0.050) | (0.143) | (0.669) |
| Ln(GNP/capita) | -0.854*** | -0.210*** | -0.738*** | -2.849*** |
| | (0.240) | (0.065) | (0.212) | (0.820) |
| Market/GDP | 1.337 | 0.329 | 1.222 | 4.458 |
| | (0.880) | (0.238) | (0.871) | (2.822) |
| GDPgrowth | -0.008 | -0.004 | -0.005 | -0.077 |
| | (0.012) | (0.005) | (0.014) | (0.054) |
| Ln(N_firms) | -0.684 | -0.178 | -0.817 | -2.103 |
| | (0.556) | (0.150) | (0.604) | (1.922) |
| Fixed effects included | Country, Year | Country, Year | Country, Year | Country, Year |
| Country-time interval-category Observations | 616 | 616 | 616 | 616 |
| Pseudo R-squared | 0.239 | 0.256 | 0.224 | 0.102 |

IPOs included in the analyses of this table are IPOs with sales below $1 billion (in the EGC-qualified category) in US and other countries. **Number of filed IPOs** is the number of IPOs that enter the public filing stage with an outcome, i.e., issued or withdrawn. **IPO issuance rate** is the ratio of Number of issued IPOs to (1+Number of filed IPOs). **Number of filed IPOs**, **IPO issuance rate**, **Number of issued IPOs**, and **Total proceeds of issued IPOs** (in $ million) are measured for each country and each 30-day interval for the EGC-qualified category. **US** is equal to 1 for the United States and 0 for all other countries. **Post** is equal to 1 for IPOs 30-day intervals starting on or after April 5, 2012, and 0 otherwise. Data on **GNP/capita** (GNP per capita**)**, **Market/GDP**(ratio of stock market capitalization**)**, **GDPgrowth**(GDP growth rate**)**, and **N_firms**(number of listed firms of the country**)** of the country are collected for each country and each year from the World Bank WBI database. These country-level variables are measured at the year prior to the IPOs. Constant terms are included in the regressions, but not reported. Robust standard errors are reported in parenthesis below each coefficient. ***, **, and * indicate two-tailed significance level at less than 1%, 5%, and 10% levels, respectively.

**Table 3: Country-Level Tobit Regression Analysis of IPO Activities: Domestic IPOs with Sales below $50 Million**

| VARIABLES | (1) Ln(1+ Number of filed IPOs) | (2) Ln(1+ IPO issuance rate) | (3) Ln(1+ Number of issued IPOs) | (4) Ln(1+ Total proceeds of issued IPOs) |
|---|---|---|---|---|
| US | 4.443*** | 1.185*** | 3.726*** | 13.995*** |
| | (0.649) | (0.224) | (0.668) | (2.842) |
| Post | -0.194 | -0.086 | -0.212 | -0.630 |
| | (0.263) | (0.111) | (0.274) | (1.193) |
| Post × US | 0.071 | 0.241*** | 0.495*** | 1.177* |
| | (0.171) | (0.068) | (0.176) | (0.640) |
| Ln(GNP/capita) | -0.603*** | -0.225*** | -0.635*** | -2.584*** |
| | (0.161) | (0.070) | (0.174) | (0.757) |
| Market/GDP | 1.516** | 0.507** | 1.448** | 5.128** |
| | (0.662) | (0.224) | (0.692) | (2.571) |
| GDPgrowth | -0.000 | 0.000 | 0.006 | -0.013 |
| | (0.014) | (0.007) | (0.018) | (0.067) |
| Ln(N_firms) | -1.390*** | -0.470*** | -1.337*** | -4.565*** |
| | (0.413) | (0.124) | (0.431) | (1.464) |
| Fixed effects included | Country, Year | Country, Year | Country, Year | Country, Year |
| Country-time interval-category Observations | 616 | 616 | 616 | 616 |
| Pseudo R-squared | 0.295 | 0.358 | 0.262 | 0.156 |

IPOs included in the analyses presented in this table are domestic IPOs with sales below $1 billion (in the Domestic EGC-qualified category) in US and other countries. **Number of filed IPOs** is the number of IPOs that enter the public filing stage with an outcome, i.e., issued or withdrawn. **IPO issuance rate** is the ratio of Number of issued IPOs to (1+Number of filed IPOs). **Number of filed IPOs**, **IPO issuance rate**, **Number of issued IPOs**, and **Total proceeds of issued IPOs** (in $ million) are measured for each country and each 30-day interval for the Domestic EGC-qualified category. **US** is equal to 1 for the United States and 0 for all other countries. **Post** is equal to 1 for IPOs 30-day intervals starting on or after April 5, 2012, and 0 otherwise. Data on **GNP/capita** (GNP per capita**)**, **Market/GDP** (ratio of stock market capitalization**)**,

**GDPgrowth** (GDP growth rate**)**, and **N_firms** (number of listed firms of the country**)** of the country are collected for each country and each year from the World Bank WBI database. These country-level variables are measured at the year prior to the IPOs. Constant terms are included in the regressions, but not reported. Robust standard errors are reported in parenthesis below each coefficient. ***, **, and * indicate two-tailed significance level at less than 1%, 5%, and 10% levels, respectively.

**Table 4: Country-Level Tobit Regression Analysis of IPO Activities: Foreign IPOs with Sales between $50 Million and $1 Billion**

