

Report to Congress on Regulation A / Regulation D Performance
As Directed by the House Committee on Appropriations in
H.R. Rept. No. 116-122



This is a report by the staff of the U.S. Securities and Exchange Commission (SEC). The Commission has expressed no view regarding the analysis, findings, or conclusions contained herein.

August 2020

Executive Summary

Congress directed the staff of the Securities and Exchange Commission (Commission or SEC) to report on the performance of Regulation A and Regulation D offerings. In its Joint Explanatory Statement accompanying the Financial Services and General Government Appropriations Act,¹ Congress states:

The Committee is concerned about the implications of private and quasi-public market growth on public markets and investors. The Committee believes public markets offer certain valuable benefits to investors that private and quasi-public markets do not provide, including more robust transparency, better pricing efficiency, more accurate valuations, deeper levels of liquidity and lower trading costs, and stronger accountability mechanisms. The Committee directs the SEC's Division of Economic and Risk Analysis to study the performance of Reg A+ and Reg D offerings and within 180 days issue a public report comparing the performance of Reg A+ and Reg D offerings versus all other offerings.

In response to the Committee's directive, this Report presents the SEC staff's analysis of available data and evidence on the state and performance of exempt offerings under Regulation A and Regulation D during the time periods noted for each of these types of offerings.² The time span of our analysis preceded the onset of the global COVID-19 pandemic, which is expected to have a negative impact on offering activity.³

¹ See H. Committee Print of Consolidated Appropriations Act, 2020, Comm. on Approp., 116 Cong, 2d Sess. No. 38-678 (Jan. 2020), at 652, available at: <https://www.govinfo.gov/content/pkg/CPRT-116HPRT38678/pdf/CPRT-116HPRT38678.pdf>. The Joint Explanatory Statement (Joint Explanatory Statement) accompanying Division C of the Consolidated Appropriations Act, 2020 addressed reporting directives to the SEC generally. The enactment of appropriations for the Commission on December 20, 2019, confirmed the directive to prepare this report. See Consolidated Appropriations Act, 2020, Pub. Law No. 116-93, 133 Stat. 2317 (2020).

² Staff in the Division of Economic Risk and Analysis (DERA) was primarily responsible for the data analysis in this report.

³ See, e.g., S.P. Kothari, *DERA Economic and Risk Outlook*, U.S. SEC. AND EXCHANGE COMM'N (Apr. 23, 2020), available at https://www.sec.gov/files/DERA_Economic-and-Risk-Outlook-Report_Apr2020.pdf.

Main Findings

Regulation D Offerings

Our analysis of Regulation D offerings is based on available data from electronic filings for 2009 through 2019, except where noted elsewhere.

- As a capital-raising tool, Regulation D accounts for a large share of the offering market and provides a robust choice for issuers seeking to raise capital.
- Over the past decade, there has been a steady increase in the number of offerings and amounts raised in Regulation D offerings. In 2019, over \$1.5 trillion was reported raised under Regulation D.
- By comparison, during the same timeframe, approximately \$1.2 trillion was raised through registered offerings, and just over \$1 billion was reported raised under Regulation A during the same timeframe.
- Private funds raised more than \$11 trillion of the \$15.5 trillion sold in Regulation D markets during 2009 through 2019. However, non-fund issuers dominate in terms of number of offerings.
- Private funds for which data is available exhibited strong performance, with significant variation across funds, as shown in greater detail in Section III.B.2. However, this period has also coincided with favorable market performance, resulting in high market portfolio returns.

Note: The distinct risk and illiquidity profile of private funds, as well as differences in data sources and methodologies for measuring performance, make direct comparisons with mutual fund and market portfolio returns difficult.

- On the basis of our analysis of a small subset of public companies that conducted Regulation D offerings during the timeframe, and in line with prior studies, we find that such companies tend to be smaller, less profitable, and more financially constrained than public companies conducting registered offerings. The companies relying on Regulation D grew faster one year after the offering but had lower profitability and stock returns, compared to public companies undertaking registered offerings.

Regulation A Offerings

Our analysis of Regulation A offerings is based on data from the effective date of the amendments that dramatically expanded it in mid-2015 (also termed “Regulation A+”) through the end of 2019, except where noted elsewhere.

- As a capital-raising tool, Regulation A met with somewhat mixed offering success during this period. While the use of Regulation A has increased over time, amounts raised (as reported) were generally below amounts sought.

Note: Proceeds information is incomplete because of lags in reporting and most offerings being made on a continuous basis.

- Among Regulation A offerings, we find Tier 2 accounted for most of the issuer activity, successful offerings, and growth in proceeds. (See discussion of Tier 2 in Section II.B. below).
- Among issuers with some offering proceeds, close to 80% of issuers continued to file reports on the Commission’s Electronic Data Gathering, Analysis, and Retrieval system (EDGAR) one year after the offering, and just under one-half of issuers remain there three years after the offering.

