Does General Solicitation Improve Access to Equity Capital for Small Businesses? Evidence from the JOBS Act

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Abstract

Under Title II of JOBS Act, firms can sell private placement securities to the public via general solicitation (GS) or privately (non-GS). We find that equity offerings under GS tend to be riskier than under non-GS. After accounting for selection, GS issuers are less likely to succeed in (1) raising capital, (2) getting VC funding, and (3) exiting via IPO or M&A; and incur substantial brokerage costs for advertising and verifying investor accreditation. But GS appears to help new entrants and offerings that use registered brokers. The success of Form D financing improves future VC financing and exit outcomes.

I. Introduction

Private capital markets have contributed significantly to capital formation in the U.S. economy, particularly for small businesses that are considered an engine for job creation and economic growth (see, e.g., Zhao, Harris, and Lam (2019)). Capital raised in private markets has outpaced that raised in public markets during recent years. For example, in 2022, public markets raised about $1 trillion in the U.S., while private markets raised over $3.7 trillion.[1] However, despite the huge inflows of capital into private markets, this market is still non-transparent to investors, market participants, policymakers, and the public.[2]

On April 5, 2012, the United States adopted the Jumpstart Our Business Startups (JOBS) Act, which allows startups to raise capital from a broader investor pool. Under Title II of the JOBS Act, which became effective September 23, 2013, small businesses can advertise and sell securities in private placements via general solicitation, such as advertising in newspapers or on the internet, as long as the sales are made only to accredited investors, verified using a detailed process. Empirical evidence on Title II's effect on small business funding is quite limited. This paper aims to fill this gap by examining how Title II of the JOBS Act affects the financing of small businesses by allowing them to publicly advertise their securities offerings. To our knowledge, this is the first paper to empirically analyze the efficacy of Title II in enabling small

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[1] See Paul Kiernan, Private Markets Raised $3.7 Trillion in 2022, Dwarfing Public Markets: SEC Report, *Wall Street Journal*, Dec. 15, 2023.

[2] See the 2021 speech by SEC Commissioner Allison Lee. https://www.sec.gov/news/speech/lee-sec-speaks-2021-10-12

businesses to raise capital. This topic is also of interest to market participants in these offerings (investors, entrepreneurs, or brokers), regulators and policymakers.

Specifically, a firm that needs to raise capital can offer and sell securities without registering the offering with the Securities and Exchange Commission (SEC) under rule 506 of a Regulation D exemption. Under Title II, this exemption provides two alternate ways to structure securities offerings: rule 506(c) and rule 506(b). Title II added the new rule 506(c) to the traditional rule 506, now called rule 506(b). Rule 506(c) allows issuers to contact investors through advertising and social media but requires issuers to ensure that each of its investors is accredited, using an elaborate verification process. An offering under rule 506(b) cannot use general solicitation or advertising to market the securities, but investors can self-certify that they are accredited simply by checking a box on an issuer-provided questionnaire. Moreover, rule 506(b) allows issuers to sell to 35 or fewer unaccredited (but financially sophisticated)[3] investors, while rule 506(c) does not allow sales to any unaccredited investors.

While the market for private placements has grown in size and importance, its full extent and functioning and the role of financial intermediaries in this market have not been systematically investigated. Most of the literature on private firms' equity fundraising focuses on venture capital (see, e.g., Metrick and Yasuda (2011) for a recent review), which is available to

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[3] A financially sophisticated investor is one who, alone or with a representative, has the knowledge and experience in financial and business matters to evaluate the merits and risks of the prospective investment. Investors can self-certify that they are sophisticated simply by checking a box on an issuer-provided questionnaire.

only the most promising startups (see Chen, Hsieh and Zhang (2021)). Using a comprehensive set of Form D private placements of equity, this paper investigates the impact of the JOBS Act on equity financings by a much broader set of startups. Our study complements Yimfor (2025), which focuses on the role of brokers and finders in Form D financings.

Our analysis yields three sets of results. First, we identify the characteristics of firms and offerings that choose general solicitation, hereafter, GS (i.e., 506(c)) offerings over non-GS (i.e., 506(b)) offerings. We find that firms that choose GS offerings are riskier: they tend to have lower revenue, fewer investors, and are more likely to make offerings that last for over a year.

Second, we find that GS offerings are substantially more likely than non-GS offerings to employ a broker or a finder (20% vs. 6%). But GS offerings have to pay larger percentage brokerage fees, likely to cover the costs of advertising and verifying investor accreditation.

Third, GS offerings have a lower funding success rate (i.e., they raise a lower fraction of the target amount of capital) and raise less capital than non-GS offerings. The net proceeds raised (= Amount sold – Brokerage commissions - Proceeds paid to insiders) are also substantially lower in GS offerings than in non-GS offerings. However, new entrants that use GS have a greater success rate, though they raise less money. This finding supports the notion that GS increases access to capital for new entrants. Perhaps they raise less money simply because they need less capital. Finally, GS offerings that employ registered brokers have a higher success rate and raise more capital than those using unregistered brokers, i.e., finders. Thus, while Title II appears to have an adverse overall effect on small business financing, it appears to have a positive effect on new entrants and issuers who use registered brokers.

Beyond the outcomes of the financing itself, we next consider outcomes at the firm level: receipt of venture capital (VC) financing, which typically goes only to the most promising and

innovative startups, and successful exit via initial public offerings (IPO) or mergers and acquisitions (M&A). We find that GS offerings are less likely to receive VC funding by the end of 2024 and receive fewer rounds of funding when they do. They are also less likely to exit successfully via IPO or acquisition by the end of 2024. The success of Form D financing improves future VC financing outcomes as well as the likelihood of successful exit, although there is no differential improvement for GS offerings.

If Title II of the JOBS Act is successful, then we might expect a new set of issuers to take advantage of the new GS method to raise capital in private placements from the public. These new issuers may differ from non-GS issuers, who rely only on their and their brokers' professional networks to place securities. These potential differences can create a challenge for empirically testing whether the Act broadened access to capital to a new set of firms that could not access this market earlier, because of the lack of a counterfactual. However, we find that there is little difference between the two offering methods in the proportion of new entrants to the securities market. The second, usual, identification concern is that there may be omitted characteristics of the firm, offering, or project that are related both to the likelihood of using the GS method and the likelihood of financing success.

While selection concerns are generally difficult to rule out completely, we try to mitigate them by using four different approaches. First, in our baseline tests, we control for several firm and offering characteristics such as firm age, revenue, number of investors, longer offering, and include fixed effects for year, and either firm or industry and state of firm location. Second, we compare issuers that switch their offering method from non-GS to GS ('switchers') for their subsequent offering matched to issuers that stay with the non-GS method ('stayers') using propensity score matching. Third, we separately analyze the subsample of firms that raise capital

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using both methods in the same year, and include firm fixed effects in these regressions to remove the effect of firm characteristics that might affect both the choice of GS and the success rate of financing, and to differentiate across project-specific effects within a given firm. This approach further mitigates selection concerns arising from different types of firms choosing different offering methods because we examine the same firm that chooses both offering methods at roughly the same time. We further analyze partitions of this subsample based on whether the first offering by a firm is GS or non-GS. Finally, we conduct a variety of robustness checks of our main results. While each of these approaches has its own strengths and weaknesses, our main findings are remarkably consistent: GS offerings have lower success rates and raise less capital than non-GS offerings.

Title I of JOBS Act, which reduces disclosure requirements for IPOs of emerging growth companies, has been widely investigated in the literature (see, e.g., Dambra, Field, and Gustafson, 2015; Barth, Landsman, and Taylor, 2017; and Chaplinsky, Hanley, and Moon, 2017). An SEC white paper discusses the regulatory framework and aggregate statistics of private placements (see Bauguess, Gullapalli, and Ivanov (2018)). We contribute to this line of research by providing a systematic empirical analysis of the effectiveness of Title II of the Act that provides small businesses with broader access to capital prior to IPO.

Our paper also contributes to the literature on entrepreneurial finance (see Ewens and Farre-Mensa (2022) for a review), angel investing (e.g., Hellmann and Thiele (2015)), crowdfunding (e.g., Agrawal, Catalini, and Goldfarb (2015); Estrin, Gozman, and Khavul (2018); Mochkabadi, Kazem, and Volkmann (2018)), and private placements of public equity (e.g., Chakraborty and Gantchev (2013)).

The paper proceeds as follows. Section II discusses the related literature. Section III details the data and sample. Section IV presents our baseline results. Section V presents identification tests, and Section VI concludes.

II. Background, Literature Review and Hypothesis Development

A. The JOBS Act

This study analyzes unregistered securities offerings pursuant to Regulation D of the Securities Act. Before the JOBS Act, rule 502 of Regulation D of the Securities Act of 1933 prohibited the general solicitation or advertising of securities in rule 506 offerings.[4] Section 201 of Title II of the JOBS Act removes this prohibition, allowing issuers to approach a wide pool of investors, potentially raising more capital. The new rule 506(c) under Title II of the JOBS Act allows companies to engage in general solicitation or advertising of unregistered securities offerings, provided the securities are sold only to accredited investors.[5] We report a few examples of general solicitation in such offerings in Appendix C.

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[4] One way to demonstrate that there was no general solicitation in an offering is for the issuer to show that it had a pre-existing substantive relationship with all its investors. The SEC considers a relationship substantive if the issuer can evaluate whether the investor's financial circumstances qualify them as accredited investors.

[5] Rule 501 of Regulation D defines an accredited investor as an individual with a net worth over $1 million or annual income over $200,000 (or $300,000 with a spouse) during each of the last three years. The following are also accredited investors: 1) banks, insurance companies, and

To participate in a GS offering, the issuer must take 'reasonable steps' to confirm that each participating investor is accredited. Typically, this involves obtaining a letter from a financial professional who knows the investor, such as an accountant, lawyer, or investment or tax advisor. The SEC also indicates that issuers may verify an investor's income for eligibility purposes by reviewing IRS documents and may review their bank and brokerage statements and credit reports to determine net worth. While accreditation need not take place for every investment, the SEC mandates that accreditation should be recertified every three months. The rule requires issuers or their brokers to follow these high standards in the selection of each accredited investor, which is an involved and time-consuming process.

B. Literature Review and Hypothesis Development

This section presents the conceptual framework behind this paper. There are two competing, non-mutually exclusive hypotheses about the efficacy of GS for issuers: Adverse selection and search costs. On the one hand, GS can increase adverse selection costs by helping low-type issuers reach beyond the pool of 'smart' investors previously available in an only non-GS world. But by permitting more liberal communication with potential investors, GS can

registered investment companies; 2) employee benefit plans with total assets over $5 million; 3) charitable organizations with total assets over $5 million; 4) an individual director, executive officer, or general partner of a company selling securities; 5) a business where all equity owners are accredited investors; and 6) a trust with assets over $5 million.

decrease search costs, which should benefit issuers. Thus, the net effect of GS on issuers is an empirical issue that has not been examined to our knowledge.

If Title II of the JOBS Act is effective, firms with fewer connections to potential investors would be able to raise capital successfully using GS. Prior literature offers conflicting predictions on whether the JOBS Act would be effective in providing access to public capital to small, unconnected firms. Jeng (2012) argues that the JOBS Act can have a positive impact on capital formation and investor protection by allowing firms to publicly solicit and advertise. An entrepreneur's professional connections have been found to reduce information asymmetry between the entrepreneur and investors in the crowdfunding market (see, e.g., Vismara (2016a), (2016b), and Ahlers, Cumming, Günther, and Schweizer (2015)). If the law reduces small businesses' cost of accessing private capital via advertising, that should also improve their future access to capital by broadening their investor base.

However, other studies suggest that adverse selection due to information asymmetry can lead to the law having unanticipated negative consequences for small firms. For example, GS offerings may raise less capital because GS attracts lower quality offerings. Because of the Act, a new set of firms may come to the market to raise capital which could not raise capital as easily before. These firms may be less attractive to investors, so they are more likely to fail to raise capital and to raise less capital when they do succeed. This can happen for at least three reasons. First, a large theoretical literature shows that small firms have difficulty in raising capital due to greater information asymmetry with potential investors (see, e.g., Amit, Glosten, and Muller (1990), Chan, Siegel, and Thakor (1990), and Gompers (1995)). In other words, potential investors are reluctant to invest in startups because they have less information about the issuer's prospects than the issuer (see, e.g., Sufi (2007)). Similarly, Hildebrand, Puri, and Rocholl (2017)

show that without financial intermediaries to reduce information asymmetry, lead investors can wrongly place higher bids on low quality issues.[6] Chen (2017) also shows that adverse selection is a first-order barrier to crowdfunding, and can lead to market failure. He calls for new market mechanisms to solve the adverse selection problem in this market. Dorff (2014) finds that promising startups which can raise capital from professional investors such as venture capitalists (VCs) do not use crowdfunding, leaving this market to less promising ventures.[7]

Second, advertising may not help small businesses raise more capital due to investors' local bias. Investors prefer making early-stage investments in local firms (see, e.g., Lin and Viswanathan (2016)) for at least two reasons. First, general solicitation exposes startup firms to distant investors through online platforms such as AngelList. However, early-stage investments often involve distance-sensitive costs, such as identifying opportunities, conducting due diligence, and monitoring progress (see, e.g., Lerner (1995), Seasholes and Zhu (2005), and Nieuwerburgh and Veldkamp (2009)). These costs deter distant investors from investing in response to general solicitation. Second, in the absence of regulatory disclosures and monitoring, investors in startups seek reputation and trust, which are built through social interactions mostly

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[6] A large literature analyzes how financial intermediaries such as VCs overcome information asymmetry (see, e.g., Chan (1983), Gompers (1995), and Lerner (1995)).

[7] Chemmanur and Yan (2009) study registered equity offerings, which are not allowed to be advertised under the Securities Act of 1933. They argue that product advertising has a positive spillover effect by reducing information asymmetry in equity markets and find that firms increase their product advertising when issuing equity.

between co-located individuals (see, e.g., Agrawal, et al. (2015)). So distant investors are unlikely to invest in these firms due to lack of reputation and trust.