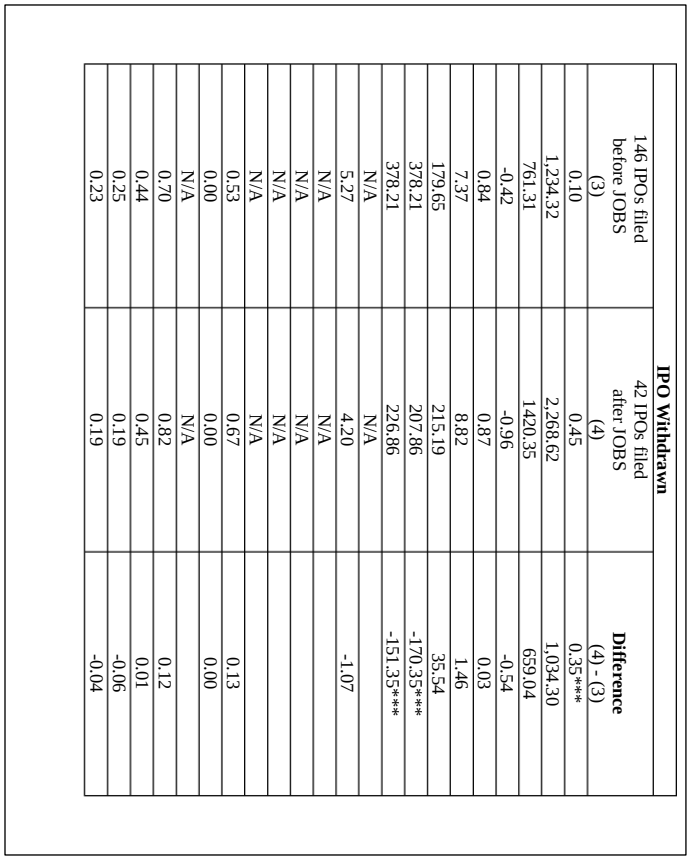
| VARIABLES | (1) Ln(1+ Number of filed IPOs) | (2) Ln(1+ IPO issuance rate) | (3) Ln(1+ Number of issued IPOs) | (4) Ln(1+ Total proceeds of issued IPOs) |
|---|---|---|---|---|
| US | 3.333* | 1.806 | 3.582* | 20.567 |
| | (1.883) | (1.098) | (2.140) | (13.143) |
| Post | -0.538 | -0.221 | -0.472 | -2.969 |
| | (0.426) | (0.266) | (0.525) | (3.235) |
| Post × US | 0.320 | 0.352 | 0.690 | 4.835 |
| | (0.421) | (0.255) | (0.493) | (3.132) |
| Ln(GNP/capita) | -0.014 | -1.706 | -3.564 | -21.936 |
| | (0.273) | (1.354) | (2.615) | (16.848) |
| Market/GDP | 1.739** | -0.001 | -0.012 | 0.779 |
| | (0.720) | (0.512) | (0.974) | (6.143) |
| GDPgrowth | 0.142** | 0.063* | 0.129* | 0.697* |
| | (0.070) | (0.034) | (0.067) | (0.393) |
| Ln(N_firms) | -1.434 | -0.475 | -0.923 | -5.175 |
| | (0.929) | (0.548) | (1.069) | (6.519) |
| Fixed effects included | Country, Year | Country, Year | Country, Year | Country, Year |
| Country-time interval-category Observations | 616 | 616 | 616 | 616 |
| Pseudo R-squared | 0.404 | 0.494 | 0.425 | 0.303 |

IPOs included in the analyses presented in this table are foreign IPOs with sales between $50 million and $1 billion (in the Foreign Non-SRC-qualified category) in US and other countries. **Number of filed IPOs** is the number of IPOs that enter the public filing stage with an outcome, i.e., issued or withdrawn. **IPO issuance rate** is the ratio of Number of issued IPOs to (1+Number of filed IPOs). **Number of filed IPOs**, **IPO issuance rate**, **Number of issued IPOs**, and **Total proceeds of issued IPOs** (in $ million) are measured for each country and each 30-day interval for the Foreign Non-SRC-qualified category. **US** is equal to 1 for the United States and 0 for all other countries. **Post** is equal to 1 for IPOs 30-day intervals starting on or after April 5, 2012, and 0 otherwise. Data on **GNP/capita** (GNP per capita**)**, **Market/GDP** (ratio of stock market capitalization**)**, **GDPgrowth** (GDP growth rate**)**, and **N_firms** (number of listed firms of the country**)** of the country are collected for each country and each year from the World Bank WBI database. These country-level variables are measured at the year prior to the IPOs. Constant terms are included in the regressions, but not reported. Robust standard errors are reported in parenthesis below each coefficient. ***, **, and * indicate two-tailed significance level at less than 1%, 5%, and 10% levels, respectively.

**Table 5: Firm-Level Descriptive Statistics of US Issued and Withdrawn IPOs**

***Panel A. Firm and IPO characteristics***

| | IPO Issued | | |
|---|---|---|---|
| | 251 IPOs filed before JOBS (1) | 328 IPOs filed after JOBS (2) | **Difference (2) - (1)** |
| EGC | 0.14 | 0.82 | 0.68*** |
| Assets | 1,038.44 | 1,022.71 | -15.73*** |
| Sales | 644.67 | 571.71 | -72.95 |
| ROA | -0.24 | -0.53 | -0.29 |
| LEV | 0.47 | 0.71 | 0.25*** |
| Age | 21.35 | 19.08 | -2.27 |
| Proceeds | 222.68 | 220.54 | -2.14 |
| Duration1 | 181.94 | 70.31 | -111.63*** |
| Duration2 | 181.94 | 128.12 | -53.83*** |
| GrossSpread% | 6.58 | 6.62 | 0.03 |
| Expense% | 3.46 | 2.77 | -0.70** |
| Price | 14.33 | 15.24 | 0.90 |
| UnderPricing | 12.55 | 18.14 | 5.59** |
| Retained% | 71.09 | 72.78 | 1.69 |
| Primary | 0.51 | 0.74 | 0.22*** |
| Specific | 0.50 | 0.66 | 0.16*** |
| VC | 0.42 | 0.49 | 0.07* |
| TopUnderwriter | 0.38 | 0.42 | 0.04 |
| Big4 | 0.81 | 0.86 | 0.05 |
| HighTech | 0.50 | 0.59 | 0.09** |
| Internet | 0.26 | 0.18 | -0.08** |
| Unique | 0.19 | 0.10 | -0.09*** |



| | IPO Withdrawn | | |
|---|---|---|---|
| | 42 IPOs filed after JOBS (4) | Difference (4) - (3) | 146 IPOs filed before JOBS (3) |
| | 0.45 | 0.35*** | 0.10 |
| | 2,268.62 | 1,034.30 | 1,234.32 |
| | 1420.35 | 659.04 | 761.31 |
| | -0.96 | -0.54 | -0.42 |
| | 0.87 | 0.03 | 0.84 |
| | 8.82 | 1.46 | 7.37 |
| | 215.19 | 35.54 | 179.65 |
| | 207.86 | -170.35*** | 378.21 |
| | 226.86 | -151.35*** | 378.21 |
| | N/A | | N/A |
| | 4.20 | -1.07 | 5.27 |
| | N/A | | N/A |
| | N/A | | N/A |
| | N/A | | N/A |
| | N/A | | N/A |
| | 0.67 | 0.13 | 0.53 |
| | 0.00 | 0.00 | 0.00 |
| | N/A | | N/A |
| | 0.82 | 0.12 | 0.70 |
| | 0.45 | 0.01 | 0.44 |
| | 0.19 | -0.06 | 0.25 |
| | 0.19 | -0.04 | 0.23 |