- The typical issuer with available post-offering data experienced a considerable increase in assets and revenues, but not in profitability, following the offering. The magnitude of the jump is generally related to the small initial size and early stage of the typical issuer.
- A minority of issuers that raised capital under Regulation A had a secondary trading market for their securities (on the over-the-counter (OTC) market or a stock exchange). Among those issuers, typical performance was below performance benchmarks; however, underperformance was not statistically significant.

Note: Our analysis and inference are limited by small sample size, data noise, and self-selection of issuers into the Regulation A market.

Summary of Conclusions

Overall, our analysis confirms that Regulation D accounted for significantly more capital raising than Regulation A, with the difference on the order of magnitude of 1000x in a typical year during the examined period. Although the use of Regulation D by private funds, which are ineligible under Regulation A, plays a significant role, Regulation D use by non-fund issuers also significantly outpaced Regulation A use. Excluding funds, most of the issuers relying on either exempt offering method are small, unlisted companies, which considerably limits data availability. However, according to available data, some of the operating companies using these offering methods exhibit considerable growth potential.

I. Introduction

Regulation A and Regulation D are two sets of rules that enable issuers to conduct an offering that is exempt from the registration requirements of the Securities Act of 1933 (the “Securities Act”).⁴ Over the past decade, markets for securities that are exempt from registration have experienced significant growth.

In response to the reporting directive from Congress,⁵ the Commission’s staff has studied the performance of Regulation A and Regulation D offerings. In this report, we analyze the performance of these offerings. Except where specified otherwise, the analysis is based on available data from electronic filings through the most recently completed calendar year (2009 through 2019 for Regulation D and June 2015 through December 2019 for Regulation A), which coincided with a period of generally favorable macroeconomic and market performance. Subsequent to the end of the period analyzed in this report, as of August 2020, the U.S. has experienced significant macroeconomic and market dislocations related to the global effects of COVID-19 and the related response. These factors are expected to have a negative impact on offering activity, including under Regulation A and Regulation D, as well as on the likelihood of liquidity events, such as initial public offerings (IPOs), and the performance of these investments in 2020.

Some of the analysis in this study incorporates the findings of the Commission staff’s lookback review of Regulation A (published March 4, 2020), as called for in the 2015

⁴ For a discussion of the various exemptions from registration under the Securities Act, including Regulation A and Regulation D, see *Concept Release on Harmonization of Securities Offering Exemptions*, Release No. 33-10649 (Jun. 18, 2019) [84 FR 30460 (Jun. 26, 2019)].

⁵ See *supra* footnote 1.

Regulation A adopting release, and the findings of the biennial offering limit review, as required by Section 3(b)(5) of the Securities Act.⁶

Below is a summary of the characteristics and performance of Regulation A and Regulation D offerings.

Regulation D

- **Over the past decade, there has been a steady increase in Regulation D offerings.** As a capital-raising tool, Regulation D accounts for a large share of the offering market and provides a robust financing method for issuers seeking to raise capital. In 2017-2019, the Regulation D market surpassed the registered offering market based on the amount of reported proceeds. In 2019, Regulation D accounted for over \$1.5 trillion in reported proceeds. By comparison, in 2019 registered offerings accounted for approximately \$1.2 trillion in proceeds, and Regulation A accounted for just over \$1 billion in reported proceeds. Much like public capital markets, capital raising through Regulation D offerings has been pro-cyclical. Private funds raised the largest amount of financing in the Regulation D market during this period.
- **Private funds exhibited strong returns during this period.** While there is variance in mean and median returns, depending on the year and data source, the private fund asset class exhibited generally strong returns in absolute terms during this period. However, as noted above, this period also coincided with favorable market and mutual fund performance.

⁶ See U.S. SEC. AND EXCHANGE COMM’N, *Regulation A Lookback Study and Offering Limit Review Analysis* (2020), available at <https://www.sec.gov/files/regulationa-2020.pdf> (“Regulation A Lookback Report”).

As an important caveat, the distinct risk and illiquidity profile of private funds and data differences make it difficult to draw direct comparisons.

- **Among non-fund issuers in the Regulation D market, issuers in the Banking/Financial, Technology, and Real Estate industries accounted for the most capital raised.** As more than 95% of non-fund Regulation D issuers are private companies, data on their performance are scarce. We present available evidence on the performance of investments in private companies. We then turn to the (small) subset of Regulation D issuers that are public companies and thus have performance data available. These issuers tend to be smaller, less profitable, and more financially constrained at the time of the Regulation D offering, compared to public companies conducting registered offerings. Reporting companies with Regulation D offerings grew faster but had lower profitability and stock returns one year after the offering than reporting companies undertaking registered offerings. However, selection bias is likely because these issuers tend to be smaller, less profitable, and more financially constrained at the time of the Regulation D offering, compared to public companies conducting registered offerings.
As an important caveat, the public company subset of Regulation D issuers is not representative of the much larger set of private companies relying on Regulation D.