Third, riskier startups may try to raise larger amounts than they can raise because less talented entrepreneurs often tend to be overconfident about their abilities (see Cooper, Woo, and Dunkelberg (1988)). Given entrepreneurs' optimism, we predict lower funding success for riskier firms. Motivated by this literature, we hypothesize the following:

H1: *Riskier firms choose GS offerings, while less risky firms choose non-GS offerings.*

H2a: *GS offerings have higher success in financing than non-GS offerings.*

H2b: *GS offerings have lower success in financing than non-GS offerings.*

Firms without social or professional ties to investors must rely on general solicitation to raise capital. These types of firms must choose to issue under GS and rely on third parties such as financial intermediaries to find potential investors, resulting in higher fees to brokers and dealers. Investors benefit from brokers via lower search costs (see Bergstresser, Chalmers, and Tufano (2008) for a review). But prior studies find that brokers do not deliver substantial benefits for investors who pay higher fees to them (see, e.g., Bolton, Freixas and Shapiro (2007), and Inderst and Ottaviani (2011)). So, GS offerings may fail to raise the target amount despite paying larger brokerage fees. This hypothesis implies that the JOBS Act has unintended consequences due to excessive broker commissions for private placement. Therefore, we hypothesize:

H3: *GS offerings require larger brokerage commissions than non-GS offerings.*

H4a: *GS offerings that pay larger brokerage commissions have higher success rates than non-GS offerings.*

H4b: *GS offerings that pay larger brokerage commissions have lower success rates than non-GS offerings.*

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Finally, we examine the potential marginal effects of GS relative to existing solutions to adverse selection and search costs in private offerings such as registered brokers and finders, analyzed recently by Yimfor (2025). Brokers and finders have legally distinct roles that affect behavior.[8] Brokers offer advice and are legally bound to suitability and now best interest requirements.[9] They are more likely to have long-term clients (i.e., play a repeated game) and can be viewed as potential solutions to adverse selection. Finders are 'human advertisers' who are prohibited from earning commissions and advising on a deal. They can potentially mitigate search costs, but not adverse selection. If GS offerings mitigate search costs but not adverse selection, GS complements brokers who mitigate adverse selection, and GS substitutes for finders who reduce search costs. So, we hypothesize the following:

H5a: *If GS complements brokers, GS with brokers should have higher success in financing than GS without brokers.*

H5b: *If GS substitutes for finders, GS with finders should not have higher success in financing than GS without finders.*

III. Data and Key Variables

A. Institutional Background

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[8] Here is a discussion of the differences by a law firm:

https://www.venable.com/insights/publications/2015/12/finders-and-unregistered-brokerdealers

[9] Under SEC Regulation Best Interest, effective July 1, 2020. See

https://www.investopedia.com/what-is-the-sec-s-regulation-bi-best-interest-rule-4689542

Firms can offer and sell securities without registering them with the SEC through a Regulation D exemption under the Securities Act of 1933 by filing Form D. While rule 504 (505) allows offerings of up to $1 million ($5 million) within a 12-month period, rule 506, which has two parts—506(b) and 506(c)—allows offerings of unlimited amounts.

An issuer must file a new Form D with the SEC for each new security offering within 15 calendar days after the date of first sale, which is the date on which the first investor commits to invest. Depending on the contract's terms and conditions, this can be the date on which the issuer receives the investor's subscription agreement or check. If there is any change or material mistake or error in the previously filed Form D, the issuer must file an amendment (Form D/A) to correct the problem as soon as practicable after the change, and annually, on or before the first anniversary of the most recent previous filing, if the offering is still continuing at that time.

B. Sample Selection

To evaluate the effect of Title II, we examine all the issuers of equity offerings covered by a Regulation D exemption via rule 506 that are required to file a Form D with the SEC over the 2008-2021 period. We focus on equity offerings, instead of all security offerings, to avoid the potential heterogeneity induced by the type of security being issued. We consider both the existing 506(b) exemption and the new 506(c) exemption. Rule 506(c) allows general solicitation or advertising to the public as long as the securities are sold only to accredited investors, while rule 506(b) does not allow general solicitation or advertising to the public, but allows the

securities to be sold to accredited investors and up to 35 unaccredited investors.[10] Beginning

March 16, 2009, Form D must be filed with the SEC electronically. We obtain data on Form D

filings from the Audit Analytics Private Placement Database.

Panel A of Table 1 describes our sample selection process. We start with all electronic

Form D and D/A filings under rule 506 of Regulation D, excluding pooled investment funds,

over 2008-2021 because electronic Form D filing became mandatory starting only in March

2009. We drop: (1) offerings by firms located outside the United States, (2) offerings by

financial and investment firms, i.e., firms in banking, financial services and real estate,[11] (3)

offerings by publicly traded and unlisted firms that report a 10-K or 8-K filing on or before the

offering year, (4) all prior filings for a given offering,[12] (5) all except the primary issuer when

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[10] How does an issuer find investors for its non-GS offering? Under the SEC's safe-harbor

provision, an issuer can solicit investors with whom it has substantive pre-existing relationships

that allow it to determine that they are accredited investors. The issuer can also use a broker who

can solicit their existing brokerage clients.

[11] We drop financial and investment firms because these firms (e.g., Softbank and many hedge

funds) have been raising large sums via private placements and are fundamentally different from

startup operating firms, which typically raise much smaller amounts of capital.

[12] Our results are similar using the full sample for our baseline analysis that includes all Form D

or D/A filings for an offering.

issuers jointly file a Form D, (6) offerings that do not include equity securities,[13] and (7) offerings of zero or unspecified offering amount.

[Table 1 here]

Our final sample consists of a firm-funding round panel dataset of 87,551 filings made by 54,419 unique firms over 2008-2021. The number of firms that filed before (after) Title II is 18,684 (39,891).[14] Of the firms that filed after Title II, 3,114 (37,314) firms issued under GS (non-GS). We obtain an unbalanced panel where the individual dimension is a firm, and the time dimension is a funding round. For a given funding round, firms raise capital through either GS or non-GS. Thus, our unit of analysis is firm-funding round level.[15]

Panel B of Table 1 shows the number of private offerings conducted under different parts of rule 506 of Regulation D by year over our entire 2008-2021 sample period. The last column of Panel B shows the percentage of GS offerings out of all offerings under Title II. GS offerings represent 5.9% of all offerings over the entire post-Title II sample period (2013-21), fluctuating between 5.36% and 8.16% over the years. Panel C of Table 1 shows the number of GS and non-

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[13] Our baseline results are for offerings that include equity securities, even if they also contain other securities. We focus on equity securities given their upside potential and the intense investor interest in them. However, for completeness, we also analyze the results for all offerings in section V.C.4 and equity only, debt only, and all debt offerings in section V.C.6.

[14] Some firms filed both before and after Title II.

[15] Multiple filings by a firm in the same year may represent different projects of the firm. The funding round is determined from the order of Form D filings made by a firm.

GS offerings under Title II by industry, as reported in Item 4 of Form D. Besides the group of Other industries, firms in Other Technology and Other Health Care industries made the largest number of both types of offerings.

Panel D of Table 1 shows the distribution of the number of separate offerings by firms during our 2008-2021 sample period. About 70% of the 54,419 sample firms make just one offering, 16% make two offerings, 7% make three offerings, and the remaining 7% make four or more offerings. Collectively, these firms make a total of 87,551 offerings shown in Panel B.

Finally, Panel E shows the distribution of offerings by the type of securities issued. These offerings satisfy all Panel A requirements except they include all types of securities. Offerings that include equity comprise about 76% (= 87,551 / 115,880) of all offerings, with debt offerings comprising most of the rest. About 80% (= 70,366 / 87,551) of the offerings that include equity consist of pure equity offerings,

Figure 1 shows that the number of firms making private placements under rule 506 over our sample period has been fairly stable over time starting in 2013. Most small firms continue to issue under the original rule 506(b) that prohibits GS, even though they can use GS under the new rule 506(c). This may be due to non-GS issuers wanting to signal their lower risk than GS issuers. Panel B shows aggregate $Sold (i.e., total capital raised) annually during 2010-21 under

the two offering methods.[16] We find that a small portion of total capital raised via private placements was raised under 506c.

[Figure 1 here]

Figure 2 shows the geographic distribution of offerings sold under GS and non-GS. There are large concentrations of both types of offerings in certain states such as California, Texas, Florida and New York, particularly in certain metro areas such as Silicon Valley, New York City, Houston, Dallas, and Atlanta.

[Figure 2 here]

C. Variable Construction

We use two dependent variables to measure the success of a private offering: (1) offering *Success Rate* = $Sold / $Offered, and (2) *Ln(1+$Sold)* = ln (1+total amount sold). Success rate is a novel measure of financing success. Unlike in many other types of financings, the success rate in a Form D private placement financing is a publicly observable variable that takes continuous values from zero to one.[17] Success rate and total capital raised (i.e., $Sold) are the final outcomes

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[16] We show this data starting in 2010 to cover full years because electronic filing of Form D with the SEC began on March 16, 2009. Title II, which created rules 506(c) and 506(b), became effective on September 23, 2013.

[17] On the other hand, in VC financing, the success rate is typically unobservable because the amount of capital sought by the startup is not publicly disclosed. The success rate in IPOs is

for each offering, based on the last amended filing for an offering. In addition, we examine the two main exit outcomes for investors in young firms: initial public offerings (IPOs) and being acquired in an M&A (Acquired). We identify the incidence of IPO or acquisition of the firms in our sample as of the end of 2024 after their private offering using the IPO and M&A databases of Audit Analytics, SDC and Professor Jay Ritter's IPO database. We use exact matching on issuers' CIK codes or fuzzy matching on issuer name and require at least a 97% match rate, after first matching on state or zip code (if state or zip code information is available in a database). Finally, we also examine an intermediate outcome: venture capital funding. VCs are professional investors who make highly risky equity investments in startup firms (see, e.g., Gompers and Lerner (2006)). But VCs provide financing to only the most promising startups (see, e.g., Chen, et al. (2021)). So, the receipt of VC funding is a mark of distinction for a startup that increases its access to equity capital. We obtain VC financing data from VentureXpert as of the end of 2024. We match Form D issuers to companies in VentureXpert that received funding from a VC firm on company name, state, and year of deal.

We control for offering and firm characteristics motivated by the prior literature. Accordingly, our control variables include: #Investors, the number of existing investors; the natural logarithm of offering amount, Ln($Offered); Firm age; Long offering, an indicator for an offering intended to last more than one year; Business Transaction, an indicator of an offering made as part of a merger, acquisition, or exchange offer; Entrant, an indicator for the first-time offering by a firm; and indicators for zero revenue, 0<Revenue≤1m ($millions),

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usually either 0 or 1 in a non-underwritten 'All or none' offering, and 1 in an underwritten offering.

1m<Revenue≤5m, 5m<Revenue≤25m, 25m<Revenue≤100m, Revenue>100m, and undisclosed revenue.[18] The regressions include fixed effects for industry and offering year.[19] In addition, prior studies find that successful fundraising in startups tends to concentrate in certain states such as California and New York (see, e.g., Nanda and Rhodes-Kropf (2013), and Stangler, Tareque, and Morelix (2016)). So, our regressions also include fixed effects for the state of firm location.

IV. Results

A. Determinants of General Solicitation

We start by considering the possibility that firms doing general solicitation GS offerings differ from those doing non-GS offerings. For example, if GS allows issuance by firms that were previously too small to access these private markets, then we would expect their issue size to be smaller. A similar story might explain the relation between fees and outcomes. Smaller, less experienced, and less connected firms may pay higher fees, raise less capital, and be less

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[18] To offset higher fees, GS offerings may need to be larger, which can mechanically lower success rates. We control for offering amount to account for this possibility. We include an indicator for a firm's first offering to control for possible differences in information environments between initial and later round offerings.

[19] Our data is from Form D filings, not equity crowdfunding platforms like Angel List, where the data coverage is limited to firms using the specific platform. While Form D filings lack data on investor characteristics, they represent a comprehensive dataset of all private placements made in the US starting in 2010.

successful because they are riskier firms that would otherwise have been unable to issue. To test this hypothesis, we use the offering amount to measure firm size and use an indicator for the firm's earliest filing to measure firm experience in the capital market. We control for firm age to account for younger firms being less connected. Finally, our first hypothesis posits that less risky firms choose to issue under non-GS, while riskier firms issue under GS. The ability to sell their products in the market profitably is the biggest source of uncertainty for firms. Among young, startup firms, those with more revenue are considered less risky. Therefore, we use revenue as an inverse measure of firm risk and uncertainty.

1. Univariate Comparisons

Panel A of Table 2 presents univariate comparisons between the two types of offerings. GS offerings have a substantially lower mean success rate than non-GS offerings both post-JOBS Act and pre-JOBS Act (37% vs. 69% or 66%). The median capital raised (i.e., $Sold) under GS is also substantially lower than that under non-GS ($150,000 vs. $1,770,000 or $1,040,000). The mean percentage brokerage fee (i.e. actual or estimated broker sales commission and finders' fees / *$Offered*) is somewhat higher in GS offerings than in non-GS offerings (5.34% v. 5.02% or 5.09%).[20] The median net proceeds are substantially lower in GS offerings than in non-GS offerings ($126,000 vs. $1,751,000 or $1,025,000). About 6% of firms that made a GS offering eventually did an IPO or were acquired, substantially less than 12% for

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[20] Appendix B shows the top 10 sales compensation recipients in GS and non-GS offerings in our sample by capital raised.

non-GS issuers post-Act and 17% pre-Act. In terms of firm risk, GS offerings (1) have a higher probability of lasting more than a year, (2) pay larger brokerage fees, and (3) their issuers are more likely to have zero revenue than non-GS issuers.[21] These results suggest that GS issuers are riskier firms, consistent with the idea that riskier startups have lower revenue, take longer time to raise capital and have to pay higher brokerage fees to do so.

[Table 2 here]

Are worse outcomes for GS offerings due to new entrants with high risk? The answer is mixed. In Table 2, while the proportion of new entrants to the securities market (*Entrant*) in GS offerings (59%) is significantly larger than non-GS offerings post Act (47%), it is about the same as in non-GS offerings pre-Act (58%). GS offerings are smaller than non-GS offerings. The mean dollar amount of securities offered under GS is about $11.3 million, while it is $12.6 million in non-GS offerings post-JOBS Act.

While 80% of GS offerings are done without a finder or broker, the proportion of offerings that hire a registered broker is higher for GS offerings than non-GS offerings (12% vs.