**EGC** is equal to 1 if the IPO is filed as an Emerging Growth Company, and 0 otherwise. **Assets** is book value of total assets in $ million. **Sales** is book value of sales revenue in $ million. **ROA** is net income divided by total assets. **LEV** is total liabilities divided by total assets. **Age** is number of years from the date of the founding/incorporation of the firm to the date the IPO is issued. **Proceeds** are the total gross proceeds of the IPO in $ millions realized (for issued IPOs) or intended (for withdrawn IPOs). **Duration1** is the number of days from the initial public filing of the IPO to the date the IPO is issued or withdrawn. **Duration2** is the number of days from the initial public/confidential filing of the IPO to the date the IPO is issued or withdrawn. **GrossSpread%** is gross spread as percent of the total gross proceeds of the IPO. **Expense%** is total IPO expenses (excluding gross spread) as percent of the total gross proceeds of the IPO. **Price** is the offer price of IPO in US$. **UnderPricing** is the return on the first trading day of the stock, measured as the close price on the first trading day minus the offer price, as percent of the offer price. **Retained%** is percent of shares outstanding that is retained by pre-IPO shareholders. **Primary** is equal to 1 if the offer includes primary shares only (i.e., pre-IPO shareholders are not selling), and 0 otherwise. **Specific** is equal to 1 if the company indicates specific use of IPO proceeds, and 0 otherwise. **VC** is equal to 1 if the IPO is venture capital-backed, and 0 otherwise. **TopUnderwriter** is equal to 1 if a bookrunner or lead underwriter of the IPO is top-ranked, as defined in Loughran and Ritter (2004). **Big4** is equal to 1 if the auditor of the company is a Big 4 accounting firm, and 0 otherwise. **HighTech** is equal to 1 for high-tech industries defined in the SDC database, and 0 otherwise. **Internet** is equal to 1 for internet industries defined in Ljungqvist and Wilhelm (2003), and 0 otherwise. **Unique** is equal to 1 for industries with two-digit SIC codes 34-40, and 0 otherwise. ***, **, and * indicate two-tailed significance level at less than 1%, 5%, and 10% levels, respectively.

***Panel B. Filing and disclosure characteristics of issued and withdrawn IPOs filed after April 5, 2012 with sales below $1 billion***

| | Mean | | | Mean difference |
|---|---|---|---|---|
| | (1) IPOs Issued & Withdrawn | (2) IPOs Issued | (3) IPOs Withdrawn | (3) - (2) |
| EGC | 0.87 | 0.92 | 0.48 | -0.45*** |
| Cfiling | 0.75 | 0.83 | 0.20 | -0.63*** |
| 2year_data | 0.45 | 0.47 | 0.33 | -0.13 |
| 2year_audit | 0.96 | 0.96 | 0.96 | 0.00 |
| 3executives | 0.70 | 0.70 | 0.70 | 0.00 |
| 2tables | 0.79 | 0.80 | 0.74 | -0.05 |
| NoICAudit | 0.92 | 0.94 | 0.70 | -0.24*** |
| Used | 1.00 | 1.00 | 1.00 | 0.00 |
| Delay_ACC | 0.15 | 0.15 | 0.13 | -0.03 |
| Use_all | 0.75 | 0.80 | 0.38 | -0.43*** |
| H_exemp | 0.63 | 0.67 | 0.35 | -0.32*** |

**IPO_issued** is equal to 1 if the IPO is issued, and 0 if the IPO is withdrawn. **EGC** is equal to 1 if the IPO is filed as an Emerging Growth Company, and 0 otherwise. **Cfiling** is equal to 1 if the company confidentially filed draft registration statements (DRS), and 0 otherwise. **2year_data** is equal to 1 if the company disclosed no more than two years of selected financial data in IPO filings, and 0 otherwise. **2year_audit** is equal to 1 if the company disclosed no more than two years of audited financial statements, and 0 otherwise. **3executives** is equal to 1 if the company named no more than three executives in compensation summary tables, and 0 otherwise. **2tables** is equal to 1 if the company disclosed no more than two compensation tables (including the summary compensation table), and 0 otherwise. **NoICAudit** is equal to 1 if the company did not provide auditor attested internal control report, and 0 otherwise. **Used** is equal to 1 if the company used any of the five scaled disclosure provisions above, and 0 otherwise. **Delay_ACC** is equal to 1 if the company does not opt out the provision to delay the adoption of new or revised accounting standards, and 0 otherwise. **Use_all** is equal to 1 if the company does not explicitly states in its prospectus that it will use only some, but not all exemptions allowed by JOBS, and 0 otherwise. **H_exemp** is equal to 1 if the sum of 2year_data, 2year_audit, 3executives, 2tables, NoICAudit, Delay_ACC, and Use_all is at least five, and 0 otherwise. ***, **, and * indicate two-tailed significance level at less than 1%, 5%, and 10% levels, respectively.

***Panel C. Pearson correlations among filing and disclosure characteristics of issued and withdrawn IPOs filed after April 5, 2012 with sales below $1 billion***

| | IPO_issued | EGC | Cfiling | H_exemp | 2year_data | 2year_audit | 3executives | 2tables | NoICAudit | Delay_ACC |
|---|---|---|---|---|---|---|---|---|---|---|
| EGC | 0.44*** | | | | | | | | | |
| Cfiling | 0.47*** | 0.67*** | | | | | | | | |
| H_exemp | 0.22*** | 0.51*** | 0.38*** | | | | | | | |
| 2year_data | 0.08 | 0.10* | 0.16*** | 0.35** | | | | | | |
| 2year_audit | 0.00 | -0.05 | -0.05 | 0.25*** | 0.14** | | | | | |
| 3executives | 0.00 | 0.25*** | 0.20*** | 0.46*** | -0.02 | -0.09 | | | | |
| 2tables | 0.04 | 0.27*** | 0.14** | 0.51*** | 0.13** | -0.06 | 0.21*** | | | |
| NoICAudit | 0.25*** | 0.88*** | 0.48*** | 0.40*** | 0.10* | -0.06 | 0.21*** | 0.33*** | | |
| Delay_ACC | 0.02 | 0.16*** | 0.06 | 0.26*** | 0.07 | 0.04 | 0.13** | -0.02 | 0.03 | |
| Use_all | 0.32*** | 0.67*** | 0.44*** | 0.44*** | -0.07 | 0.04 | 0.06 | 0.12** | 0.44*** | 0.01 |

**IPO_issued** is equal to 1 if the IPO is issued, and 0 if the IPO is withdrawn. **EGC** is equal to 1 if the IPO is filed as an Emerging Growth Company, and 0 otherwise. **Cfiling** is equal to 1 if the company confidentially filed draft registration statements (DRS), and 0 otherwise. **2year_data** is equal to 1 if the company disclosed no more than two years of selected financial data in IPO filings, and 0 otherwise. **2year_audit** is equal to 1 if the company disclosed no more than two years of audited financial statements, and 0 otherwise. **3executives** is equal to 1 if the company named no more than three executives in compensation summary tables, and 0 otherwise. **2tables** is equal to 1 if the company disclosed no more than two compensation tables (including the summary compensation table), and 0 otherwise. **NoICAudit** is equal to 1 if the company did not provide auditor attested internal control report, and 0 otherwise. **Delay_ACC** is equal to 1 if the company does not opt out the provision to delay the adoption of new or revised accounting standards, and 0 otherwise. **Use_all** is equal to 1 if the company does not explicitly states in its prospectus that it will use only some, but not all exemptions allowed by JOBS, and 0 otherwise. **H_exemp** is equal to 1 if the sum of 2year_data, 2year_audit, 3executives, 2tables, NoICAudit, Delay_ACC, and Use_all is at least five, and 0 otherwise. ***, **, and * indicate two-tailed significance level at less than 1%, 5%, and 10% levels, respectively.