Regulation A

- **As a capital-raising tool, Regulation A met with somewhat mixed offering success during this period.** While the use of Regulation A has increased over time, amounts reported raised were generally below amounts sought, with the caveat that proceeds information is incomplete because of the nature of observed reporting, as well as the fact

that most offerings were made on a continuous basis, with an increase in offering activity in later years.

- **Among Regulation A offerings, Tier 2 accounted for most of the issuer activity, successful offerings, and growth in proceeds.** Among issuers reporting some offering proceeds, close to 80% of issuers continued filing in EDGAR (including filings other than those required under Regulation A) a year after the offering, and just under one-half of issuers continued filing in EDGAR three years after the offering. Where data were available, the typical issuer experienced a considerable increase in assets and revenues, but not in profitability, following the offering. The magnitude of the jump is related to the small initial size and early stage of the typical issuer.
- **For the minority of Regulation A issuers that had a secondary trading market for their securities, stock returns after the offering were positively skewed, with means substantially higher than medians.** Typical performance, in absolute terms and in excess of the market index return, was below the performance of other considered groups of small issuers. The underperformance was not significant, although the power of the analysis was limited by very small sample size. Finally, with the caveat about the latency of potential violations, there have been few instances of civil cases or administrative proceedings involving Regulation A during this period.

The rest of the report is organized as follows: Section II presents the market and offering landscape and evidence on the offering and issuer characteristics for both Regulation A and Regulation D offerings; Section III presents available evidence on performance of Regulation A and Regulation D offerings and issuers; and Section IV provides our conclusions. In each

section below, we present the analysis of the Regulation D market first, given its much larger size, followed by the analysis of the Regulation A market.

II. Market and Offering Landscape

The existing regulatory framework and market practices permit a wide variety of methods for issuers to access external financing or realign their capital structure. Below we present an overview of the requirements of Regulation A and Regulation D, including recent rule changes, as well as the associated market practices and how they fit within the broader landscape of exempt and registered offerings.

Over the past several years, but particularly since the implementation of the Jumpstart Our Business Startups Act of 2012 (“JOBS Act”), the Commission has undertaken several rulemaking actions that involved changes to the framework for exempt offerings under Regulation A and Regulation D, as seen in Table 1 below.

Table 1. Recent Rulemaking Actions Involving Regulation A and Regulation D under the Securities Act

Date	Summary of Commission Action	Title	Citation
Jul. 2013	Adopted Rule 506(c) implementing Title II of the JOBS Act.	<i>Eliminating the Prohibition Against General Solicitation and General Advertising in Rule 506 and Rule 144A Offerings</i>	Release No. 33-9415 (July 10, 2013) [78 FR 44771 (July 24, 2013)]
Jul. 2013	Amended Rule 506 to disqualify certain “bad actors” under Rule 506 of Regulation D.	<i>Disqualification of Felons, Other “Bad Actors” from Rule 506 Offerings</i>	Release No. 33-9414 (July 10, 2013) [78 FR 44729 (July 24, 2013)]
Mar. 2015	Raised offering limits and made other changes to Regulation A to implement Title IV of the JOBS Act.	<i>Amendments for Small and Additional Issues Exemptions under the Securities Act (Regulation A)</i>	Release No. 33-9741 (Mar. 25, 2015) [80 FR 21806 (Apr. 20, 2015)] (“2015 Regulation A Release”)
Oct. 2016	Amended Rule 504 to increase the aggregate amount of securities that can be offered and sold in a 12-month period from \$1 million to \$5 million, and repealed Rule 505.	<i>Exemptions to Facilitate Intrastate and Regional Securities Offerings</i>	Release No. 33-10238 (Oct. 26, 2016) [81 FR 83494 (Nov. 21, 2016)]
Dec. 2018	Amended Regulation A to extend eligibility to reporting companies, implementing the mandate of Economic Growth, Regulatory Relief, & Consumer Protection Act of 2018.	<i>Amendments to Regulation A</i>	Release No. 33-10591 (Dec. 19, 2018) [84 FR 520 (Jan. 31, 2019)]

Jun. 2019	Published a concept release on the harmonization of the exempt offering framework.	<i>Concept Release on Harmonization of Securities Offering Exemptions</i>	Release No. 33-10649 (Jun. 18, 2019) [84 FR 30460 (Jun. 26, 2019)] (“Harmonization Concept Release”)
Dec. 2019	Proposed amendments to the accredited investor definition.	<i>Amending the “Accredited Investor” Definition</i>	Release No. 33-10734 (Dec. 18, 2019) [85 FR 2574 (Jan. 15, 2020)]
Mar. 2020	Proposed further amendments to simplify, harmonize, and improve aspects of the exempt offering framework.	<i>Facilitating Capital Formation & Expanding Investment Opportunities by Improving Access to Capital in Private Markets</i>	Release No. 33-10763 (Mar. 4, 2020) [85 FR 17956 (Mar. 31, 2020)] (“Harmonization Proposing Release”).