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[21] Interestingly, GS issuers are substantially more likely to disclose revenue than non-GS issuers. If issuers do not disclose revenue due to competition concerns, GS issuers may be less concerned about competition than non-GS issuers. This conjecture is supported by the fact that GS firms are younger, and perhaps less established, than non-GS firms: only 17% of GS firms are over 5 years old, compared to 25% (24%) of non-GS firms pre-Act (post-Act).

5%) in our sample.[22] GS offerings are also much more likely than non-GS offerings to hire unregistered brokers, also known as finders (8% vs. 1%), who have been linked to a variety of misconduct.[23] Overall, we find that GS offerings make greater use of intermediaries, either a registered broker or finder, than non-GS offerings post-Act (20% vs. 6%), consistent with the greater difficulty of raising capital for the former group of firms, which are less established. The *Regd broker, if Use Broker or Finder* variable indicates that among the offerings that hire a broker or finder, while only 60% of the GS offerings choose registered (rather than unregistered) brokers, as many as 78% of the non-GS offerings choose registered brokers after the Act. GS issuers also have fewer officers and directors (NOD), file their final Form D somewhat earlier after the first sale of securities (Days to filing) and solicit in more states than non-GS issuers. The median NOD, Days to filing and #States_solicited in GS (non-GS) offerings is 2 (4), 11 (14) and 52 (1), respectively.

Finally, after Title II, about 5% (15%) of the GS (non-GS) issuers receive VC funding by the end of 2024 in an average of 0.14 (0.50) financing rounds. And about 10% (16%) of GS (non-GS) issuers eventually exit successfully via an IPO or acquisition by the end of 2024. These

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[22] Appendix D shows additional figures that describe the use of intermediaries and GS in each round.

[23] See Eaglesham, J. & Jones, C., Wall Street Journal, A private-market deal gone bad: Sketchy brokers bilked seniors and a cosmetologist, May 7, 2018; Firms with troubled brokers are often behind sales of private stakes, June 24, 2018.

comparisons generally mirror those when we compare GS offerings to non-GS offerings before Title II.

2. Multivariate Regression Results

We next consider what firm or offering characteristics are associated with the choice of GS in a regression framework. Table 3 presents estimates of marginal effects from logit regressions of firms' choice of the method of private offerings made after the adoption of Title II. The dependent variable equals 1 (0) for GS (non-GS) offerings. GS issuers appear to be riskier: they have lower revenue, are more likely to have long offerings (i.e., expected to last for >1 year), are younger, and are more likely to be new entrants to the market. GS offerings also have fewer current investors. Columns 1 and 2 show that GS offerings are substantially more likely to hire brokers, either registered or unregistered (i.e., finders). In terms of economic magnitude, brokered offerings are 10% more likely to be GS offerings (see column 1). Column 3 shows that among the subset of offerings that use a broker, GS offerings are more likely to use an unregistered broker, i.e., a finder, than a registered broker.

[Table 3 here]

B. Cost of General Solicitation

Our results so far suggest that firms pursuing general solicitation are riskier, which implies that brokers assisting such firms would have to work harder and therefore charge higher commissions. Higher brokerage costs for GS offerings may also be due to the requirement of verifying investor accreditation as well as advertising costs. So we next examine whether GS offerings incur higher brokerage fees.

We obtain data on the cost of general solicitation from item 15 in Form D filings, which separately reports the amounts of sales commission and finders' fees. We compute the total dollar amount paid to brokers as *sales commission$* plus *finders' fee$*. Using the post-JOBS Act sample of GS or non-GS issuers, we estimate the following regression of brokerage commissions for the subset of offerings that use a broker:

(1) $$y_{i,t} = \alpha_0 + \alpha_1 GS_{i,t} + \alpha_2 Control_{i,t} + \alpha_3 FEs_{i,t,k} + \varepsilon_{i,t}$$

The dependent variables are: (1) *Ln($Fee)* = Ln(*$Commissions* + *$Finders' Fees*) and (2) *%Fee* = (*$Commissions* + *$Finders' fees*) / *$Offered*. *GS* equals one (zero) if firm *i* issues using GS (non-GS). *Control* is a set of control variables for firm and offering characteristics that consist of *Revenue FE*, *I_FirmAge>5*, *#Investors*, *Ln($Offered)*, *Long offering*, *Business transaction*, and *Entrant*. Appendix A defines the variables. The regressions also include state, industry, and year fixed effects. Standard errors are clustered at the firm level. Our main interest is in the coefficient α_1, which compares the cost of offering under GS vs. non-GS.

Table 4 shows OLS estimates of this model.[24] Within the subsample of offerings that use a broker, GS offerings have considerably larger brokerage costs and finders' fees than non-GS offerings, in both dollar and percentage terms (see columns (1) and (2)). In terms of economic magnitude, GS offerings incur a 0.76 percentage point larger brokerage fee than non-GS offerings. These findings suggest that general solicitation via GS offerings incurs substantially

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[24] The results are similar after excluding observations for which either the commissions or fees reported in Form D are estimated, instead of actual, values.

higher brokerage costs than non-GS offerings, likely because of advertising costs and the need to verify that investors are accredited.

[Table 4 here]

To examine the marginal contribution of GS to the fees by whether the firm uses a broker or a finder, we create an interaction term between GS and Regd broker. On average, a registered broker charges a higher fee. In column (2), the coefficient of Regd broker is 0.69, indicating that brokerage fees for registered brokers are 0.69 percentage point higher than for finders. However, the coefficient of the interaction GS×Regd broker in column (2) implies that registered broker fees in GS offerings are 0.88 percentage points lower than fees for unregistered brokers (i.e., finders). Our finding that GS offerings with a registered broker pay lower fees than GS with a finder suggests that GS complements the use of a registered broker.

C. GS and Outcomes of Form D Financing

In this section, we examine the effects of general solicitation on small business financing. Using a sample of offerings that use GS or non-GS, we estimate the regression in equation (1) where the dependent variables measure the success rate of solicitation (*Success Rate*) or the total amount sold (*Ln(1+Sold))* of offering i. The control variables are the same as in Table 4. The regressions include fixed effects for revenue, year, industry, and state of firm location.

Table 5 presents our baseline estimates from pooled OLS regressions of small business financing. We find that GS offerings, newly enabled by the law, have a 21% lower funding success rate than non-GS offerings. Moreover, GS offerings raise substantially less capital. The total amount sold is about 90% (= $e^{-2.26}$ - 1) lower in GS offerings than non-GS offerings. These findings are striking because GS was created to allow small businesses to raise more capital by

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allowing entrepreneurs to solicit from a wider pool of investors. Instead, we find that general

solicitation is associated with negative outcomes. More importantly, success rates for GS

offerings with a registered broker are 9 (=13 - 4) percentage points higher than for GS offerings

with an unregistered broker (i.e., a finder), suggesting that the marginal contribution of GS

relative to existing solutions to adverse selection (i.e., registered brokers) and search costs (i.e.,

finders) in private offerings is to help offerings with brokers more than those with finders. This

result is consistent with our previous finding that GS complements the use of brokers. However,

these initial results do not account for firms' endogenous choice of offering method (GS vs. non-

GS), based on differences in firm risk and other characteristics. That is a task we tackle in

Section V.

[Table 5 here]

We next examine how first-time issuers, who tend to be riskier due to their greater

information asymmetry with potential investors, fare in raising capital under GS and non-GS. So,

we add an indicator for new entrants (Entrant) and an interaction term between Entrant and GS

offerings. The coefficient of Entrant is negative and statistically significant in both columns 1

and 2. Compared to repeat issuers, new entrants experience a 3% lower success rate and raise -

37% less (= $e^{-0.46}$ - 1) capital in non-GS offerings. The coefficient estimate of the interaction term

shows that while the success rate of financing is higher for new entrants that choose GS in

column (1), they raise less capital in column (2). The former result supports the notion that GS

benefits new entrants raise capital. The latter result may reflect the fact that new entrants tend to

be smaller firms, which may need less capital. Of course, if GS has enabled new firms that could

not access the private placement market before Title II to tap this market and raise any amount of

capital, that can be viewed as success for Title II. We deal with the question of an issuer's

selection of a GS offering and the appropriate counterfactual in Section V. The average effect of general solicitation continues to be negative on the outcomes of fundraising for small businesses.[25] We cannot control for firm fixed effects in this analysis because the Entrant variable is unique for a given firm.[26]

So far, we find that riskier firms indeed choose to offer under more lenient rules, and the cost of this choice is higher fees paid to information brokers. We next examine whether general solicitation increases issuers' net proceeds after paying the solicitation fees to brokers and the proceeds due to insiders. We start by estimating regressions of *Ln(1+Net proceeds),* defined as Ln(1+ Total amount sold – Sales commissions – Finders' fees – Proceeds paid to insiders). In column (1) of Table 6, the net proceeds are 94% (= $e^{-2.87}$ -1) lower in GS offerings than in non-GS offerings. But net proceeds are higher in GS offerings that use a broker or a finder than in direct offerings, which suggests that GS complements the use of brokers or finders.

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[25] In untabulated analysis, we also examine whether initial *private* offerings are more successful after the adoption of Title II, regardless of the offering method chosen, GS or non-GS. So, we replace the indicator for a GS offering with an indicator for post-Title II (*Post*). Our results offer no evidence to support the notion that entrants have become more successful after the adoption of Title II.

[26] We include industry, instead of firm, fixed effects in these baseline regressions because as many as 70% of the issuers make private placements only once over our entire sample period, as shown in Panel D in Table 1. Nonetheless, the results are similar when we include firm fixed effects and exclude the Entrant variable and its interaction, as shown in Table 10.

[Table 6 here]

We next test our fifth hypothesis about the success of GS offerings that pay higher brokerage commissions compared to non-GS offerings. Columns (2) to (5) of Table 6 show regressions of our two measures of offering success for the subsample of offerings that hire a broker. In columns (2) and (3) the main explanatory variables are *GS*, *%Fee* and their interaction. Consistent with our baseline results in Table 5, the coefficient of *GS* is significantly negative in both these columns, which implies that GS offerings are less successful than non-GS offerings.

The coefficient of *%Fee* is negative, indicating that higher *%Fee* is associated with lower financing success for non-GS offerings. But there is essentially no such relation for GS offerings in column (2), since the coefficient of *GS×%Fee* is significantly positive, and the coefficients of *%Fee* and *GS×%Fee* roughly offset each other.

Yimfor (2025) finds that private offerings that use registered brokers have better outcomes than offerings that employ unregistered brokers (i.e., finders). So, we next examine how this result interacts with the method of offering, i.e., GS vs. non-GS. We include indicators for a finder (=Unregd broker) as well as registered broker. In column (4), the coefficient of GS×Regdbroker×%Fee is significantly positive, which implies that when more money is spent on broker commissions rather than finder fees, the effect of GS on success rate is higher. This result is consistent with the finding that GS and a registered broker are complements. Our finding in column (2) that broker commissions and finder fees are better spent if an offer is generally solicited is consistent with a potential benefit of GS, recognizing that the benefit largely offsets the negative association with fees spent generally.

D. GS and Subsequent VC Funding and Firm Exit Outcomes

So far, we have examined the efficacy of general solicitation using outcomes of the Form D financing itself. We next examine two types of outcomes at the firm-level — venture capital funding and successful exits via IPO or acquisition. We consider VC funding as an intermediate outcome, because VC financing typically goes only to the most successful and innovative startups (see, e.g., Chen, et al. (2021)). We use two measures of VC funding: VC funding equals 1 for a Form D issuer that receives VC financing by the end of 2024 and equals 0 otherwise; and # VC funding rounds, which is the largest number of VC funding rounds a firm secures by the end of 2024.

The first two columns in Table 7 report the marginal effects of logit regressions where we replace the dependent variable in Table 5 with an indicator for VC funding. The main explanatory variables in column (1) are GS, Regd Broker and Unregd Broker; in column (2), we add interactions of GS with the latter two variables. The other control variables are the same as in Table 5. The regressions include year, industry and state fixed effects. In both models, GS offerings negatively predict the probability of VC funding. The marginal effects indicate that GS offerings are about 6 percentage points less likely to receive VC financing. This effect is quite large compared to a sample firm's average probability of getting VC funding of 15% shown in

the last row of the table.[27] In column (1), offerings that employ registered (unregistered) brokers are also 4 (7) pp less likely to receive VC funding.

[Table 7 here]

Columns (3) and (4) report marginal effects from Poisson regression models that investigate the determinants of the number of VC funding rounds a firm secures. GS offerings receive significantly fewer VC funding rounds. The magnitude of this effect is economically large. After controlling for other things, GS offerings have about 0.23 fewer VC funding rounds, or about 45% fewer compared to the sample average of 0.51 rounds shown in the last row of the table.

Finally, we examine successful firm exits via IPO or acquisition. *IPO or Acquired* equals 1 if an issuer goes public or is acquired by the end of 2024 and equals 0 otherwise. In columns (5) and (6) of Table 7, we find that GS offerings are less likely to exit via an IPO or acquisition compared to non-GS offerings. The magnitude of this effect is about 2 pp on the probability of an exit, or about 13% unconditional probability of an exit by a sample firm of 16%. Using an unregistered broker decreases the probability of a successful exit by about 3 to 4 pp.

In Panel B of Table 7, we examine whether the success of Form D financing is related to receipt of VC funding or successful exit via IPO or acquisition. In regressions similar to Panel A, we now replace the explanatory variables Regd broker, Unregd broker, and their interactions

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[27] The marginal effect in the Logit and Poisson regressions for a dummy variable D_1 is calculated as $E(y \mid D_1=1, X) - E(y \mid D_1=0, X)$, where y is the dependent variable and $X = x_1$ to x_n represents other explanatory variables.

with GS by our two measures of the success of the Form D financing, Success rate and Ln(+$Sold), and their interactions with GS. The probability of VC funding as well as the number of rounds of VC financing are significantly lower in GS offerings, as in Panel A. The success of Form D financing improves future VC financing outcomes as well as the likelihood of successful exit, although there is no differential improvement for GS offerings.