**Table 6: Firm-Level Logit Regression Analysis of Issuance Rate of US IPOs Filed after April 5, 2012 with Sales below $1 Billion**

| VARIABLES | (1) Pr(IPO_issued=1) (marginal effects presented) | (2) Pr(IPO_issued=1) (marginal effects presented) | (3) Pr(IPO_issued=1) (marginal effects presented) | (4) Pr(IPO_issued=1) (marginal effects presented) |
|---|---|---|---|---|
| EGC | 0.049* | | 0.055** | |
| | (0.026) | | (0.024) | |
| Cfiling | | 0.112*** | | 0.110** |
| | | (0.028) | | (0.048) |
| H_exemp | | -0.009 | | 0.008 |
| | | (0.037) | | (0.040) |
| Ln(Assets) | 0.002 | 0.002 | -0.005 | -0.006 |
| | (0.011) | (0.009) | (0.009) | (0.009) |
| LEV | -0.033*** | -0.023* | -0.035*** | -0.023 |
| | (0.012) | (0.012) | (0.011) | (0.017) |
| ROA | 0.003 | 0.000 | 0.001 | 0.000 |
| | (0.004) | (0.004) | (0.004) | (0.004) |
| Ln(1+ Age) | 0.021** | 0.022** | 0.014 | 0.010 |
| | (0.010) | (0.011) | (0.017) | (0.018) |
| HighTech | 0.068 | 0.057 | | |
| | (0.051) | (0.046) | | |
| Internet | -0.035* | -0.046** | | |
| | (0.021) | (0.023) | | |
| Unique | -0.080*** | -0.059** | | |
| | (0.017) | (0.024) | | |
| | | | | |
| Fixed effects included | None | None | Industry, Year | Industry, Year |
| Observations | 301 | 301 | 239 | 239 |
| Pseudo R-squared | 0.208 | 0.302 | 0.361 | 0.419 |

**IPO_issued** is equal to 1 if the IPO is issued, and 0 if the IPO is withdrawn. **EGC** is equal to 1 if the IPO is filed as an Emerging Growth Company, and 0 otherwise. **Cfiling** is equal to 1 if the company confidentially filed draft registration statements (DRS), and 0 otherwise. **H_exemp** is equal to one if the IPO firm used at least four of the seven disclosure exemptions below, and 0 otherwise: (1) **2year_data** is equal to 1 if the company disclosed no more than two years of selected financial data in IPO filings, and 0 otherwise; (2) **2year_audit** is equal to 1 if the company disclosed no more than two years of audited financial statements, and 0 otherwise; (3) **3executives** is equal to 1 if the company named no more than three executives in compensation summary tables, and 0 otherwise; (4) **2tables** is equal to 1 if the company disclosed no more than two compensation tables (including the summary compensation table), and 0 otherwise; (5) **NoICAudit** is equal to 1 if the company did not provide auditor attested internal control report, and 0 otherwise; (6) **Delay_ACC** is equal to 1 if the company does not opt out the provision to delay the adoption of new or revised accounting standards, and 0 otherwise; (7) **Use_all** is equal to 1 if the company does not explicitly states in its prospectus that it will use only some, but not all exemptions allowed by JOBS, and 0 otherwise. **Assets** is book value of total assets in $ million. **LEV** is total liabilities divided by total assets. **ROA** is net income divided by total assets. **Age** is number of years from the date of the founding/incorporation of the firm to the date the IPO is issued. **HighTech** is equal to 1 for high-tech industries defined in the SDC database, and 0 otherwise. **Internet** is equal to 1 for internet industries defined in Ljungqvist and Wilhelm (2003), and 0 otherwise. **Unique** is equal to 1 for industries with two-digit SIC codes 34-40, and 0 otherwise. Robust standard errors are reported in parenthesis below each coefficient. ***, **, and * indicate two-tailed significance level at less than 1%, 5%, and 10% levels, respectively.

**Table 7: Firm-Level Logit Analysis of Issuance Rate of US IPOs Filed after April 5, 2012 with Sales below $1 Billion: Propensity Score-Matched Samples**

***Panel A. Propensity score matching***

| | Matching on propensity to have EGC status | | Matching on propensity to have EGC status, confidential filing, and high exemptions | | | | |
|---|---|---|---|---|---|---|---|
| VARIABLES | (1) Pr(EGC=1) (marginal effects presented) | (2) Mean of EGCs – mean of benchmarks | (3) Pr(EGC=1, Cfiling=0, H_exemp=0) | (4) Pr(EGC=1, Cfiling=1, H_exemp=0) | (5) Pr(EGC=1, Cfiling=0, H_exemp=1) | (6) Pr(EGC=1, Cfiling=1, H_exemp=1) | (7) Mean of EGCs – mean of benchmarks |
| Ln(Assets) | -0.035** | 0.085 | -0.010 | 0.003 | -0.029** | -0.037 | -0.004 |
| | (0.013) | | (0.009) | (0.012) | (0.012) | (0.024) | |
| LEV | -0.001 | -0.005 | -0.002 | -0.004 | 0.006 | -0.018 | 0.103 |
| | (0.014) | | (0.004) | (0.008) | (0.005) | (0.013) | |
| ROA | -0.004 | 0.263 | 0.007 | 0.014 | -0.003 | -0.004 | 0.139 |
| | (0.015) | | (0.011) | (0.025) | (0.005) | (0.019) | |
| Ln(1+ Age) | 0.049** | 0.033 | 0.014* | 0.048** | 0.026 | 0.026 | 0.029 |
| | (0.022) | | (0.008) | (0.020) | (0.018) | (0.029) | |
| HighTech | 0.134*** | 0.025 | 0.012 | 0.113 | -0.005 | 0.154*** | 0.050 |
| | (0.049) | | (0.016) | (0.061) | (0.024) | (0.045) | |
| Internet | -0.115** | 0.004 | -0.048* | 0.003* | -0.044*** | -0.165** | 0.054 |
| | (0.058) | | (0.029) | (0.088) | (0.016) | (0.067) | |
| Unique | -0.102 | 0.004 | 0.029 | -0.117 | 0.005 | -0.086 | 0.007 |
| | (0.062) | | (0.028) | (0.066) | (0.039) | (0.064) | |
| | | | | | | | |
| Observations | 549 | 560 | 282 | 333 | 294 | 447 | 560 |
| Pseudo R-squared | 0.049 | | 0.039 | 0.043 | 0.161 | 0.060 | |