By allowing issuers to forgo the registration process, Regulation D affords issuers greater speed and flexibility of raising capital, reduced compliance costs, and a lower risk of sharing proprietary information with competitors. Raising capital under Regulation D may also enable issuers to retain a more concentrated ownership and control structure (including greater founder control over the company’s future decisions). Similar to Regulation D, Regulation A enables issuers to forgo the registration process and provide less extensive disclosures. Unlike Regulation D, as shown below, the Regulation A offering market is much smaller.

A. Regulation D

1. Institutional and Regulatory Background

Regulation D was adopted in 1982⁷ to provide a unified scheme for exempting certain securities offerings from the registration requirements of the Securities Act. It was designed to simplify existing rules and regulations to facilitate capital formation, particularly for small businesses, consistent with the protection of investors. At its inception, the Regulation D market was comprised of offerings undertaken in reliance on three rules: Rule 504, Rule 505, and Rule 506. Today, Regulation D offerings may be conducted under Rule 504, Rule 506(b), and Rule

⁷ *Revision of Certain Exemptions From Registration for Transactions Involving Limited Offers and Sales*, Release No. 33-6389 (Mar. 8, 1982) [47 FR 11251 (Mar. 16, 1982)].

506(c). Rule 505 was repealed, in conjunction with certain amendments to Rule 504, effective May 22, 2017.

Rule 504

Rule 504 of Regulation D provides an exemption from registration under the Securities Act for the offer and sale of up to \$5 million of securities in a 12-month period. Reporting companies, investment companies, and certain development-stage companies are ineligible to issue securities under Rule 504. In October 2016, the Commission adopted amendments to expand Rule 504 and repeal Rule 505, with the changes effective May 22, 2017. Prior to these rule changes, Rule 504 limited the aggregate amount of securities that could be offered and sold in a 12-month period to \$1 million, while Rule 505 (available to both non-reporting and reporting companies) limited the aggregate offering amount in a 12-month period to \$5 million, subject to certain other conditions. In general, issuers relying on Rule 504 may not use general solicitation or general advertising to market the securities, and securities are restricted. These prohibitions are generally inapplicable if the issuer complies with state registration requirements, or state exemptions from registration for sales to accredited investors.⁸

⁸ Rule 501 contains the definition of the accredited investor. Today, natural persons may qualify as accredited investors based on the following criteria: (1) Individuals who have a net worth exceeding \$1 million (excluding the value of the individual's primary residence), either alone or with their spouses; (2) Individuals who had an income in excess of \$200,000 in each of the two most recent years, or joint income with the individual's spouse in excess of \$300,000 in each of those years, and have a reasonable expectation of reaching the same income level in the current year; and (3) Directors, executive officers, and general partners of the issuer or of a general partner of the issuer. Some entities may qualify as accredited investors based on their status alone. These entities include: (1) Banks, savings and loan associations, brokers or dealers registered pursuant to Section 15 of the Exchange Act, insurance companies, small business investment companies, investment companies registered under the Investment Company Act, or business development companies as defined in Section 2(a)(48) of that Act; (2) Private business development companies as defined in Section 202(a)(22) of the Advisers Act; and (3) Entities in which all of the equity owners are accredited investors. Other entities may qualify as accredited investors based on a combination of their status and the amount of their total assets. These entities include: (1) Tax exempt charitable organizations, corporations, Massachusetts or similar business trusts, or partnerships, not formed for the specific purpose of acquiring the securities offered, with total assets in excess of \$5 million; (2) Plans established and maintained by a state, its political subdivisions, or any agency or instrumentality of a state or its political subdivisions, for the benefit of its employees, if such plan has total

Rule 506

Rule 506 was adopted in 1982 as a non-exclusive safe harbor under Section 4(a)(2) of the Securities Act. In 2013, the Commission amended Rule 506 pursuant to Title II of the JOBS Act, which directed the Commission to permit general solicitation and general advertising in certain Rule 506 offerings. (Prior to the JOBS Act, general solicitation had not been allowed for Rule 506 offerings.) Rule 506(c), which became effective on September 23, 2013, allows general solicitation and general advertising in Rule 506 offerings, without any limitation on amounts offered, as long as all purchasers are accredited investors and issuers take reasonable steps to verify that such purchasers are accredited investors. Rule 506, as it existed before the adoption of Rule 506(c), was preserved and re-designated as Rule 506(b). Offerings under both Rule 506(b) and Rule 506(c) must satisfy the conditions of (i) Rule 501 (definitions for the terms used in Regulation D); (ii) Rule 502(a) (integration); (iii) Rule 502(d) (limitations on resale); and (iv) Rule 506(d) (“bad actor” disqualification). Offerings under Rule 506(b) must also satisfy the conditions of (i) Rule 502(b) (type of information to be furnished); and (ii) Rule 502(c) (limitations on the manner of offering).