V. Identification: Accounting for Selection Effects

We find that firms that choose GS offerings differ from those that choose non-GS offerings in that, for example, the former have lower revenues. This causes problems in empirically testing whether the Act helps small firms raise capital under GS because it becomes difficult to compare them to a counterfactual. This is especially problematic if there are unobservable characteristics of the firm, issue, or project that are related both to the likelihood of using GS and the likelihood of financing success. We mitigate these concerns in several different ways. First, in our baseline tests, we control for a number of measures of firm risk such as firm age, revenue, the number of investors, and long offering. Moreover, both in our baseline tests and in the approaches described below, we include fixed effects for year, industry, and state. Second, we employ a propensity score matching (PSM) approach to compare issuers that switch from using non-GS for a prior offering to using GS for the current offering (i.e., Switchers) to Stayers, who use non-GS for both offerings. Third, we separately analyze a subsample of firms that raise capital under both GS and non-GS in the same year. This approach compares the outcomes of GS and non-GS offerings by the same firm at about the same time. Finally, we conduct a variety of robustness checks of our main results.

A. Switchers vs. Stayers

We next use a PSM approach to compare outcomes for non-GS issuers who switch to GS ('Switchers') to a control group of similar non-GS issuers who decide to stay with non-GS ('Stayers') after Title II of the JOBS Act gives them a choice. There are two main issues to consider. First, before Title II, firms have only one method of fundraising, non-GS. After Title II, firms have two choices, GS or non-GS. Second, it is impossible to know which firms would have issued under GS before Title II. We address the first issue by focusing on issuers that make multiple offerings during the post-Title II period, when they can choose between GS and non-GS offering methods. Here, we compare firms that complete a non-GS offering, then switch to GS for the subsequent offering (i.e., *Switchers*) to matched firms that complete a non-GS offering and stay with non-GS for the subsequent offering (i.e., *Stayers*), and report the results in Panel A of Table 8. The switch to GS is an entirely new offering by the same issuer because we keep only the latest filing for a given offering, as discussed in Section III.B and shown in Panel A of Table 1. To address the second issue, we examine the subset of firms that complete an offering before the Act and make another offering after the Act. Here, we redefine *Switchers* as firms that make an offering under non-GS pre-Title II and switch to GS for a different offering post-Title II, and *Stayers* as their matched firms that make an offering under non-GS pre-Title II and continue to use non-GS for a different offering post-Title II, and present the results in Panel B of the table.

[Table 8 here]

Table 2 shows that firm and offering characteristics differ between offerings under GS and non-GS. To control for these differences, we match each treated offering (i.e., a *Switcher*) to a control offering (i.e., a *Stayer*) from the same industry in the same offering year using the propensity score matching (PSM) method. We match each *Switcher* firm to its nearest neighbor

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in the sample of *Stayers* that has the closest propensity score obtained from logit regressions with replacement.[28] Matching is based on the following variables: Revenue fixed effects, I_FirmAge>5, the number of current investors, offering amount, and indicators for offerings that last more than a year, offerings made as part of a business transaction, Entrant, successful completion of past offering, use of different type of broker (registered, unregistered, both or neither) as in the past offering, and fixed effects for year and state of firm location. The standard errors are robust. We use two different matched samples in the two panels in Table 8. Panel A presents a post-JOBS Act analysis, while Panel B presents a pre- and post-Act analysis.

The first part of Panel A of Table 8 shows descriptive statistics of the matched sample of switchers (i.e., treated offering) and stayers (i.e., control offering) post-Act. We report the mean values for the later offering by each group of issuers (i.e., GS offering by Switchers and non-GS offering by Stayers) and the significance levels based on *t*-statistics of the differences. The treated and control samples are quite similar after matching, with no significant differences between the two groups, except for the indicator for older firms (age > 5 years). In addition, we control for all these firm and offering characteristics in the regressions. In regressions similar to those in Table 5 in the next part of Panel A, switchers to GS offerings have a 22% lower financing success rate and raise a whopping 93% less ($=e^{-2.71} - 1$) capital than similar non-GS stayers after Title II took effect.

Next, in Panel B of Table 8, we compare each switcher (i.e., an issuer who made a non-GS offering before Title II and made a GS offering after Title II) to a matched stayer (i.e., an

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[28] We match with replacement following the recommendation of Abadie and Imbens (2006).

issuer who made a non-GS offering before Title II and made a non-GS offering after Title II). The first part of Panel B shows descriptive statistics of this matched sample of the later offering by each group of issuers (i.e., GS offering by Switchers and non-GS offering by Stayers). The treatment and control groups are quite similar after matching, with no significant differences between them. The estimate of Switcher to GS in the regression in the second half of Panel B shows that switchers to GS offerings post-Act have a 13% lower financing success rate and raise 80% less ($=e^{-1.59} - 1$) capital than its matched non-GS stayers. We conclude that firms that choose to issue under GS are worse off than non-GS issuers.

B. Subsample Analysis

We next try to mitigate the identification problem further by analyzing an interesting, though more limited, subsample. Specifically, we limit the sample to firms that raise capital using both methods in the same year. This approach largely overcomes selection concerns from different types of firms choosing different methods of raising capital, GS or non-GS. This approach has the advantage that the issuer's financial profile that may affect fund raising outcomes is unlikely to change significantly within the same year.

But even though the two types of offerings are made by the same firm in the same year, maybe they are aimed at financing different projects in the firm, which can still lead to different outcomes for the fundraising effort. To address this issue, we use three specifications. The first specification, shown in the first two columns of Panel A in Table 9, uses the full sample of such offerings. The second specification, shown in the next two columns, uses a subsample of firms that switch from GS to non-GS in a given year. The third specification, shown in the last two columns of the panel, uses a subsample of firms that switch from non-GS to GS. Because project

information is not publicly available, we include controls for offering information reported in Form D. All the specifications include fixed effects for industry, state of firm location, and year. Panel B performs a similar analysis, except that we now replace industry and state fixed effects by firm fixed effects to remove any time-invariant firm characteristics that might affect both the choice of offering method and financing success rate.

[Table 9 here]

In our sample, 162 firms make one or more GS offerings and one or more non-GS offerings in the same year, for a total of 192 and 208 offerings of the two types, respectively. We conduct OLS regressions similar to those in Table 5 on this subsample of 400 offerings. Panel A of Table 9 shows the results. We find that GS offerings still lead to a considerably lower success rate for a firm than non-GS offerings, even after controlling for selection effects and firm characteristics. In column (1), GS offerings have a 12% lower success rate than non-GS offerings. GS offerings also raise substantially less capital than non-GS offerings. In column (2), the magnitude of this effect is as much as -83% (= $e^{-1.78}$ -1).

Is a GS offering more likely to succeed if it is the first offering, instead of the second offering, during the year in such cases? That does not appear to be the case. In Panel A of Table 9, we report the results of regressions for partitions of this subsample by whether the first offering during the year is made under GS or non-GS. The success rate of the offering as well as the amount sold are consistently lower in GS offerings than in non-GS offerings in the subgroup of issuers switching from nonGS to GS in columns (5) and (6). This result suggests that when an issuer switches from nonGS to GS in the same year, the GS offering has a lower success rate and raises less capital. The significantly negative coefficient of *Unregd broker* in columns (5) and (6) suggests that Non-GS offerings that use a finder are met with a lower success rate and raise less

capital, which may have led to their decision to switch to GS. To examine within-firm differences in success rates, we replace industry and state fixed effects in the analysis of Panel A by firm fixed effects and show the results in Panel B. We find a robust result that shows that the GS method lowers success rate and raises less capital.

Do firms make a GS offering first, and if it fails to raise enough money, follow it up with a non-GS offering? In Figure 3, the proportion of firms doing a GS offering first in this subsample (of Table 9) starts out at its peak in 2013 and declines substantially after that. Firms appear to start out with a preference for using the new GS offering method first once it became available but gradually lose interest once they realize that it does not seem to help in raising capital successfully. This pattern is consistent with firms learning from financial markets, as has been found in other contexts in finance (e.g., shareholder rights and stock returns (Bebchuk, Cohen and Wang (2013)), and the use of common M&A advisers by acquiring and target firms (Agrawal, Cooper, Lian, and Wang (2013)).

[Figure 3 here]

C. Robustness Checks

1. Subsample of Positive Amount Sold

Do our main results lose statistical or economic significance if we omit the worst offerings, i.e., those that raise no capital? To address this issue, we redo the Table 5 regressions in the subsample of offerings with positive dollar amounts raised. In Panel A of Table 10, we find that even in this sample, GS offerings are significantly less successful in fundraising than corresponding non-GS offerings.

[Table 10 here]

2. Firm Fixed Effect Regression

Panel B of Table 10 shows that our main results continue to hold when we replace industry and state fixed effects in the regressions of Table 5 by firm fixed effects.

3. Composition of Brokers and Finders

Does the relative number and composition of brokers and finders affect the success of financing? To test this, we replace the indicators for brokers and finders with the percentage of brokers. The percentage of brokers is defined as the number of brokers relative to the total number of brokers and finders in an offering. The results, shown in Panel C of Table 10, are qualitatively and quantitatively similar to those in Table 5.

4. Regressions Controlling for NOD and Days to Filing for Offerings of All Types of Securities

We next examine three potential issues. First, our main firm size measure, Revenue, is not disclosed in about 49% of GS and 81% of non-GS offerings. So we use the number of executive officers (including promoters) and directors (NOD) listed in item 3 of Form D as another measure of firm size and add it as an explanatory variable in the regressions. Larger firms usually have more officers and directors. Second, the lower success rate of GS offerings may be partly due to GS issuers filing the Form D earlier than non-GS issuers, which would lead to the amount sold reported in Form D being lower than the amount raised when the offering is completed. Given that there is no requirement to file a Form D after the offering is completed, the last filing may not capture the amount finally raised. To address this issue, we add a control variable, Days to filing, defined as the number of days between the date of the first sale of the

securities being offered to the filing date of the last Form D filing for the offering. Finally, all of our results so far are for equity offerings or offerings that include equity securities. We now examine whether our main results hold regardless of the type of security issued by including all offerings that satisfy all the other data requirements of Table 1, Panel A.

Panel D of Table 10 shows regressions controlling for the number of officers and directors (NOD) and Days to Filing. Because the sample includes offerings of all types of securities, we also include a binary variable, Debt_offering, that equals 1 if the offering includes any debt securities and 0 otherwise.[29] Column (1) shows marginal effects from a logit regression of the choice of GS (vs. non-GS) offering similar to column (2) of Table 3. Smaller firms, i.e., firms with fewer officers and directors, and firms making debt offerings are more likely to choose a GS offering. Compared to non-GS offerings, GS offerings also file their last Form D sooner after their first sale of securities.

Columns (2) – (6) show regressions of our main outcome variables: success rate and amount sold similar to columns (1) and (2) of Table 5, and VC funding, the number of VC funding rounds and IPO or Acquired similar to columns (2), (4) and (6) of Table 7. As expected, later filings have a higher success rate and raise more capital; but they neither get more VC funding nor are they more likely to exit via IPO or acquisition. The number of officers and directors positively predicts all five outcome variables, suggesting that larger firms among Form D filers have better outcomes in Form D fundraising, VC funding and ultimate exit via IPO or acquisition, perhaps because they are less risky. While debt offerings have less success in the

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[29] We provide a fuller analysis by the type of security offered in section V.C.6 below.

Form D fundraising market, they subsequently receive more rounds of VC funding. But more important, consistent with our baseline results in Tables 5 and 7, all five outcome variables are worse for GS than for non-GS offerings.

5. Regressions Controlling for #States_solicited and Foreign_solicited

One advantage of GS is that it enables issuers to reach a wider pool of investors. So we next examine the possibility that GS offerings solicit investors in more states as well as other countries. We obtain data on the number of states solicited (#States_solicited) and whether foreign countries are solicited in the offering (Foreign_solicited) from item 12, which provides information on compensation to brokers and finders. Unfortunately, this information is only available for a small subset of the offerings, mostly those that employ brokers or finders. So we analyze this sample separately and present the results in Panel E in a format similar to Panel D, except with the addition of #States_solicited and Foreign _solicited as explanatory variables. We find that GS offerings indeed solicit investors in more states as well as other countries. But controlling for these variables does not affect our main conclusions: GS offerings continue to have lower success in Form D financing, getting VC funding, and eventual exit via IPO or acquisition.

6. Separate Regressions for Debt and Equity Offerings

Our baseline results in Tables 5 and 7 are for offerings that include equity, i.e., equity only or equity and other securities. While we analyze offerings of all types of securities in sections V.C.4 and V.C.5 above and Panels D and E of Table 10, we now separately examine equity and debt offerings in more detail. Accordingly, we analyze offerings of equity only in

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Panel F, debt only in Panel G, and debt only or debt and other securities except equity in Panel H in a format similar to Panel D, except that we now exclude the Debt_offering indicator variable.

In Panels F and G, GS offerings have a lower success rate and raise less capital in Form D financing for both equity only and debt only offerings, although the success rate is considerably lower in pure equity offerings than in pure debt offerings, perhaps due to greater potential for adverse selection in GS equity offerings. The untabulated t-statistic for the difference in the coefficient of GS in column (1) between Panels F and G is 4.16. GS offerings are less likely to get VC funding subsequently for both pure equity and pure debt offerings, with similar magnitudes. Notably, while pure equity GS offerings receive significantly less rounds of VC funding and are less likely to successfully exit via IPO or acquisition than pure equity non-GS offerings, neither effect is statistically significant for pure debt offerings, further pointing to greater adverse selection with GS in equity over debt offerings. Finally, the results in Panel H on offerings of debt only or debt and other securities largely mirror those in Panel G for debt only offerings.

7. What if Some Issuers Do Not File Form D?

Due to the lack of strict SEC enforcement, some startups, especially in Silicon Valley, appear to violate the requirement to file a Form D.[30] While there is no way to reliably assess the

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[30] See https://techcrunch.com/2018/11/07/the-disappearing-form-d/. However, many law firms point out that non-filing of Form D for a Regulation D offering is a violation of Reg D, with

magnitude of this non-compliance,[31] we next examine whether this possibility creates a bias in our approach. First, we include fixed effects for the state of firm location in all the regressions, which should reduce the bias arising from certain geographic areas. Second, we include industry fixed effects to deal with a bias arising from some industries. Third, we examine the distribution of Form Ds that are unsuccessful in fundraising. If this distribution is somewhat stable over time, that would suggest that selection into filing a Form D is less of an issue, given press reports that suggest that non-compliance is a recent phenomenon. Figure 4 shows the annual percentage of unsuccessful non-GS offerings pre-Title II and GS and non-GS offerings during the post-Title II period. The percentage of unsuccessful offerings under each category is the number of Form Ds that are unsuccessful in fundraising divided by the total number of Form Ds filed in the category in a given year. We define an offering as unsuccessful if its most recent Form D or Form D/A

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potentially serious consequences. See, e.g., Emily Cain and Dan Clevenger, SEC brings enforcement actions for failures to timely file Form D, Foley Hoag, February 12, 2025.