EGC qualified IPOs, excluding those that are filed before April 5, 2012 and obtain EGC status after April 5, 2012, are included in the analysis presented in column (1). Matched 280 pairs of IPOs based on the propensity scores obtained from the analysis in column (1) are included in the t-tests of the mean differences presented in column (2). The analysis in column (3) includes EGC qualified IPOs, excluding those that are filed before April 5, 2012 and obtain EGC status after April 5, 2012, that satisfy the conditions that EGC=1, Cfiling=0, H_exemp=0, or EGC=0. The analysis in column (3) includes EGC qualified IPOs, excluding those that are filed before April 5, 2012 and obtain EGC status after April 5, 2012, that satisfy the conditions that EGC=1, Cfiling=0, H_exemp=0, or EGC=0. The analysis in column (4) includes EGC qualified IPOs, excluding those that are filed before April 5, 2012 and obtain EGC status after April 5, 2012, that satisfy the conditions that EGC=1, Cfiling=1, H_exemp=0, or EGC=0. The analysis in column (5) includes EGC qualified IPOs, excluding those that are filed before April 5, 2012 and obtain EGC status after April 5, 2012, that satisfy the conditions that EGC=1, Cfiling=0, H_exemp=1, or EGC=0. The analysis in column (6) includes EGC qualified IPOs, excluding those that are filed before April 5, 2012 and obtain EGC status after April 5, 2012, that satisfy the conditions that EGC=1, Cfiling=1, H_exemp=1, or EGC=0. Matched 280 pairs of IPOs based on the propensity scores obtained from the analyses in columns (3) to (6) are included in the t-tests of the mean differences presented in column (7). **EGC** is equal to 1 if the IPO is filed as an Emerging Growth Company, and 0 otherwise. **Cfiling** is equal to 1 if the company confidentially filed draft registration statements (DRS), and 0 otherwise. **H_exemp** is equal to one if the IPO firm used at least four of the seven disclosure exemptions below, and 0 otherwise: (1) **2year_data** is equal to 1 if the company disclosed no more than two years of selected financial data in IPO filings, and 0 otherwise; (2) **2year_audit** is equal to 1 if the company disclosed no more than two years of audited financial statements, and 0 otherwise; (3) **3executives** is equal to 1 if the company named no more than three executives in compensation summary tables, and 0 otherwise; (4) **2tables** is equal to 1 if the company disclosed no more than two compensation tables (including the summary compensation table), and 0 otherwise; (5) **NoICAudit** is equal to 1 if the company did not provide auditor attested internal control report, and 0 otherwise; (6) **Delay_ACC** is equal to 1 if the company does not opt out the provision to delay the adoption of new or revised accounting standards, and 0 otherwise; (7) **Use_all** is equal to 1 if the company does not explicitly states in its prospectus that it will use only some, but not all exemptions allowed by JOBS, and 0 otherwise. **Assets** is book value of total assets in $ million. **LEV** is total liabilities divided by total assets. **ROA** is net income divided by total assets. **Age** is number of years from the date of the founding/incorporation of the firm to the date the IPO is issued. **HighTech** is equal to 1 for high-tech industries defined in the SDC database, and 0 otherwise. **Internet** is equal to 1 for internet industries defined in Ljungqvist and Wilhelm (2003), and 0 otherwise. **Unique** is equal to 1

for industries with two-digit SIC codes 34-40, and 0 otherwise. Robust standard errors are reported in parenthesis below each coefficient. ***, **, and * indicate two-tailed significance level at less than 1%, 5%, and 10% levels, respectively.

***Panel B. Regressions using matched samples***

| | Matched sample based on propensity to have EGC status | | |
|---|---|---|---|
| VARIABLES | (2)<br>Pr(IPO_issued=1)<br>(marginal effects presented) | (3)<br>Pr(IPO_issued=1)<br>(marginal effects presented) | (4)<br>Pr(IPO_issued=1)<br>(marginal effects presented) |
| EGC | | 0.059 | |
| | | (0.063) | |
| Cfiling | 0.315*** | | 0.179** |
| | (0.065) | | (0.079) |
| H_exemp | 0.024 | | -0.005 |
| | (0.053) | | (0.084) |
| Ln(Assets) | -0.011 | -0.023 | -0.022 |
| | (0.010) | (0.015) | (0.014) |
| LEV | -0.048** | -0.061*** | -0.056*** |
| | (0.022) | (0.018) | (0.017) |
| ROA | 0.002 | 0.004 | 0.003 |
| | (0.008) | (0.006) | (0.006) |
| Ln(1+ Age) | 0.080*** | 0.087*** | 0.087*** |
| | (0.014) | (0.017) | (0.018) |
| HighTech | -0.003 | | |
| | (0.041) | | |
| Internet | -0.126*** | | |
| | (0.025) | | |
| Unique | 0.021 | | |
| | (0.042) | | |
| | | | |
| Fixed effects included | None | Industry, Year | Industry, Year |
| Observations | 560 | 471 | 471 |
| Pseudo R-squared | 0.242 | 0.335 | 0.348 |

| Matched sample based on propensity to have EGC status, confidential filing, and high exemptions | | | |
|---|---|---|---|
| (5) Pr(IPO_issued=1) (marginal effects presented) | (6) Pr(IPO_issued=1) (marginal effects presented) | (7) Pr(IPO_issued=1) (marginal effects presented) | (8) Pr(IPO_issued=1) (marginal effects presented) |
| 0.182*** | | 0.139** | |
| (0.033) | | (0.063) | |
| | 0.253*** | | 0.211*** |
| | (0.066) | | (0.061) |
| | 0.006 | | 0.020 |
| | (0.054) | | (0.070) |
| 0.008 | 0.006 | 0.009 | 0.007 |
| (0.013) | (0.013) | (0.012) | (0.012) |
| -0.025* | -0.021 | -0.037** | -0.035** |
| (0.013) | (0.014) | (0.017) | (0.016) |
| -0.002 | -0.004 | -0.011 | -0.012 |
| (0.012) | (0.008) | (0.008) | (0.008) |
| 0.061*** | 0.063*** | 0.078*** | 0.063*** |
| (0.014) | (0.016) | (0.019) | (0.016) |
| -0.028 | -0.035 | | |
| (0.049) | (0.050) | | |
| 0.042 | 0.037 | | |
| (0.042) | (0.046) | | |
| -0.151*** | -0.137*** | | |
| (0.026) | (0.035) | | |
| | | | |
| None | None | Industry, Year | Industry, Year |
| 560 | 560 | 452 | 452 |
| 0.174 | 0.213 | 0.298 | 0.320 |