Rule 506(b) is a non-exclusive safe harbor under Section 4(a)(2) of the Securities Act. It allows an issuer to offer and sell an unlimited amount of securities, provided that: (1) offers do

assets in excess of \$5 million; (3) Employee benefit plans (within the meaning of the Employee Retirement Income Security Act) if a bank, savings and loan association, insurance company, or registered investment adviser makes the investment decisions, or if the plan has total assets in excess of \$5 million; and (4) Trusts with total assets in excess of \$5 million, not formed for the specific purpose of acquiring the securities offered, the purchases of which are directed by a person who meets the legal standard of having sufficient knowledge and experience in financial and business matters to be capable of evaluating the merits and risks of the prospective investment.

not involve general solicitation or general advertising; and (2) sales are made only to accredited investors, or up to 35 sophisticated non-accredited investors.⁹

2. Offering and Issuer Characteristics

Below we discuss amounts of Regulation D capital raising, issuer types, and the distribution of issuer industries and locations. In Table 2 below, we present data on Regulation D offering and issuer characteristics.

Data Sources

Our analysis and the data presented are based on electronic Form D filings from 2009 through 2019 available on EDGAR.¹⁰ (The Commission required the form to be filed on EDGAR starting in March 2009.)

To address duplication, we consolidate multiple amended filings at the offering level, using the original “accession id” available in subsequent filings; thus, the number of unique offerings is less than the total number of filings during the same period. In offerings with amendments, “total amounts sold” reported in the amended filing are compared to the “total amounts sold” reported in the original filing to calculate incremental proceeds, which are attributed to the calendar year in which the amendment is filed. For offerings initiated prior to 2009 and continuing in subsequent years, an issuer’s only electronic filings during the considered period would have been Form D amendments. If these amendments reference a post-2008 sale

⁹ See Rule 506(b)(2)(ii) (stating that “[e]ach purchaser who is not an accredited investor either alone or with his purchaser representative(s) has such knowledge and experience in financial and business matters that he is capable of evaluating the merits and risks of the prospective investment, or the issuer reasonably believes immediately prior to making any sale that such purchaser comes within this description.”).

¹⁰ See also Scott Baugess, Rachita Gullapalli, & Vladimir Ivanov, *Capital Raising in the U.S.: An Analysis of the Market for Unregistered Securities Offerings, 2009–2017* (U.S. Sec. and Exchange Comm’n, DERA White Paper, Aug. 2018), available at https://www.sec.gov/dera/staff-papers/white-papers/dera_white_paper_regulation_d_082018 (“Regulation D White Paper”).

date, the first amendment filed electronically is treated as an original Form D filing, as Form D was not filed electronically prior to 2009.

A number of pooled investment funds appear to report, in their annual amendments, net asset values (NAVs) for total amount sold under the offering. NAVs could reflect fund performance as well as new investment into, and redemptions from, the fund. In the absence of detailed information in the filed form, we treat the “total amounts sold” as amounts raised in the offering. Finally, when an issuer checks the box to claim multiple offering exemptions (Rule 504, 505, or 506), for the purposes of this analysis, we assume that any issuer that checks the box for Rule 506 is relying on Rule 506.

Comparative Data

Where feasible, we provide comparative data for issuers that raised capital through registered offerings during 2009 through 2019 and also for the current set of reporting companies. We obtain data for issuers conducting registered offerings from SDC Platinum’s New Issues database. We select all registered public offerings conducted in the U.S. market during 2009 through 2019, excluding IPOs¹¹ and government/federal agency offerings. We obtain financial information for reporting companies from S&P’s Compustat, a commercial database that compiles, aggregates, and standardizes financial data reported by public companies. For the purposes of this analysis, we use data from Compustat North America (Fundamentals Annual) for the latest fiscal year that is available for all companies, as of the time of retrieval, in

¹¹ For this analysis, we consider follow-on equity offerings and debt offerings as more appropriate benchmarks for Regulation D offerings because the motivations for conducting an IPO may extend beyond raising capital to meet a company’s financial needs. See, e.g., Marco Pagano, Fabio Panetta, & Luigi Zingales, *Why Do Companies Go Public? An Empirical Analysis*, 53 J. FIN. 27 (1998) (showing that companies go public after a period of strong investment and growth to capitalize on higher valuations, to reduce leverage and cost of debt, and for change in control).

the database. The data presented in the tables and figures below may be incomplete for small and non-exchange-listed public companies.