[31] Bauguess, et al. (2018, p. 7) note that while Rule 503 of Regulation D requires the filing of a Form D no later than 15 days after the first sale of securities, the filing of a Form D is not a condition to claiming a Regulation D safe harbor or exemption, and it is possible that some issuers do not file Form D for offerings, relying on Regulation D. They refer to a separate SEC analysis of Form D filings by funds advised by registered investment advisers and broker-dealer members of FINRA, which suggests that Form D filings are not made for about 10% of Reg D offerings.

indicates that the amount sold is less than the offering amount. In Figure 4, the annual proportion of unsuccessful offerings is fairly stable during the 2010 to 2021 period.

[Figure 4 here]

VI. Conclusion

On September 23, 2013, Title II of the JOBS Act became effective. Previously, small firms could avoid registering private placement securities with the SEC, but were not allowed to advertise, which limited their potential investor pool. On the other hand, they could sell to a small number of unaccredited investors. Moreover, the burden of proving accreditation status was on the investor, rather than the issuer. And the burden was rather light: investors could satisfy it by simply checking a box indicating that they are accredited on a pre-qualification form provided by the issuer. After the passage of Title II, firms can issue securities with or without general solicitation, which includes advertising.

This paper investigates the impact of Title II of the JOBS Act on firm financing. We find that issuers that choose the newly introduced GS method for private placement under Title II are riskier: they have less revenue, fewer investors, and make more long-duration (>1 year) offerings. After accounting for this selection effect using several different approaches, we find that GS offerings have a lower funding success rate and raise less capital than non-GS offerings. GS offerings incur higher percentage brokerage commissions than non-GS offerings, likely due to the cost of advertising and verifying investor accreditation. Moreover, by the end of 2024, GS issuers are also less likely to receive VC funding or to successfully exit via IPO or acquisition. However, GS appears to help new entrants to the market for private equity offerings and issuers

that use registered brokers. The success of Form D financing improves future VC financing and exit outcomes, although there is no differential improvement for GS offerings.

Our findings thus provide mixed support to the notion that Title II provides greater access to capital markets for small firms that lack prior connections to investors. The paper also points to possible reasons why small businesses still prefer to raise capital through the traditional non-GS offering, and why investment platforms that facilitate matching entrepreneurs to investors appear to dread general solicitation (see, e.g., Clark, 2020). This is because Title II places severe restrictions on who can purchase the securities offered under general solicitation, and brokers charge substantial fees for advertising private placement securities and verifying using an elaborate process that each investor is accredited, i.e., qualified to invest. Our results imply the need to craft policies that induce better ways of signaling offering quality or more transparent approaches to reducing information asymmetry to improve access to capital for small businesses.

Finally, our paper highlights the marginal impact of GS on small firm financing, after controlling for the use of intermediaries to help reduce adverse selection and search costs (see, e.g., Yimfor (2025)). By reducing search costs through advertising, GS appears to complement registered brokers who help reduce adverse selection in the market for private placements.

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Figure 1

Number of Issuers Doing Private Offerings

The figure shows the number of unique issuers in our sample that raise capital in private markets in a transaction exempt from registration under rule 506 pre-Title II and rule 506(c) or 506(b) post-Title II (effective September 23, 2013).

Panel A: Number of Unique Firms by Year
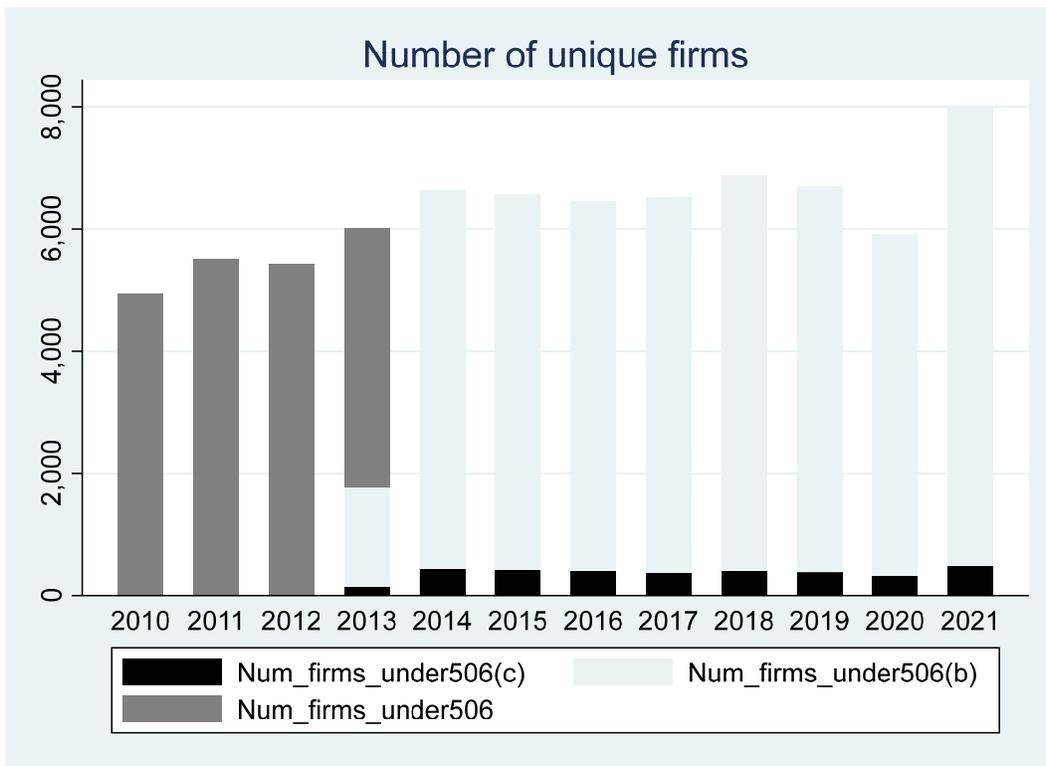
Panel B: Aggregate Capital Raised by Year
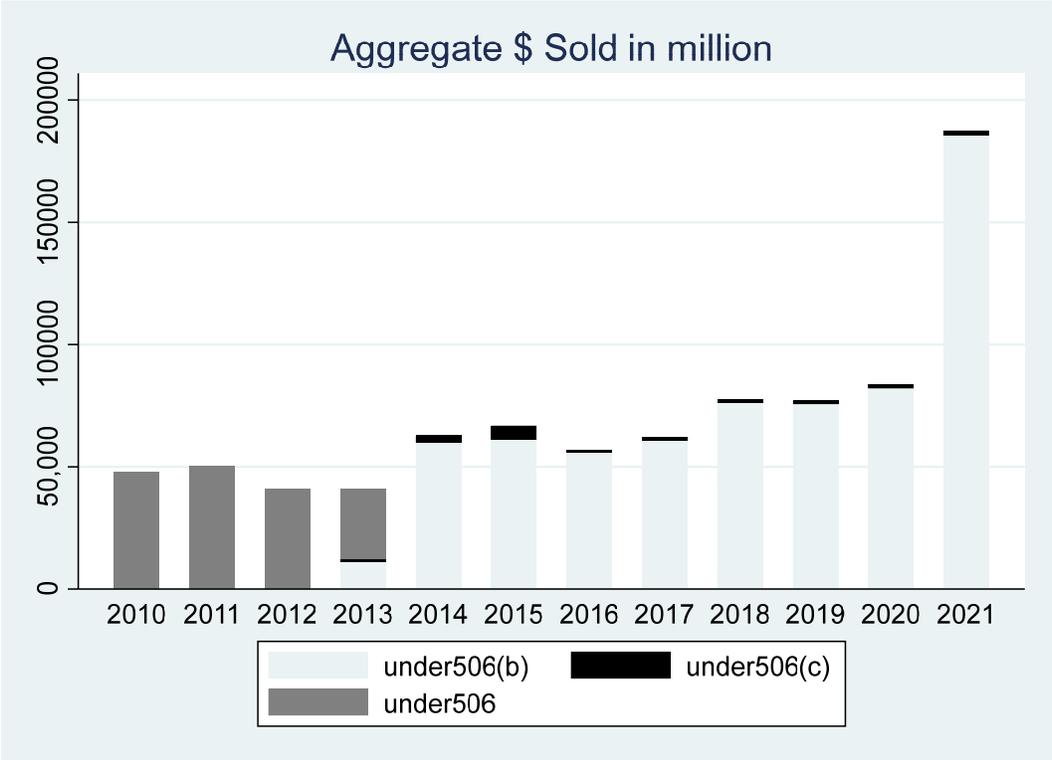
Figure 2. Geographic Distribution of GS and Non-GS Private Offerings

Panel A: GS Offerings
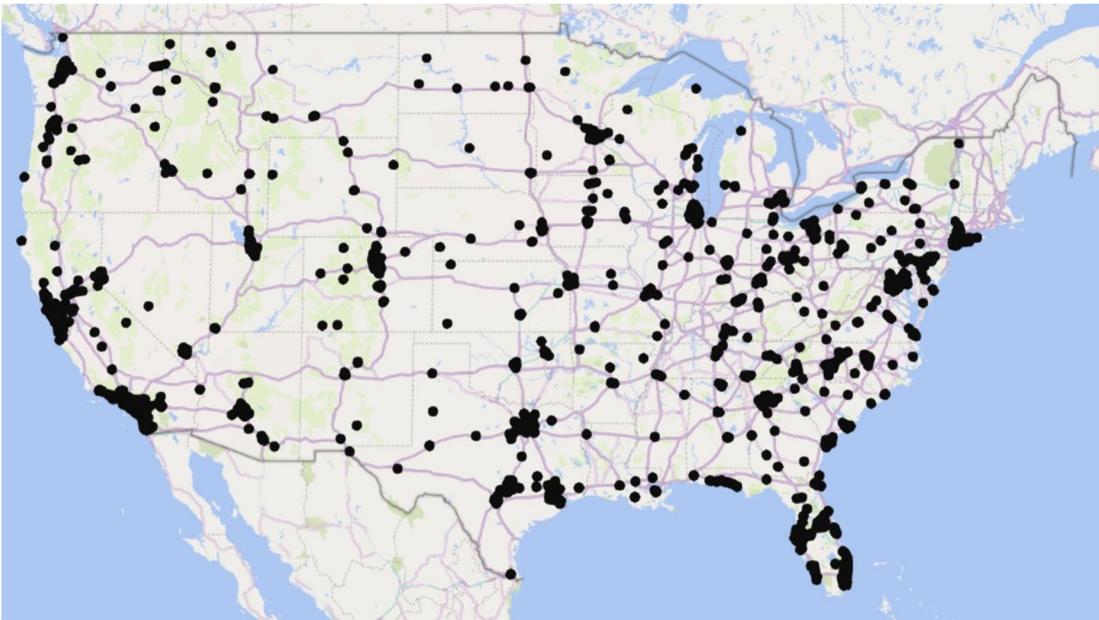
Panel B: Non-GS Offerings
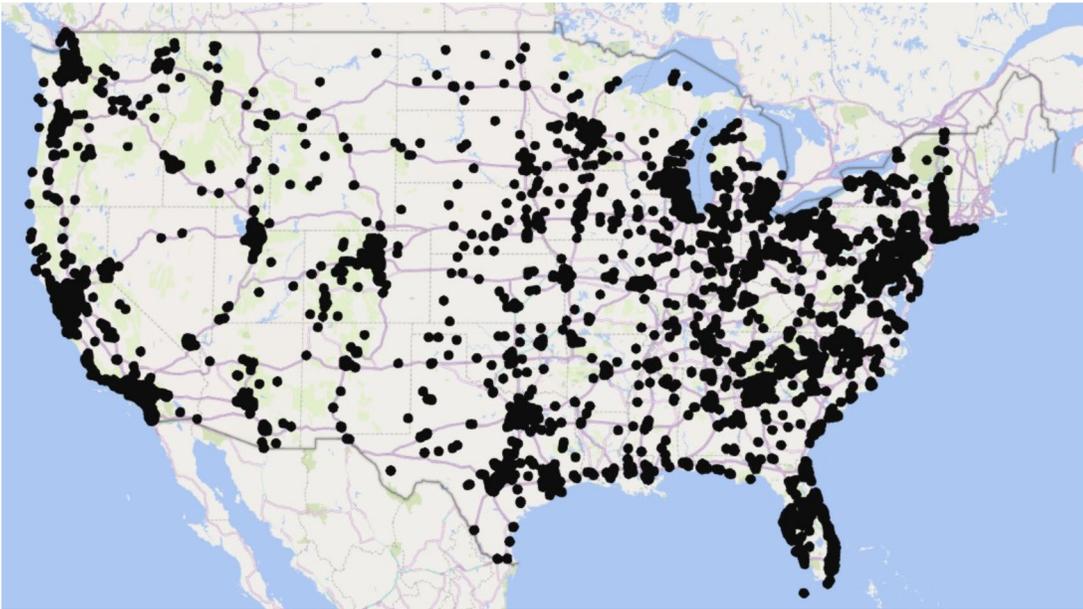
Figure 3

Learning

The figure shows the percentage of GS offerings going first by year in the subsample of firms that make both GS and non-GS offerings in the same year.

Figure 4

Time Series of Private Offerings

The figure shows the annual percentage of unsuccessful private offerings attempted under rule 506 before Title II since 2010 and rules 506(c) and 506(b) after Title II (effective September 23, 2013). The percentage of unsuccessful offerings under each category is calculated as the number of Form Ds that are unsuccessful in fundraising divided by the total number of Form Ds in a given year. An offering is defined as unsuccessful if its most recent Form D or Form D/A indicates that the amount sold is less than the offering amount.

Table 1

Private Offerings Conducted under Rule 506 of Regulation D

Panel A shows the steps in our sample selection procedure. Panel B shows the annual number of GS offerings and non-GS offerings (Post- and Pre-Title II) over our 2008-2021 sample period; the last column shows the percentage of GS offerings out of all offerings. Panel C shows the number of GS and non-GS offerings under Title II by industry, as reported in Item 4 of Form D. Panel D shows the distribution of the number of separate offerings by the 54,419 unique firms that make a total of 87,551 offerings in our sample during 2008-2021 (see Panel B). Panel E includes offerings (that satisfy all the requirements of Panel A) of all types of securities.