**IPO_issued** is equal to 1 if the IPO is issued, and 0 if the IPO is withdrawn. **EGC** is equal to 1 if the IPO is filed as an Emerging Growth Company, and 0 otherwise. **Cfiling** is equal to 1 if the company confidentially filed draft registration statements (DRS), and 0 otherwise. **H_exemp** is equal to one if the IPO firm used at least four of the seven disclosure exemptions below, and 0 otherwise: (1) **2year_data** is equal to 1 if the company disclosed no more than two years of selected financial data in IPO filings, and 0 otherwise; (2) **2year_audit** is equal to 1 if the company disclosed no more than two years of audited financial statements, and 0 otherwise; (3) **3executives** is equal to 1 if the company named no more than three executives in compensation summary tables, and 0 otherwise; (4) **2tables** is equal to 1 if the company disclosed no more than two compensation tables (including the summary compensation table), and 0 otherwise; (5) **NoICAudit** is equal to 1 if the company did not provide auditor attested internal control report, and 0 otherwise; (6) **Delay_ACC** is equal to 1 if the company does not opt out the provision to delay the adoption of new or revised accounting standards, and 0 otherwise; (7) **Use_all** is equal to 1 if the company does not explicitly states in its prospectus that it will use only some, but not all exemptions allowed by JOBS, and 0 otherwise. **Assets** is book value of total assets in $ million. **LEV** is total liabilities divided by total assets. **ROA** is net income divided by total assets. **Age** is number of years from the date of the founding/incorporation of the firm to the date the IPO is issued. **HighTech** is equal to 1 for high-tech industries defined in the SDC database, and 0 otherwise. **Internet** is equal to 1 for internet industries defined in Ljungqvist and Wilhelm (2003), and 0 otherwise. **Unique** is equal to 1

for industries with two-digit SIC codes 34-40, and 0 otherwise. Robust standard errors are reported in parenthesis below each coefficient. ***, **, and * indicate two-tailed significance level at less than 1%, 5%, and 10% levels, respectively.

**Table 8: Firm-Level OLS Regression Analysis of Other Costs and Benefits of US Issued IPOs Filed April 5, 2012 with Sales below $1 Billion**

***Panel A. The effect of EGC status***

| VARIABLES | (1) EmpGrowth | (2) Ln(Duration1) | (3) Ln(1+Proceeds) |
|---|---|---|---|
| EGC | 0.023 | -0.645*** | -0.034 |
| | (0.376) | (0.202) | (0.116) |
| Ln(Assets) | 0.106 | -0.032 | 0.274*** |
| | (0.065) | (0.019) | (0.024) |
| LEV | 0.374* | 0.019 | 0.020 |
| | (0.198) | (0.022) | (0.035) |
| ROA | -0.355*** | 0.058*** | -0.139*** |
| | (0.083) | (0.020) | (0.030) |
| Ln(1+ Age) | -0.100 | 0.067 | 0.049* |
| | (0.161) | (0.050) | (0.029) |
| Specific | -0.283*** | 0.021 | -0.029 |
| | (0.094) | (0.063) | (0.045) |
| Retained% | 0.007* | 0.003 | -0.013*** |
| | (0.004) | (0.003) | (0.002) |
| Primary | 0.172 | 0.250*** | -0.152** |
| | (0.126) | (0.077) | (0.064) |
| VC | 0.400 | -0.248*** | 0.178*** |
| | (0.372) | (0.037) | (0.047) |
| TopUnderwriter | -0.054 | -0.038 | 0.160*** |
| | (0.187) | (0.108) | (0.052) |
| Big4 | -0.109 | -0.199*** | 0.301*** |
| | (0.194) | (0.058) | (0.071) |
| Price | 0.028*** | -0.011 | 0.062*** |
| | (0.009) | (0.007) | (0.007) |
| Fixed effects included | Industry, Year | Industry, Year | Industry, Year |
| Observations | 234 | 516 | 516 |
| Adj. R-squared | 0.338 | 0.529 | 0.823 |

| (4) Ln(1+Expense%) | (5) Ln(1+GrossSpread%) | (6) Ln(100+Underpricing) | (7) CAR | (8) VOLAT |
|---|---|---|---|---|
| -0.059 | 0.036 | 0.149*** | 0.324 | -0.003 |
| (0.190) | (0.039) | (0.047) | (0.197) | (0.007) |
| -0.051** | -0.021** | -0.018 | 0.015 | -0.002*** |
| (0.019) | (0.008) | (0.015) | (0.031) | (0.001) |
| -0.010 | -0.010*** | -0.024 | 0.016 | -0.002 |
| (0.010) | (0.003) | (0.020) | (0.029) | (0.001) |
| 0.035 | 0.009 | -0.004 | 0.076** | 0.001 |
| (0.024) | (0.007) | (0.011) | (0.031) | (0.001) |
| -0.026 | -0.007 | -0.014 | -0.030 | -0.001* |
| (0.016) | (0.006) | (0.012) | (0.038) | (0.001) |
| 0.057 | 0.014 | -0.022 | -0.000 | -0.002** |
| (0.041) | (0.011) | (0.017) | (0.054) | (0.001) |
| 0.002 | 0.001 | 0.001 | -0.002 | 0.000** |
| (0.001) | (0.001) | (0.001) | (0.002) | (0.000) |
| 0.088** | 0.002 | -0.021 | -0.044 | 0.001 |
| (0.042) | (0.013) | (0.022) | (0.058) | (0.001) |
| 0.012 | 0.013 | -0.011 | -0.036 | -0.002 |
| (0.049) | (0.020) | (0.015) | (0.074) | (0.001) |
| -0.028 | -0.022** | 0.027 | 0.024 | 0.003* |
| (0.029) | (0.008) | (0.017) | (0.083) | (0.002) |
| -0.071 | -0.004 | 0.058* | -0.047 | 0.002** |
| (0.054) | (0.010) | (0.031) | (0.086) | (0.001) |
| -0.017*** | -0.004*** | 0.016*** | -0.000 | -0.001*** |
| (0.003) | (0.001) | (0.002) | (0.004) | (0.000) |
| | | | | |
| Industry, Year | Industry, Year | Industry, Year | Industry, Year | Industry, Year |
| 516 | 516 | 514 | 338 | 338 |
| 0.411 | 0.377 | 0.338 | 0.120 | 0.463 |