Capital Raising under Regulation D

Table 2 below presents summary statistics for Regulation D capital raising activity and issuer characteristics.¹² Almost all of the capital raised in the Regulation D market is raised under Rule 506(b). For 2019, of the approximately \$1.56 trillion raised through Regulation D, Rule 506(b) offerings accounted for \$1.5 trillion, which exceeds the capital raised in 2019 through registered offerings (\$1.2 trillion). Offerings under Rule 506(c) raised approximately \$66 billion, and offerings under Rule 504 raised approximately \$228 million.

¹² See also Harmonization Concept Release; Regulation D White Paper, *supra* footnote 10.

Table 2. Summary of Regulation D Issuer and Offering Characteristics, 2009–2019¹³

Number of Issuers	173,697	
Number of Offerings	242,070	
Amounts Reported Sold	\$13,576 billion	
Mean Amount Sold (if reported)	\$58 million	
Median Amount Sold (if reported)	\$1.50 million	
Mean Offer Size (if reported)	\$71 million	
Median Offer Size (if reported)	\$2.25 million	
Median Years Since Incorporation	2	
Median Issuer Size (if reported)	 Private Funds (Net Asset Value) Non-Fund Issuers (Revenue)	\$25 million - \$50 million \$1 million - \$5 million
Used Intermediary	20%	
Total Investors	 As reported in initial Form D filings All filings, including amendments	3.4 million 5.9 million
Average Investors/Offering (if reported)	10	

¹³ The number of issuers is based on a unique Central Index Key (CIK) identifier. Number of offerings represents all new offerings initiated during the period 2009 through 2019, as represented by a Form D filing, and offerings initiated prior to 2009 but continuing into the period 2009 through 2019 (as represented by an amendment filed). Amounts Reported Sold is calculated as described above and includes amounts sold reported in initial Form D filings and incremental amounts sold reported in amendment filings. Total number of investors, as reported in Form D and Form D/A filings, is calculated similarly. Issuers are not required to file a Form D at the close of offering. Not all offerings report amounts raised sold in their initial Form D filing.

Table 3¹⁴ below summarizes recent data on the state of the Regulation D market.

Table 3. Offerings by Exemptions Available under Regulation D in 2019

	Rule 504	Rule 506(b)	Rule 506(c)	Regulation D - Total
Number of New Offerings	476	24,636	2,269	27,381
Amount Reported Raised	\$0.2 billion	\$1,491.9 billion	\$66.3 billion	\$1,558.4 billion

Reporting Company and Listing Status

Table 4 below presents a classification of the reporting and trading status of Regulation D issuers during the 2009 through 2019 time period.¹⁵ Approximately 2% of all Regulation D issuers are also reporting issuers and are listed on a stock exchange or quoted on the OTC market. Almost 90% of offerings by non-fund issuers raise capital through equity securities.

¹⁴ This table includes Regulation D offerings for all issuers, including pooled investment funds. Data are obtained from Form D filings. The amount raised is based on “Total amount sold” in new and amended Form D filings. Incremental proceeds reported in amended filings are recorded in the year of the amended filing. We believe reported data is likely an underestimate of the amount raised because (1) Rule 503 of Regulation D requires issuers to file a Form D no later than 15 days after the first sale of securities, but a failure to do so does not invalidate the exemption; so, some Regulation D issuers may fail to file a Form D (we note that, while failure to file Form D does not affect the exempt offering, it could have other consequences, including, under Rule 507, the potential loss of ability to rely upon Regulation D in the future), and (2) there is no requirement to file a Form D at completion of the offering, or to file an amendment to reflect additional amounts offered if the aggregate offering amount does not exceed the original offering size by more than ten percent (so, amounts reported may be lower than total amounts sold).