Panel A: Deal Sample Selection Process

Electronic initial Form D and amended Form D/A filings under rule 506, excluding pooled investment funds over 2008-2021	
(Electronic filing of Form D with SEC required since March 16, 2009)	244,762
Keep only firms located in the United States with valid zip code	226,455
Drop financial firms (i.e., Banking and Financial Services and Real Estate)	157,708
Drop if the firm reports a 10-K or 8-K filing on or before the offering year	145,959
Keep only the latest filing for a given offering	123,707
Keep only the primary issuer when issuers jointly file a Form D (e.g., one firm has two CIK codes)	122,736
Keep only offerings that include equity, even if they also contain other types of securities	92,740
Drop if total offering amount is indefinite or zero	87,551
Final full sample (based on 54,419 unique issuers)	*87,551*

Panel B: Sample of Offerings by Year

Year	GS	Non-GS Post	Non-GS Pre	%GS = $(\frac{GS}{GS+NonGS\ Post})$
2008	0	0	100	
2009	0	0	4,254	
2010	0	0	5,601	
2011	0	0	6,147	
2012	0	0	5,956	
2013	149	1,677	4,568	8.16
2014	458	6,790	0	6.32
2015	437	6,761	0	6.07
2016	426	6,715	0	5.97
2017	397	6,752	0	5.55
2018	446	7,192	0	5.84
2019	404	6,932	0	5.51
2020	348	6,145	0	5.36
2021	532	8,364	0	5.98
Total	**3,597**	**57,328**	**26,626**	**5.90**
All	**60,925**		**87,551**	

Panel C: Sample Distribution of GS and Non-GS Offerings by Industry After Title II (Sep. 23, 2013 to Dec. 31, 2021)

Industry Group	Freq. GS	Freq. Non-GS
Agriculture	84	647
Airlines and Airports	14	31
Biotechnology	118	3,350
Business Services	97	1,051
Coal Mining	1	10
Computers	69	739
Electric Utilities	10	48
Energy Conservation	16	110
Environmental Services	8	113
Hospitals and Physicians	22	377
Lodging and Conventions	29	301
Manufacturing	174	1,702

Oil and Gas	246	1,652
Other	1,160	16,532
Other Energy	120	911
Other Health Care	268	5,829
Other Technology	847	19,527
Other Travel	10	109
Pharmaceuticals	53	1,060
Restaurants	93	1,272
Retailing	96	1,412
Telecommunications	50	478
Tourism and Travel Services	12	67
Total	**3,597**	**57,328**

Panel D: Distribution of the Number of Separate Offerings by a Given Sample Firm During the 2008-2021 Sample Period

No. of offerings	No. of unique firms
1	37,908
2	8,926
3	3,805
4	1,815
5	891
6	469
7	253
8	133
9	69
10	41
11+	109
Total	**54,419**

Panel E: Distribution of All Offerings by the Type of Securities Issued

Securities offered	Number of offerings
Equity only	70,366
Equity and debt only	2,414
Equity, debt and other securities (e.g., options, warrants)	2,221
Equity and other securities, no debt	12,550
Debt only	7,385
Debt and other securities, no equity	10,830
Other securities only, no debt or equity	10,114
Total	**115,880**

Table 2

Descriptive Statistics

The table compares the characteristics of offerings made after Title II during September 23, 2013 to December 31, 2021 using GS and non-GS and before Title II. Panel A reports mean and median values and *t*-statistics and *p*-value of the differences between the two groups (reference group is always GS). The *$Fee* and *%Fee* variables are computed based on the subsample of offerings where a broker is hired, i.e., where *Use Broker or Finder*=1. For dollar variables, *t*-statistics are based on the natural logarithm of one plus the dollar value. To reduce the effect of outliers, we winsorize all dollar variables at the 1st and 99th percentiles. The sample size is the same for #States_ solicited and Foreign_ solicited variables and is shown below these variables in the row labeled 'N_solicited.'

| | **Mean** | | | | | **Median (Wilcoxon)** | | | | |
	GS	nonGS postAct	*t*-stat	nonGS preAct	*t*-stat	GS	nonGS postAc	*p*-value	nonGS preAct	*p*-value
%Success Rate	36.75	68.92	-49.99	65.99	-42.28	11.5	88.89	0.00	84.89	0.00
$Sold ('000)	2,860	8,765	-55.15	5,930	-44.39	150	1,770	0.00	1,040	0.00
$Offered ('000)	11,300	12,600	-2.15	8,620	7.61	3,000	3,000	0.00	2,400	0.00
%Fee (N: 733, 3,352, 2,761)	5.34	5.02	2.10	5.09	1.65	5.00	4.34	0.10	4.83	0.19
$Fee ('000)	504	923	-10.33	550	-5.37	138	360	0.00	210	0.00
Use Broker or Finder	0.20	0.06	34.12	0.08	25.19	0	0	0.00	0	0.00
Regd broker	0.12	0.05	20.43	0.05	17.77	0	0	0.00	0	
if Use Broker or Finder=1	0.60	0.78	-10.29	0.64	-2.02	1	1	0.00	1	
Unregd broker	0.08	0.01	31.27	0.03	17.04	0	0	0.00	0	
if Use Broker or Finder=1	0.40	0.22	10.29	0.36	2.01	0	0	0.00	0	

Direct (i.e., unbrokered) offering	0.80	0.94	-34.12	0.92	-25.19	1	1	0.00	1	
Both Regd & Unregd broker	0.00	0.00	0.43	0.00	-0.76	0	0	0.67	0	
%Regd broker	0.13	0.05	19.97	0.05	18.32	0	0	0.00	0	
$paid to CEO/ Directors/ Promoters ('000)	140	53	33.16	75	19.93	0	0	0.00	0	0.00
$Net proceeds ('000)	2,744	8,699	-47.70	5,878	-39.26	126	1,751	0.00	1,025	0.00
NotDiscloseRevenue	48.85%	81.09%	-47.03	66.45%	-20.83	0	1	0.00	1	0.00
Revenue=0	28.38%	10.30%	33.44	15.59%	19.24	0	0	0.00	0	0.00
0<Revenue≤1m	15.74%	5.46%	25.16	11.11%	8.12	0	0	0.00	0	0.00
1m<Revenue≤5m	4.81%	1.86%	12.14	3.68%	3.32	0	0	0.00	0	0.00
5m<Revenue≤25m	1.64%	0.90%	4.45	2.13%	-1.93	0	0	0.00	0	0.05
25m<Revenue≤100m	0.31%	0.27%	0.35	0.71%	-2.79	0	0	0.72	0	0.00
Revenue>100m	0.28%	0.11%	2.83	0.34%	-0.59	0	0	0.00	0	0.55
#Investors	8.42	11.66	-12.38	9.78	-5.49	2	6	0.00	5	0.00
Long offering	0.14	0.06	19.09	0.06	17.23	0	0	0.00	0	0.00
Offering w/ a business transaction	0.03	0.05	-4.48	0.05	-6.29	0	0	0.00	0	0.00
Entrant	0.59	0.47	14.90	0.58	1.61	1	0	0.00	1	0.10
I_FirmAge>5	0.17	0.25	-10.06	0.24	-8.55	0	0	0.00	0	0.00
VC funding	0.05	0.15	-16.77	0.12	-13.28	0	0	0.00	0	0.00
# VC funding rounds	0.14	0.50	-12.48	0.58	-12.92	0	0	0.00	0	0.00
IPO or Acquired	0.10	0.16	-9.97	0.24	-18.77	0	0	0.00	0	0.00
NOD	2.93	4.01	24.18	4.41	29.30	2	4	0.00	4	0.00
Days to Filing	73.58	84.28	-2.53	80.79	-1.75	11	14	0.00	14	0.00
Debt_ offering	0.08	0.05	6.76	0.06	4.93	0	0	0.00	0	0.00
#States_ solicited	31.13	9.81	29.87	11.41	23.51	52	1	0.00	1	0.00
Foreign_ solicited	0.12	0.08	3.36	0.07	4.21	0	0	0.00	0	0.00
N_solicited	*999*	*4,619*		*2,901*						

Number of observations	*3,597*	*57,328*	*26,626*	

Table 3

Determinants of the Choice of General Solicitation Method

The table presents estimates of marginal effects from logit regressions of firms' choice of the method of private offerings made after the adoption of Title II of the JOBS Act. The dependent variable equals 1 (0) for GS (non-GS) offerings. Regressions are for the full sample in columns 1 and 2, and for the subsample of brokered offerings in column 3. Appendix A defines the variables. The numbers in parentheses are t-statistics based on robust standard errors clustered at the firm level. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	1 GS offering	2 GS offering	3 GS offering
Use Broker	0.10***		
	(13.00)		
Regd broker		0.09***	
		(10.13)	
Unregd broker		0.12***	
		(10.00)	
%Regd broker			-0.03**
			(-2.26)
Revenue=0	0.07***	0.07***	0.07***
	(11.61)	(11.51)	(3.40)
0<Revenue≤1m	0.09***	0.09***	0.18***
	(12.78)	(12.73)	(5.37)
1m<Revenue≤5m	0.07***	0.07***	0.16***
	(7.35)	(7.34)	(4.02)
5m<Revenue≤25m	0.04***	0.04***	0.04
	(3.96)	(3.93)	(1.00)
25m<Revenue≤100m	0.02	0.02	0.04
	(0.95)	(0.94)	(0.45)
Revenue>100m	0.05	0.04	0.12
	(1.53)	(1.49)	(0.86)
I_FirmAge>5	-0.01***	-0.01***	-0.04***
	(-3.19)	(-3.19)	(-2.88)
#Investors	-0.00***	-0.00***	-0.00
	(-5.69)	(-5.59)	(-1.28)
Ln($Offered)	0.00*	0.00*	-0.02***

	(1.90)	(1.89)	(-5.80)
Long offering	0.05***	0.05***	0.05**
	(8.39)	(8.26)	(2.28)
Business transaction	-0.02***	-0.02***	-0.06**
	(-3.65)	(-3.69)	(-2.40)
Entrant	0.02***	0.02***	0.08***
	(7.50)	(7.43)	(5.47)
Year FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
State FE	Yes	Yes	Yes
N	60925	60925	3987
Pseudo R^2	0.11	0.12	0.18

Table 4

Subsample Analysis of the Cost of General Solicitation: Brokerage Fees

The table shows OLS estimates from the following regression of brokerage commissions for s

subsample of offerings when a firm choose to use a broker (i.e., offerings with payment of

positive financial intermediary fees):

$$y_{i,t} = \alpha_0 + \alpha_1 GS_{i,t} + \alpha_2 Control_{i,t} + \alpha_3 Year_t + Fixed\ Effects_{j(i),t} + \varepsilon_{i,t}$$

where the variables are for a firm i in each deal t. The dependent variables are: (1) *Ln($Fee)* =

Ln(Sales Commissions + Finders' Fees), and (2) *%Fee* = 100×(Sales Commissions + Finders'

Fees) / Total dollars offered. To reduce the effect of outliers, we winsorize *$Fee* at the 1st and

99th percentiles. *GS* equals one (zero) for offerings that use GS (non-GS). *Regd broker* equals

one if the filing has a registered broker, zero for an unregistered broker (also known as finder).

Appendix A defines the variables. The numbers in parentheses are t-statistics based on robust

standard errors clustered at the firm level. *, **, and *** indicate statistical significance at the

10%, 5%, and 1% levels, respectively.

	1 Ln($Fee)	2 %Fee
GS	0.27**	0.76**
	(1.97)	(2.43)
GS×Regd broker	-0.52***	-0.88**
	(-3.25)	(-2.44)
Regd broker	0.33***	0.69***
	(3.44)	(3.52)
I_FirmAge>5	0.03	-0.17
	(0.49)	(-1.14)
#Investors	0.00	-0.00
	(0.53)	(-1.32)
Ln($Offered)	0.74***	-0.36***
	(41.82)	(-8.31)
Long offering	-0.28***	-0.31*

	(-3.44)	(-1.66)
Business transaction	0.33***	0.68**
	(2.72)	(2.10)
Entrant	0.02	0.01
	(0.38)	(0.05)
Revenue FE	Yes	Yes
Year FE	Yes	Yes
Industry FE	Yes	Yes
State FE	Yes	Yes
N	4085	4085
R^2	0.63	0.32

Table 5
Effects of the JOBS Act on Small Business Financing

The table presents estimates from pooled OLS regressions of measures of success of general solicitation offerings and the offering method. The sample includes firms doing GS and non-GS offerings. We use the following specification:

$$y_{i,t} = \alpha_0 + \alpha_1 GS_{i,t} + \alpha_2 Control_{i,t} + \alpha_3 Year_t + Fixed\ Effects_{j(i),t} + \varepsilon_{i,t}$$

where the variables are for a firm i in each deal t. The dependent variable in column (1) is *Success Rate* = (Total amount sold / Total offering amount); in column (2), *Ln(1+$Sold)* = ln(1+Total amount sold). *GS* equals one if the firm uses GS; it equals zero otherwise. Appendix A defines the variables. The numbers in parentheses are t-statistics based on robust standard errors clustered at the firm level. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	1 Success Rate	2 Ln(1+$Sold)
GS	-0.21***	-2.26***
	(-16.89)	(-12.15)
GS× Regd broker	0.13***	1.28***
	(5.99)	(4.09)
GS× Unregd broker	0.04	-1.08**
	(1.55)	(-2.41)
GS× Entrant	0.04***	-0.94***
	(2.68)	(-4.33)
Regd broker	-0.13***	-0.79***
	(-13.35)	(-7.66)
Unregd broker	-0.17***	-2.12***
	(-7.70)	(-9.21)
I_FirmAge>5	0.01	0.09**
	(1.20)	(2.04)
#Investors	0.01***	0.07***
	(53.99)	(55.33)
Ln($Offered)	-0.02***	0.78***
	(-14.72)	(74.75)

Long offering	-0.17***	-0.95***
	(-29.93)	(-12.12)
Business transaction	0.18***	0.78***
	(22.60)	(7.56)
Entrant	-0.03***	-0.46***
	(-8.64)	(-12.57)
Revenue FE	Yes	Yes
Year FE	Yes	Yes
Industry FE	Yes	Yes
State FE	Yes	Yes
N	60925	60925
R^2	0.26	0.39

Table 6

Success and Cost of General Solicitation

The table reports results on the relation between measures of success of general solicitation

offerings, brokerage commissions and use of a registered or unregistered broker. The sample

includes GS and non-GS offerings. We use the following specification:

$$y_{i,t} = \alpha_0 + \alpha_1 GS_{i,t} \times \%Fee_{i.t} + \alpha_2 GS_{i,t} + \alpha_3 \%Fee_{i.t} + \alpha_4 Controls_{i,t} + \alpha_5 Year_t$$

$$+ \ Fixed \ Effects_{j(i),t} + \varepsilon_{i,t}$$

The dependent variable is *Success Rate* = (Total amount sold / Total offering amount),

Ln(1+$Sold)=ln(1+Total amount sold), or *Ln(1+Net proceeds)* = Ln(1+ Total amount sold -

Sales Commissions - Finders' Fees). *GS* equals one if a firm uses GS, and zero otherwise. *Regd*

broker equals one if the filing has a registered broker, zero for an unregistered broker (also

known as finder). *%Fee* = (Sales Commissions + Finders' Fees) / Total offering amount.