Each column uses a matched sample using all EGC qualified IPOs that have the date for the regression in the column, excluding those that are filed before April 5, 2012 and obtain EGC status after April 5, 2012, based on the propensity to have EGC status, confidential filing, and high exemptions. **EmpGrowth** is annualized growth rate of the number of employees from IPO issuance date to the date the first post-IPO number of employees is reported in COMPUSTAT. **Duration1** is the number of days from the initial public filing of the IPO to the date the IPO is issued or withdrawn. **Proceeds** are the total gross proceeds of the IPO in $ millions realized. **Expense%** is total IPO expenses (excluding gross spread) as percent of the total gross proceeds of the IPO. **GrossSpread%** is gross spread as percent of the total gross proceeds of the IPO. **UnderPricing** is the return on the first trading day of the stock, measured as the close price on the first trading day minus the offer price, as percent of the offer price. **CAR** is the sum of daily value-weighted market-adjusted abnormal returns of the stock over the first 180 trading days. **VOLAT** is standard deviation of daily value-weighted market-adjusted abnormal returns of the stock over the first 180 trading days. **EGC** is equal to 1 if the IPO is filed as an Emerging Growth Company, and 0 otherwise. **Assets** is book value of total assets in $ million. **LEV** is total liabilities divided by total assets. **ROA** is net income divided by total assets. **Age** is number of years from the date of the founding/incorporation of the firm to the date the IPO is issued. **Specific** is equal to 1 if the company indicates specific use of IPO proceeds, and 0 otherwise. **Retained%** is percent of shares outstanding that is retained by pre-IPO shareholders. **Primary** is equal to 1 if the offer includes primary shares only (i.e., pre-IPO shareholders are not selling), and 0 otherwise. **VC** is equal to 1 if the IPO is venture capital-backed, and 0 otherwise. **TopUnderwriter** is equal to 1 if a bookrunner or lead underwriter of the IPO is top-ranked, as defined in Loughran and Ritter (2004). **Big4** is equal to 1 if the auditor of the company is a Big 4 accounting firm, and 0 otherwise. **Price** is the offer price of IPO in US$. Robust standard errors are reported in parenthesis below each coefficient. ***, **, and * indicate two-tailed significance level at less than 1%, 5%, and 10% levels, respectively.

***Panel B. The effects of confidential filing and reduced disclosure***

| VARIABLES | (1)<br>EmpGrowth | (2)<br>Ln(Duration1) | (3)<br>Ln(1+Proceeds) |
|---|---|---|---|
| Cfiling | 0.127 | -0.719*** | 0.125 |
| | (0.251) | (0.115) | (0.093) |
| H_exemp | -0.136 | -0.006 | -0.017 |
| | (0.264) | (0.042) | (0.062) |
| Ln(Assets) | 0.104* | -0.015 | 0.276*** |
| | (0.057) | (0.018) | (0.024) |
| LEV | 0.374* | -0.007 | 0.028 |
| | (0.188) | (0.018) | (0.036) |
| ROA | -0.358*** | 0.042** | -0.141*** |
| | (0.086) | (0.017) | (0.029) |
| Ln(1+ Age) | -0.098 | 0.061 | 0.051* |
| | (0.170) | (0.047) | (0.029) |
| Specific | -0.282*** | 0.000 | -0.033 |
| | (0.095) | (0.072) | (0.045) |
| Retained% | 0.006* | 0.003 | -0.013*** |
| | (0.003) | (0.003) | (0.002) |
| Primary | 0.171 | 0.229*** | -0.155** |
| | (0.108) | (0.071) | (0.063) |
| VC | 0.400 | -0.209*** | 0.169*** |
| | (0.385) | (0.036) | (0.048) |
| TopUnderwriter | -0.056 | -0.044 | 0.162*** |
| | (0.191) | (0.100) | (0.052) |
| Big4 | -0.120 | -0.220*** | 0.308*** |
| | (0.180) | (0.063) | (0.071) |
| Price | 0.028*** | -0.014** | 0.062*** |
| | (0.009) | (0.006) | (0.007) |
| Fixed effects included | Industry, Year | Industry, Year | Industry, Year |
| Observations | 234 | 516 | 516 |
| Adj. R-squared | 0.336 | 0.566 | 0.823 |

| (4) Ln(1+Expense%) | (5) Ln(1+GrossSpread%) | (6) Ln(100+Underpricing) | (7) CAR | (8) VOLAT |
|---|---|---|---|---|
| 0.039 | 0.010 | 0.110*** | -0.183 | 0.002 |
| (0.048) | (0.024) | (0.018) | (0.147) | (0.003) |
| -0.016 | -0.005 | -0.060 | -0.089 | -0.000 |
| (0.036) | (0.014) | (0.039) | (0.060) | (0.002) |
| -0.049*** | -0.023*** | -0.027* | 0.010 | -0.002*** |
| (0.015) | (0.008) | (0.014) | (0.029) | (0.001) |
| -0.006 | -0.010*** | -0.023 | 0.009 | -0.002 |
| (0.012) | (0.004) | (0.020) | (0.028) | (0.001) |
| 0.033* | 0.011 | 0.003 | 0.080*** | 0.001 |
| (0.018) | (0.007) | (0.012) | (0.026) | (0.001) |
| -0.024 | -0.008 | -0.012 | -0.039 | -0.001 |
| (0.016) | (0.005) | (0.010) | (0.037) | (0.001) |
| 0.053 | 0.016 | -0.009 | -0.000 | -0.002** |
| (0.035) | (0.012) | (0.014) | (0.053) | (0.001) |
| 0.002 | 0.001 | 0.001 | -0.002 | 0.000* |
| (0.001) | (0.001) | (0.001) | (0.002) | (0.000) |
| 0.085** | 0.004 | -0.015 | -0.042 | 0.001 |
| (0.035) | (0.013) | (0.021) | (0.064) | (0.001) |
| 0.008 | 0.013 | -0.016 | -0.019 | -0.002 |
| (0.048) | (0.019) | (0.017) | (0.087) | (0.001) |
| -0.027 | -0.022** | 0.022 | 0.009 | 0.003** |
| (0.028) | (0.009) | (0.016) | (0.080) | (0.002) |
| -0.068 | -0.004 | 0.063** | -0.046 | 0.002** |
| (0.056) | (0.010) | (0.029) | (0.083) | (0.001) |
| -0.017*** | -0.004*** | 0.016*** | -0.002 | -0.001*** |
| (0.002) | (0.001) | (0.002) | (0.004) | (0.000) |
| | | | | |
| Industry, Year | Industry, Year | Industry, Year | Industry, Year | Industry, Year |
| 516 | 516 | 514 | 338 | 338 |
| 0.378 | 0.406 | 0.382 | 0.124 | 0.462 |