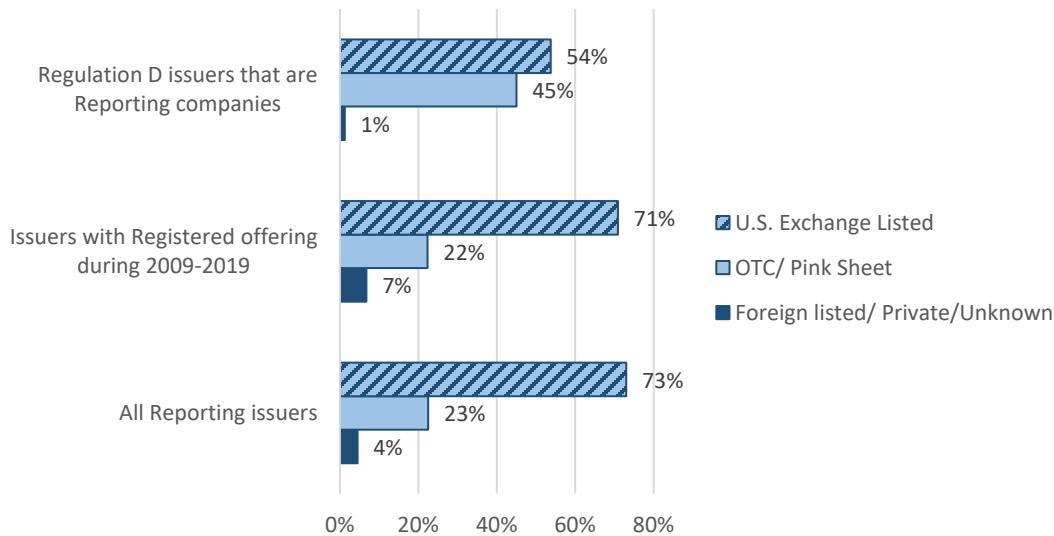
¹⁵ We obtain this information by merging the list of Regulation D issuers with Compustat North America data using CIK as the common identifier, which yields matches for 4,108 unique Regulation D issuers. This includes some companies that became reporting companies subsequent to their Regulation D offering. Trading venue for reporting company Regulation D issuers is based on Compustat data reported during calendar year 2019 or later. Trading venue for issuers conducting registered offerings is based on SDC Platinum data. The proportion of U.S. exchange-listed issuers is close to 90% for registered equity offerings.

Table 4. Reporting Company and Listing Status of Regulation D Issuers

		Regulation D Issuers 2009–2019
Reporting Companies		
Exchange-Listed		2,184
OTC - Bulletin Board		23
OTC - Other		1,852
No Trading Market / Unknown		51
Non-Reporting Companies		
Private Funds		67,582
Private Non-Fund Issuers		102,007
TOTAL		173,697

As the table above shows, almost half of the 4,108 reporting companies that are also Regulation D issuers are OTC companies. This is a much larger proportion than the share of OTC companies in the current set of all reporting companies (23%), and is also larger than the proportion of OTC companies in the subset of companies that raised capital through a registered offering during 2009 through 2019 (22%). (See Figure 1 below.)

Figure 1. Secondary Market Trading Status of Regulation D Issuers that are Reporting Companies¹⁶



¹⁶ Some Regulation D issuers became reporting companies subsequent to their private offering. The proportions remain similar (53% exchange-listed; 46% OTC) when we consider only those Regulation D issuers that were reporting companies during the year they conducted their Regulation D offering.

Industry Distribution

Table 5 below presents the industry distribution of Regulation D issuers, issuers that conducted a follow-on registered equity or debt offering during the 2009 through 2019 period, and all reporting companies (based on information reported in calendar year 2019 or later).¹⁷ The largest number (39%) of Regulation D issuers are from the pooled investment fund industry. Among non-fund Regulation D issuers, most issuers are in the technology, real estate, health care, and financial services industries.

Table 5. Industry Distribution of Regulation D Issuers and Reporting Companies (2009–2019)

Industry	Regulation D Issuers	Issuers with a Registered Offering	All Reporting Companies
Private Funds	38.9%	Not applicable	Not applicable
Agriculture	0.8%	0.2%	0.2%
Banking/Financial	7.6%	19.9%	39.0%
Business Services	1.6%	6.2%	1.8%
Energy	6.0%	11.3%	6.4%
Health Care	10.0%	19.2%	11.2%
Manufacturing	2.7%	11.1%	9.8%
Other	21.4%	7.0%	12.7%
Real Estate	25.5%	7.3%	4.1%
Restaurants	1.8%	0.8%	0.7%
Retailing	2.0%	2.3%	2.1%
Technology	20.0%	12.9%	11.2%
Travel	0.7%	1.7%	0.8%

Geographic Distribution

¹⁷ Industry information for Regulation D issuers is based on Form D data, which use a broader industry classification. See <https://www.sec.gov/files/formd.pdf>. Industry information for reporting companies is based on Compustat data reported in 2019 or later. Industry information for issuers with follow-on equity or registered debt offerings is obtained from SDC Platinum. For comparability, SIC-based industry definitions for reporting companies and registered offerings are converted to the Form D industry classification.