Controls are issuer *Revenue FE, I_FirmAge>5, #Investors, Ln($Offered), Long offering,*

BusinessTransaction, and *Entrant*. Column (1) is for the full sample of offerings, and columns

(2) - (5) are for the subsample of offerings that employ a broker. The numbers in parentheses are t-statistics based on robust standard errors clustered at the firm level. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	1 Ln(1+Net proceeds)	2 Success Rate	3 Ln(1+$Sold)	4 Success Rate	5 Ln(1+$Sold)
GS	-2.87***	-0.18***	-2.83***	-0.13**	-4.03***
	(-22.37)	(-5.99)	(-6.86)	(-2.26)	(-4.91)
%Fee		-0.01*	-0.24***	-0.00	-0.27***
		(-1.90)	(-6.81)	(-0.19)	(-3.89)
GS×%Fee		0.01**	0.07	-0.01	0.13
		(2.02)	(1.17)	(-0.73)	(1.04)
GS× Regd broker	2.92***			-0.08	1.80**
	(15.83)			(-1.24)	(1.99)
Regd broker	0.35***			0.09*	1.19***
	(5.47)			(1.73)	(2.64)
GS× Unregd broker	3.11***				
	(8.50)				
Unregd broker	0.58***				
	(2.65)				
Regd broker ×%Fee				-0.01	0.02
				(-1.17)	(0.23)
GS×Regdbroker×%Fee				0.02***	-0.04
				(2.78)	(-0.28)
Controls	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes
State FE	Yes	Yes	Yes	Yes	Yes
N	59618	4085	4085	4085	4085
R^2	0.39	0.44	0.44	0.45	0.46

Table 7

Venture Capital (VC) Funding and Exit via IPO or Acquisition

Panel A presents marginal effects from logit regressions of VC funding (columns (1) and 2)) or successful exits via IPO or acquisition (columns (5) and 6)). Specifically, the "VC funding" ("IPO/Acquired") variable indicates whether a firm secures VC financing (exits via an IPO or is acquired) within three years of its first filing for the first Form D round. Columns (3) and (4) report the marginal effects from a Poisson regression of the number of VC funding rounds a firm secures within three years of its first filing for the first Form D round. The analysis uses IPO and M&A data from Audit Analytics and venture capital data from VentureXpert, both covering the period from 2008 to 2024. The regression specification and control variables are the same as in Table 5, and singletons have been excluded. The last row (labeled 'Ymean') reports the mean value of the dependent variable. The numbers in parentheses are t-statistics based on robust standard errors clustered at the firm level. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively. Panel B shows similar regressions where the Regd broker and Unregd broker variables are replaced by Success rate and Ln(1+$Sold).

Panel A: GS, VC Funding and Exit Outcomes

	1 VC funding	2 VC funding	3 # VC funding rounds	4 # VC funding rounds	5 IPO/Acquired	6 IPO/Acquired
GS	-0.06***	-0.06***	-0.23***	-0.22***	-0.02*	-0.02*
	(-7.31)	(-6.99)	(-5.51)	(-5.23)	(-1.75)	(-1.92)
Regd broker	-0.04***	-0.04***	-0.07	-0.07	0.01	0.01
	(-5.28)	(-5.12)	(-1.22)	(-1.13)	(1.04)	(1.09)
Unregd broker	-0.07***	-0.06***	-0.24***	-0.23***	-0.03**	-0.04***
	(-5.34)	(-4.60)	(-4.08)	(-3.50)	(-2.23)	(-2.92)

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	1	2	3	4	5	6
GS×Regd broker		0.01		-0.02		-0.01
		(0.58)		(-0.61)		(-0.39)
GS×Unregd broker		0.00		-0.01		0.05
		(0.10)		(-0.37)		(1.46)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
State FE	Yes	Yes	Yes	Yes	Yes	Yes
N	60790	60790	60925	60925	60873	60873
Pseudo R^2	0.14	0.14			0.12	0.12
Ymean	0.15	0.15	0.51	0.51	0.16	0.16

Panel B: Funding Success under GS, VC Funding and Exit Outcomes

	1	2	3	4	5	6
	VC funding	VC funding	# VC funding rounds	# VC funding rounds	IPO/Acquired	IPO/Acquired
GS	-0.03***	-0.04***	-0.14***	-0.16***	-0.01	-0.01
	(-2.93)	(-4.06)	(-2.62)	(-3.36)	(-0.65)	(-1.17)
Success Rate	0.12***		0.46***		0.08***	
	(18.62)		(13.13)		(12.52)	
Ln(1+$Sold)		0.02***		0.08***		0.01***
		(11.17)		(8.15)		(8.18)
GS× Success Rate	0.025		0.089		-0.029	
	(1.01)		(0.72)		(-1.42)	
GS× Ln(1+$Sold)		-0.004		-0.032**		-0.003**
		(-1.51)		(-2.08)		(-2.50)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
State FE	Yes	Yes	Yes	Yes	Yes	Yes
N	60790	60790	60925	60925	60873	60873
Pseudo R^2	0.15	0.15			0.12	0.12
Ymean	0.15	0.15	0.51	0.51	0.16	0.16

Table 8

Propensity Score Matching (PSM) Analysis

The table shows a set of PSM analyses to examine the effect of Title II on fundraising by small businesses. Panel A compares switchers (i.e., firms that complete a non-GS offering post-JOBS Act and switch to GS for the next offering post-JOBS Act) and their matched stayers (i.e., firms that complete a non-GS offering post-JOBS Act and stay with non-GS for the next offering post-Act). Panel B compares switchers (i.e., firms that complete a non-GS offering pre-JOBS Act and switch to GS for the next offering post-JOBS Act) and their matched stayers (i.e., firms that complete a non-GS offering pre-JOBS Act and stay with non-GS for the next offering post-Act). We match each switcher (i.e., treated) offering to a stayer (i.e., control) offering from the same industry and same year using the propensity score matching (PSM) method. We match each switcher offering to its nearest neighbor in the sample of stayers that has the closest propensity scores obtained from logit regressions with replacement using a caliper of 0.25 standard deviations of the estimated propensity scores on the common support. Matching is based on the following variables: indicators for successful completion of previous offering, use of different type of broker (registered, unregistered, both or neither) as in the previous offering, issuer *Revenue FE, I_FirmAge>5, #Investors, Ln($Offered), Long offering, BusinessTransaction, Entrant*, and fixed effects for year and state of firm location. Each panel shows descriptive statistics of the later offering in samples of switchers and stayers (mean values and significance level based on t-statistics of the differences), followed by coefficient estimates and t-statistics (in parentheses) from regressions of Success Rate and capital raised (i.e., Ln(1+$Sold)) in the later offering. The numbers in parentheses are t-statistics based on robust standard errors clustered at

the firm level. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel A: Analysis of Switchers (i.e., Treated) and Matched Stayers (i.e., Control) Post-Act

Mean values of	Switcher (Treated, N= 263)	Stayer (Control, N= 263)	t-statistic
lag_successful_completion	0.32	0.32	0.09
lag_Regd broker	0.06	0.07	-0.34
lag_Unregd broker	0.03	0.03	0.25
0<Revenue≤1m	0.10	0.09	0.44
1m<Revenue≤5m	0.14	0.13	0.51
5m<Revenue≤25m	0.05	0.03	0.67
25m<Revenue≤100m	0.01	0.01	-0.45
I_FirmAge>5	0.38	0.51	-2.91***
#Investors	10.40	11.68	-0.88
Ln($Offered)	14.97	14.99	-0.08
Long offering	0.08	0.10	-0.75
Business transaction	0.03	0.02	1.08
Entrant	0.00	0.00	.

	1 Success Rate	2 Ln(1+$Sold)
Switcher to GS	-0.22***	-2.71***
	(-6.22)	(-5.71)
Switcher to GS × Regd broker	0.05	-0.61
	(0.45)	(-0.45)
Switcher to GS × Unregd broker	0.02	2.15
	(0.10)	(0.66)
Regd broker	-0.10	0.59
	(-1.05)	(0.57)
Unregd broker	-0.19	-4.40*
	(-0.96)	(-1.90)
Controls	Yes	Yes
Year FE	Yes	Yes
Industry FE	Yes	Yes
State FE	Yes	Yes
N	526	526
R²	0.38	0.47

Panel B: Analysis of Switchers (i.e., Treated) and Matched Stayers (i.e., Control) Pre- and Post-Act

Mean values of	Switcher (Treated, N= 138)	Stayer (Control, N= 138)	t-statistic
lag_successful_completion	0.34	0.32	0.38
lag_Regd broker	0.04	0.04	0.00
lag_Unregd broker	0.04	0.04	0.31
0<Revenue≤1m	0.07	0.05	0.75
1m<Revenue≤5m	0.12	0.12	0.18
5m<Revenue≤25m	0.06	0.02	1.54
25m<Revenue≤100m	0.04	0.03	0.34
I_FirmAge>5	0.54	0.61	-1.22
#Investors	11.39	13.79	-1.20
Ln($Offered)	15.17	15.40	-1.14
Long offering	0.07	0.09	-0.65
Business transaction	0.03	0.01	0.82
Entrant	0.00	0.00	.

	1 Success Rate	2 Ln(1+$Sold)
Switcher to GS	-0.13***	-1.59***
	(-2.61)	(-3.10)
Switcher to GS × Regd broker	-0.12	-0.55
	(-0.63)	(-0.31)
Switcher to GS × Unregd broker	0.03	0.21
	(0.11)	(0.08)
Regd broker	-0.02	-0.18
	(-0.15)	(-0.21)
Unregd broker	-0.21	-1.92*
	(-1.14)	(-1.67)
Controls	Yes	Yes
Year FE	Yes	Yes
Industry FE	Yes	Yes
State FE	Yes	Yes
N	276	276
R²	0.40	0.52

Table 9

Identification: Subsample Analysis

The table reports results on the relation between the success rate of private placements and the offering method for a subsample of 162 firms that make both GS and non-GS offerings in the same year, for a total of 192 and 208 offerings of the two types, respectively. The regression specification follows Table 5. Each panel shows the results for the full subsample of such offerings, followed by subsamples for issuers that switched from GS to nonGS, and from nonGS to GS. The regressions in Panel A (B) include fixed effects for industry and state (firm). Appendix A defines the variables. The numbers in parentheses are t-statistics based on robust standard errors clustered at the firm level. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel A: Full and Subsample Partitioned by Whether the First Offering Uses GS or not

	Full Sample		GS →nonGS		nonGS →GS	
	1	2	3	4	5	6
	Success Rate	Ln(1+$Sold)	Success Rate	Ln(1+$Sold)	Success Rate	Ln(1+$Sold)
GS	-0.12***	-1.78***	-0.07	-1.75*	-0.18**	-2.49***
	(-2.75)	(-3.28)	(-0.98)	(-1.87)	(-2.50)	(-2.96)
GS× Regd broker	-0.12	-2.19	-0.25	-1.46	-0.18	-2.63
	(-1.11)	(-1.64)	(-1.43)	(-0.68)	(-1.03)	(-1.38)
GS× Unregd broker	0.09	1.95	0.17	5.24*	0.35**	0.55
	(1.28)	(1.07)	(0.96)	(1.93)	(2.29)	(0.21)
Regd broker	-0.13	-0.65	-0.09	-0.73	-0.10	-0.19
	(-1.64)	(-0.65)	(-0.65)	(-0.36)	(-0.94)	(-0.18)
Unregd broker	-0.41***	-3.91**	-0.31	-3.42	-0.57***	-6.86**
	(-3.96)	(-2.43)	(-1.37)	(-1.41)	(-3.19)	(-2.57)

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	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
State FE	Yes	Yes	Yes	Yes	Yes	Yes
N	400	400	165	165	235	235
R^2	0.47	0.49	0.67	0.70	0.52	0.64

Panel B: Within-firm Difference in Success Rate and Amount Sold

	Full Sample		GS →nonGS		nonGS →GS	
	1	2	3	4	5	6
	Success Rate	Ln(1+$Sold)	Success Rate	Ln(1+$Sold)	Success Rate	Ln(1+$Sold)
GS	-0.13**	-2.28***	-0.09	-2.81**	-0.15**	-1.80*
	(-2.47)	(-2.82)	(-1.08)	(-2.33)	(-2.09)	(-1.69)
GS× Regd broker	-0.15	-0.76	0.09	3.37**	-0.34	-3.39
	(-0.97)	(-0.41)	(0.46)	(2.09)	(-1.58)	(-1.20)
GS× Unregd broker	0.00	-0.95	-0.00	1.83	-0.04	-4.88
	(0.02)	(-0.30)	(-0.00)	(0.82)	(-0.14)	(-0.69)
Regd broker	-0.13	0.16	-0.26	-0.27	-0.03	0.58
	(-0.77)	(0.08)	(-0.90)	(-0.12)	(-0.13)	(0.21)
Unregd broker	0.02	2.51	0.02	-0.78	0.00	3.25
	(0.07)	(0.60)	(0.13)	(-0.30)	(0.01)	(0.58)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
N	400	400	165	165	235	235
R^2	0.71	0.68	0.72	0.72	0.72	0.70