Each column uses a matched sample using all EGC qualified IPOs that have the date for the regression in the column, excluding those that are filed before April 5, 2012 and obtain EGC status after April 5, 2012, based on the propensity to have EGC status, confidential filing, and high exemptions. **EmpGrowth** is annualized growth rate of the number of employees from IPO issuance date to the date the first post-IPO number of employees is reported in COMPUSTAT. **Duration1** is the number of days from the initial public filing of the IPO to the date the IPO is issued or withdrawn. **Proceeds** are the total gross proceeds of the IPO in $ millions realized. **Expense%** is total IPO expenses (excluding gross spread) as percent of the total gross proceeds of the IPO. **GrossSpread%** is gross spread as percent of the total gross proceeds of the IPO. **UnderPricing** is the return on the first trading day of the stock, measured as the close price on the first trading day minus the offer price, as percent of the offer price. **CAR** is the sum of daily value-weighted market-adjusted abnormal returns of the stock over the first 180 trading days. **VOLAT** is standard deviation of daily value-weighted market-adjusted abnormal returns of the stock over the first 180 trading days. **Cfiling** is equal to 1 if the company confidentially filed draft registration statements (DRS), and 0 otherwise. **H_exemp** is equal to one if the IPO firm used at least four of the seven disclosure exemptions below, and 0 otherwise: (1) **2year_data** is equal to 1 if the company disclosed no more than two years of selected financial data in IPO filings, and 0 otherwise; (2) **2year_audit** is equal to 1 if the company disclosed no more than two years of audited financial statements, and 0 otherwise; (3) **3executives** is equal to 1 if the company named no more than three executives in compensation summary tables, and 0 otherwise; (4) **2tables** is equal to 1 if the company disclosed no more than two compensation tables (including the summary compensation table), and 0 otherwise; (5) **NoICAudit** is equal to 1 if the company did not provide auditor attested internal control report, and 0 otherwise; (6) **Delay_ACC** is equal to 1 if the company does not opt out the provision to delay the adoption of new or revised accounting standards, and 0 otherwise; (7) **Use_all** is equal to 1 if the company does not explicitly states in its prospectus that it will use only some, but not all exemptions allowed by JOBS, and 0 otherwise. **Assets** is book value of total assets in $ million. **LEV** is total liabilities divided by total assets. **ROA** is net income divided by total assets. **Age** is number of years from the date of the founding/incorporation of the firm to the date the IPO is issued. **Specific** is equal to 1 if the company indicates specific use of IPO proceeds, and 0 otherwise. **Retained%** is percent of shares outstanding that is retained by pre-IPO shareholders. **Primary** is equal to 1 if the offer includes primary shares only (i.e., pre-IPO shareholders are not selling), and 0 otherwise. **VC** is equal to 1 if the IPO is venture capital-backed, and 0 otherwise. **TopUnderwriter** is equal to 1 if a bookrunner or lead underwriter of the IPO is top-ranked, as defined in Loughran and Ritter (2004). **Big4** is equal to 1 if the auditor of the company is

a Big 4 accounting firm, and 0 otherwise. **Price** is the offer price of IPO in US$. Robust standard errors are reported in parenthesis below each coefficient. ***, **, and * indicate two-tailed significance level at less than 1%, 5%, and 10% levels, respectively.

**Figure 1: New Provisions Brought by the JOBS Act to Different EGC Categories**

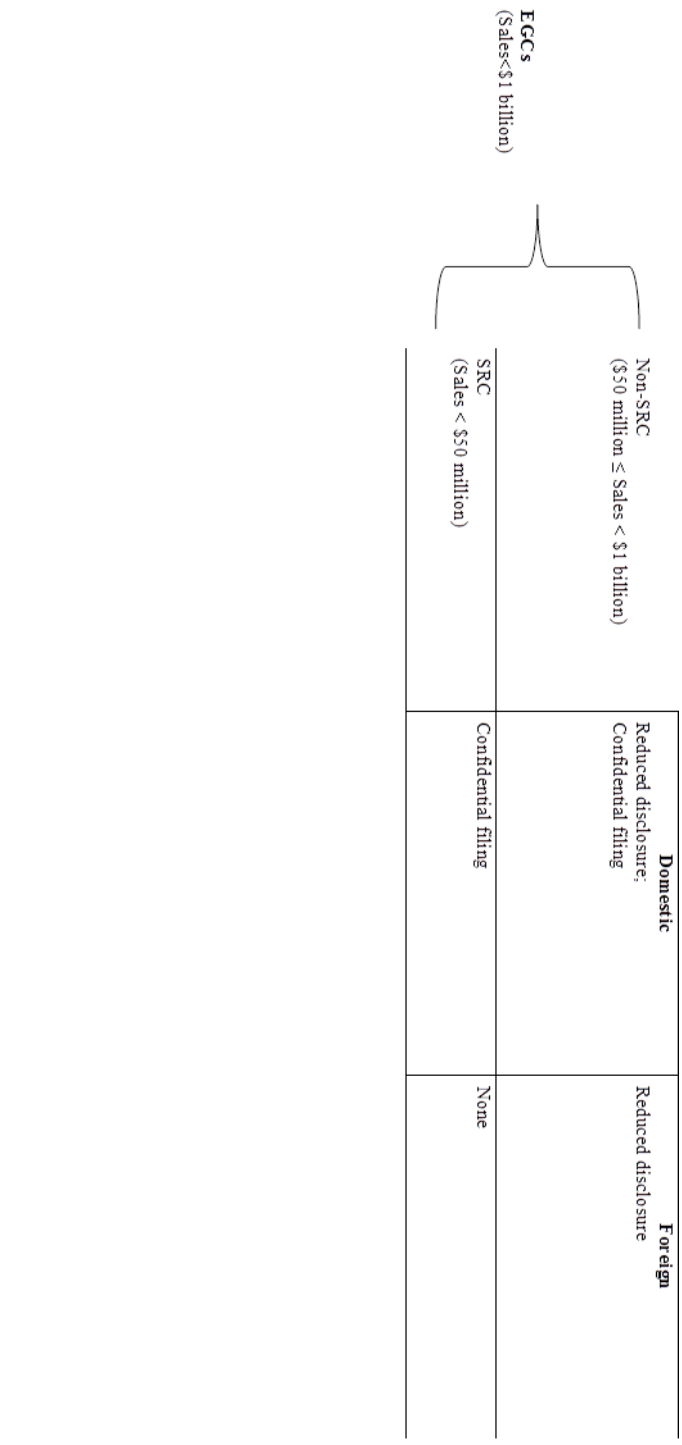


**Figure 2: DIDID Design**

| | **Pre-JOBS** | **Post-JOBS** | **Difference (Post – Pre)** |
|---|---|---|---|
| US, EGC | $\beta_0 + \beta_1 + \beta_4 + \beta_5$ | $\beta_0 + \beta_1 + \beta_2 + \beta_3 + \beta_4 + \beta_5 + \beta_6 + \beta_7$ | $\beta_2 + \beta_3 + \beta_6 + \beta_7$ |
| Non-US, EGC | $\beta_0 + \beta_4$ | $\beta_0 + \beta_2 + \beta_4 + \beta_6$ | $\beta_2 + \beta_6$ |
| Difference in EGC in US vs. Non-US | $\beta_1 + \beta_5$ | $\beta_1 + \beta_3 + \beta_5 + \beta_7$ | $\beta_3 + \beta_7$ (EGC DID) |
| | | | |
| US, Non-EGC | $\beta_0 + \beta_1$ | $\beta_0 + \beta_1 + \beta_2 + \beta_3$ | $\beta_2 + \beta_3$ |
| Non-US, Non-EGC | $\beta_0$ | $\beta_0 + \beta_2$ | $\beta_2$ |
| Difference in Non-EGC in US vs. Non-US | $\beta_1$ | $\beta_1 + \beta_3$ | $\beta_3$ (Non-EGC DID) |
| | | | |
| **Difference in EGC vs. Non-EGC differences** | $\beta_5$ | $\beta_5 + \beta_7$ | $\boldsymbol{\beta_7}$ **(DIDID)** |