Table 10

Robustness Checks

The table reports the coefficients of *GS* from several robustness tests performed on the success of general solicitation offerings for the subsample of offerings with positive dollar amount sold (Panel A) and specifications with firm fixed effects (Panel B) and the % of registered and unregistered brokers (Panel C). Panel D shows regressions controlling for the number of officers and directors (NOD) and Days to Filing. Column 1 shows a regression similar to column 2 of Table 3. Columns 2-6 show regressions similar to columns (1) and (2) of Table 5 and (2), (4) and (6) of Table 7. Panel E shows regressions that also control for the number of states solicited (#States_solicited) and whether other countries are solicited (Foreign_solicited) for the subsample where solicitation data is available. The samples in Panels D and E includes offerings of all types of securities. Regressions similar to columns (2) to (6) of Panel D are shown in Panel F for offerings of equity only, in Panel G for debt only, and in Panel H for debt only or debt and other securities, but no equity. In all the panels, the sample consists of offerings after Title II. The regression specification and control variables are the same as in Table 5, except as noted above. The numbers in parentheses are t-statistics based on robust standard errors clustered at the firm level. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

| | Panel A: Positive Amount Sold | | Panel B: Firm FE | |
	Success Rate	Ln(1+$Sold)	Success Rate	Ln(1+$Sold)
GS	-0.13***	-0.49***	-0.10***	-1.54***
	(-14.09)	(-12.33)	(-3.24)	(-3.70)
GS× Regd broker	0.10***	0.65***	-0.06	-0.56
	(4.38)	(5.35)	(-0.93)	(-0.57)
GS× Unregd broker	-0.05	-0.02	0.01	0.61
	(-1.04)	(-0.10)	(0.11)	(0.38)
Regd broker	-0.12***	-0.75***	-0.03	-0.22
	(-11.53)	(-7.87)	(-1.40)	(-1.04)

Unregd broker	-0.13***	-0.81***	-0.02	-0.33
	(-4.59)	(-4.41)	(-0.63)	(-0.84)
Controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	No	No
State FE	Yes	Yes	No	No
Firm FE			Yes	Yes
N	54855	54855	60925	60925
R^2	0.18	0.81	0.86	0.91

Panel C: Composition of Brokers and Finders

	Success Rate	Ln(1+$Sold)
GS	-0.22***	-2.51***
	(-17.57)	(-13.43)
%Regd broker	-0.15***	-1.22***
	(-16.72)	(-10.82)
GS×%Regd broker	0.15***	1.81***
	(7.07)	(5.85)
Controls	Yes	Yes
Year FE	Yes	Yes
Industry FE	Yes	Yes
State FE	Yes	Yes
N	60925	60925
R^2	0.26	0.39

Panel D: Regressions Controlling for NOD and Days to Filing for Offerings of All Types of Securities

	1. Logit: ME: GS offering	2 Success Rate	3 Ln(1+$Sold)	4 VC funding	5 # VC funding rounds	6 IPO/ Acquired
GS		-0.13***	-1.92***	-0.07***	-0.26***	-0.02**
		(-20.85)	(-22.73)	(-9.42)	(-5.71)	(-2.48)
Days to Filing	-0.01***	0.07***	1.35***	0.00	0.00	-0.00
	(-14.55)	(70.15)	(87.58)	(1.49)	(0.36)	(-0.02)
NOD	-0.01***	0.01***	0.10***	0.01***	0.05***	0.01***
	(-5.96)	(16.92)	(12.70)	(8.72)	(10.63)	(11.15)
Debt_ offering	0.01**	-0.11***	-0.20***	0.01	0.12***	-0.00
	(2.47)	(-26.00)	(-5.31)	(1.35)	(3.79)	(-0.09)
Controls	Yes	Yes	Yes	Yes	Yes	Yes

	Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Ind. FE	Yes	Yes	Yes	Yes	Yes	Yes
State FE	Yes	Yes	Yes	Yes	Yes	Yes
N	78583	78583	78583	78564	78583	78345
R^2		0.34	0.55			

Panel E: Regressions Controlling for #States_solicited and Foreign_solicited for Offerings of All Types of Securities for the Subsample with Solicitation Data Available

	1. Logit: ME: GS offering	2 Success Rate	3 Ln(1+$Sold)	4 VC funding	5 # VC funding rounds	6 IPO/ Acquired
GS		-0.06**	-1.68***	-0.06***	-0.28***	-0.04**
		(-2.39)	(-4.73)	(-4.34)	(-3.10)	(-2.27)
Days to Filing	-0.01***	0.08***	1.85***	0.01**	0.01	-0.00
	(-2.72)	(20.12)	(32.03)	(2.26)	(0.48)	(-0.92)
NOD	-0.01***	0.011***	0.092***	0.003**	0.020***	0.001
	(-2.72)	(3.55)	(3.43)	(2.04)	(2.59)	(0.61)
Debt_ offering	0.00	-0.01	0.07	-0.02*	-0.01	0.00
	(0.08)	(-1.02)	(0.53)	(-1.73)	(-0.15)	(0.36)
#States_ solicited	0.004***	-0.002***	-0.021***	0.000	-0.001	0.001*
	(21.14)	(-6.15)	(-7.02)	(1.07)	(-1.12)	(1.76)
Foreign_ solicited	0.06***	0.01	-0.03	0.02	-0.15**	0.02
	(3.30)	(0.40)	(-0.14)	(1.03)	(-2.39)	(1.17)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Ind. FE	Yes	Yes	Yes	Yes	Yes	Yes
State FE	Yes	Yes	Yes	Yes	Yes	Yes
N	5579	5618	5618	5217	5618	5257
R^2		0.45	0.64			

Panel F: Equity Only Offerings

	1 Success Rate	2 Ln(1+$Sold)	3 VC funding	4 # VC funding rounds	5 IPO/ Acquired
GS	-0.15***	-1.95***	-0.08***	-0.31***	-0.02**
	(-18.79)	(-18.91)	(-6.07)	(-3.73)	(-2.46)
Days to Filing	0.077***	1.434***	0.002	0.005	0.000
	(65.91)	(81.74)	(1.58)	(0.71)	(0.33)
NOD	0.013***	0.094***	0.006***	0.041***	0.007***
	(14.10)	(10.94)	(6.25)	(8.76)	(9.11)

Controls	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Ind. FE	Yes	Yes	Yes	Yes	Yes
State FE	Yes	Yes	Yes	Yes	Yes
N	48224	48224	48217	48224	48055
R^2	0.345	0.575			

Panel G: Debt Only Offerings

	1	2	3	4	5
	Success Rate	Ln(1+$Sold)	VC funding	# VC funding rounds	IPO/ Acquired
GS	-0.062***	-1.586***	-0.100***	-0.218	0.010
	(-3.02)	(-5.76)	(-3.20)	(-1.34)	(0.52)
Days to Filing	0.060***	1.154***	-0.000	-0.004	0.001
	(14.22)	(21.03)	(-0.13)	(-0.24)	(0.32)
NOD	0.015***	0.106***	0.009***	0.040***	0.007***
	(6.24)	(3.50)	(4.10)	(4.87)	(3.90)
Controls	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes
State FE	Yes	Yes	Yes	Yes	Yes
N	5177	5177	4841	5177	4827
R^2	0.316	0.462			

Panel H: Offerings of Debt Only or Debt and Other Securities, But No Equity

	1	2	3	4	5
	Success Rate	Ln(1+$Sold)	VC funding	# VC funding rounds	IPO/ Acquired
GS	-0.07***	-1.59***	-0.08***	-0.24	0.01
	(-4.45)	(-7.72)	(-3.20)	(-1.41)	(0.73)
Days to Filing	0.066***	1.023***	-0.000	-0.009	-0.000
	(22.73)	(28.85)	(-0.16)	(-0.62)	(-0.14)
NOD	0.018***	0.116***	0.011***	0.058***	0.010***
	(10.66)	(6.37)	(5.78)	(6.91)	(6.03)
Controls	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Ind. FE	Yes	Yes	Yes	Yes	Yes

State FE	Yes	Yes	Yes	Yes	Yes
N	12314	12314	12121	12314	12026
R²	0.284	0.430			

Appendix A

Variable Definitions

The table defines the main variables used in the study. The data comes from the Audit Analytics

Private Placement Database.

Variable	Definition
Revenue	This indicates Revenue Range disclosed Item 5, Form D
Revenue=0	= 0 if revenue range is "No Revenues"
0<Revenue≤1m	= 1 if revenue range is "$1 - $1,000,000"
1m<Revenue≤5m	= 2 if revenue range is "$1,000,001 - $5,000,000"
5m<Revenue≤25m	= 3 if revenue range is "$5,000,001 - $25,000,000"
25m<Revenue≤100m	= 4 if revenue range is "$25,000,001 - $100,000,000"
Revenue>100m	= 5 if revenue range is "Over $100,000,000"
NotDiscloseRevenue	=1 if revenue range is "Decline to Disclose" or "Not Applicable", zero otherwise
$Offered	The dollar amount of securities being offered. Item 13, Form D
#Investors	The total number of investors who have already invested in the offering. Item 14, Form D
Long offering	=1 if the issuer intends the offering to last more than one year, zero otherwise. Item 8, Form D
GS	=1 if an offering uses GS, zero otherwise
Post	=1 post-Title II, zero pre-Title II of the JOBS Act
Business transaction	=1if the offering is in made in connection with a business combination transaction, zero otherwise. Item 10, Form D
Entrant	=1 for the earliest Form D filing by a given firm in the database, zero otherwise.
Success Rate	= (Total amount sold / Total offering amount)
$Sold	The dollar amount of securities sold. Item 13, Form D
$Commissions	The dollar amount of Sales Commission expenses, including estimates. Item 15, Form D
$Finders' fees	The dollar amount of Finders' Fee expenses, including estimates. Item 15, Form D

$Fee	*$Commissions + $Finders' fees*. Item 15 of Form D; in the subsample of offerings that use a broker.
Use Broker or Finder	= 1 if issuer has positive fee; zero otherwise.
%Fee	*= $Fee / $Offered;* in the subsample of offerings that use a broker.
$Proceeds paid	Proceeds paid to executive officers, directors, or promoters in $. Item 16 of Form D
I_FirmAge>5	= 1 if issuer age is over five years; zero otherwise
$Net proceeds	*= $Sold - $Fee*
VC funding	= 1 for an issuer that receives VC financing by the end of 2024, 0 otherwise.
# VC funding rounds	= the largest number of VC funding rounds a firm secures by the end of 2024.
IPO or Acquired	= 1 if a Form D issuer goes public or is acquired by the end of 2024, 0 otherwise. We use exact matching on issuers' CIK codes or fuzzy matching on issuer name and require at least a 97% match rate, after first matching on state or zip code (if state or zip code information is available in a database).
Regd broker	= 1 if the filing has a broker with a CRD number (i.e., a registered broker), 0 otherwise.
Unregd broker	= 1 if the filing has an unregistered broker (i.e., finder), 0 otherwise.
#Regd Brokers	The number of brokers with a CRD (Central Registration Depository) number, a unique identifier assigned by FINRA to individuals and firms in the financial industry.
#UnRegd Brokers	The number of brokers without CRD numbers.
%Regd brokers	*= #Regd brokers / (#Regd Brokers + #Unregd Brokers)*
NOD	The number of executive officers (including promoters) and directors. Item 3, Form D.
#States_solicited	= The number of states solicited in the offering. Item 12, Form D.
Foreign_ solicited	= 1 if foreign countries are solicited in the offering; 0 otherwise. Item 12, Form D.
Days to Filing	=ln (Number of days from the date of first sale to the filing date).
Debt_offering	= 1 if Form D includes any debt offerings, 0 otherwise.
State Fixed Effects	Dummy variable for issuer state, as disclosed in Item 2 of Form D.
Industry Fixed Effects	Dummy variable for industry, as disclosed in Item 4 of Form D.

Appendix B

Top 10 brokers

The table lists top 10 sales compensation recipient company names in GS and non-GS offerings in our sample by $Sold.

	GS offerings		Non-GS offerings
1	J.P. Morgan Securities, LLC	1	Goldman, Sachs & Co.
2	FTP Securities, LLC	2	KKR Capital Markets, LLC
3	Source Capital Group, Inc.	3	Dbo Partners, LLC
4	Fusion Analytics Securities, LLC	4	Bofa securities, Inc.
5	Americas Executions, LLC	5	Jefferies, LLC
6	Alliance Partnership Management, LLC	6	Brooklands Capital Strategies Bd, LP
7	Growth Capital Services, Inc.	7	Merrill Lynch, Inc.
8	Race Rock Capital LLC	8	S F Sentry securities, inc.
9	Morgan Stanley	9	Morgan Stanley
10	Arbor Advisors LLC	10	J.P. Morgan Securities, LLC

Appendix C

Examples of Advertising in General Solicitation Offerings

       Here are a few examples of advertising in general solicitation offerings, identified via internet searches.

1. A press release by the issuer, reported by PRnewswire:[32] "Entoro Capital, LLC (Entoro) announces the first non-fungible tokens (NFT) issued as a security under the Reg. D 506(c) offering exemption. The offer to Accredited Investors will conclude on Friday, October 8, 2021, in Austin Texas at the Texas Blockchain Summit VIP dinner. NFTs will be sold online through Entoro's proprietary securities offering platform, OfferBoard".

2. News coverage of the offering by an online industry newsletter for the legal profession.[33] It reports that "on September 21, 2022, Reynen Court, the so-called app store for legal technology, launched a general solicitation stock offering in order to bring on individual lawyers and "legal technology enthusiasts" as investors in the company. The offering, which is described at invest.reynencourt.com, is being made under Rule 506(c) of the federal securities laws, …. Reynen Court said this online offering "is groundbreaking in its use of social media and other forms of general solicitation to attract individual shareholders to a mission to help define, adopt,

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[32] Entoro Capital announces the first NFT security offering, PRNewswire, October 1, 2021.

[33] Reynen Court, the 'app store of legal,' launches online stock offering to bring on individual investors, LawNext.com, September 21, 2022.

and support technology standards designed to drive down costs for both the buyers and sellers of

technology."

APPENDIX   D

Additional Figures

The figures show the percentage of offerings with a broker, finder, both, or neither (i.e., direct

offering), and GS in each round post-JOBS Act.

Subsample of offerings with a broker or finder