Most Regulation D issuers are located, in terms of principal place of business, in California or New York (see Figures 2 and 3 below),¹⁸ even though many are incorporated in Delaware. The next largest states based on principal place of business are Texas, Florida, and Massachusetts. This is similar to reporting companies, whose top five states of headquarters locations are California, New York, Illinois, Texas, and Massachusetts. While 9% of offerings are conducted by Regulation D issuers that are headquartered outside of the United States, 20% of reporting companies (as reported in 2019) were located abroad, and 15% of registered offerings conducted in the United States during 2009 through 2019 were undertaken by companies located in a foreign country. During 2009 through 2019, approximately 10% of Regulation D offerings were initiated by foreign-incorporated companies. By comparison, 30% of reporting companies and approximately 13% of issuers conducting registered offerings¹⁹ were incorporated outside of the United States based on information filed during 2019.

¹⁸ Figure 2 is based on Form D initial filings, excluding amendments, and includes offerings by operating companies and pooled investment funds. Figure 3 is based on amounts reported raised in Form D initial filings and amendments and includes offerings by operating companies pooled investment funds.

¹⁹ For issuers conducting registered offerings, SDC data on country of incorporation is available only for 63% of observations.

Figure 2. Number of Regulation D Offerings by Issuer Headquarters Location (2009–2019)

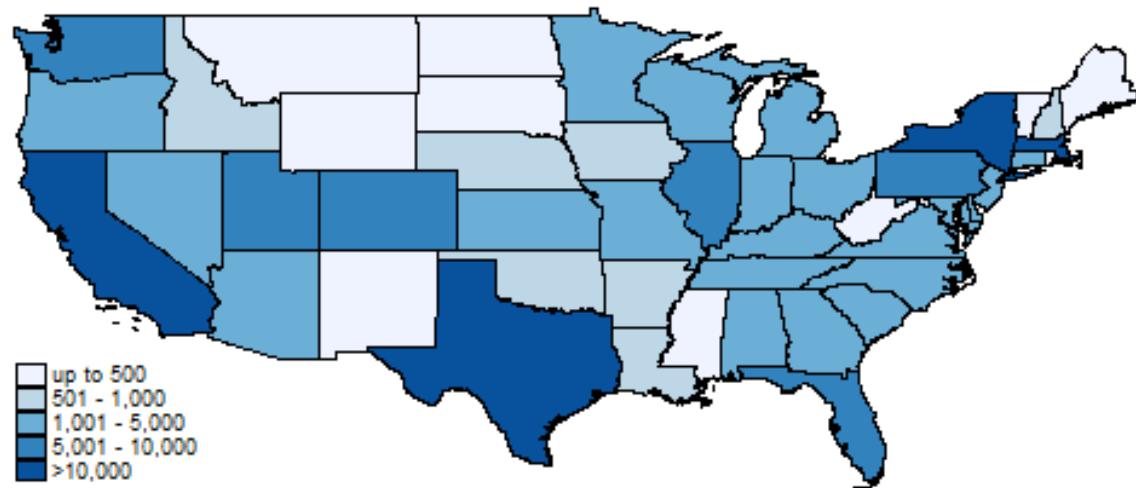
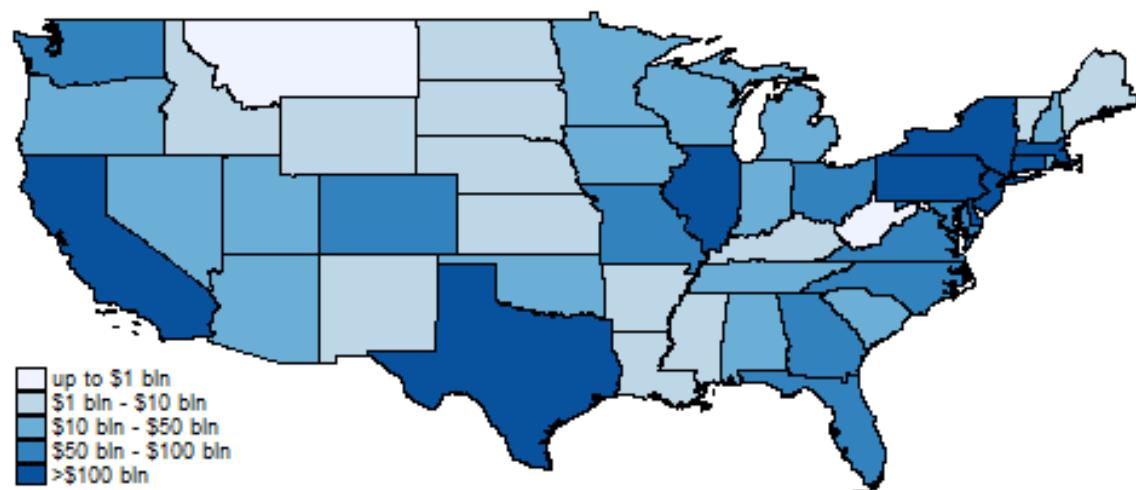


Figure 3. Regulation D Amounts Sold by Issuer Headquarters Location (2009–2019)



bln = billion

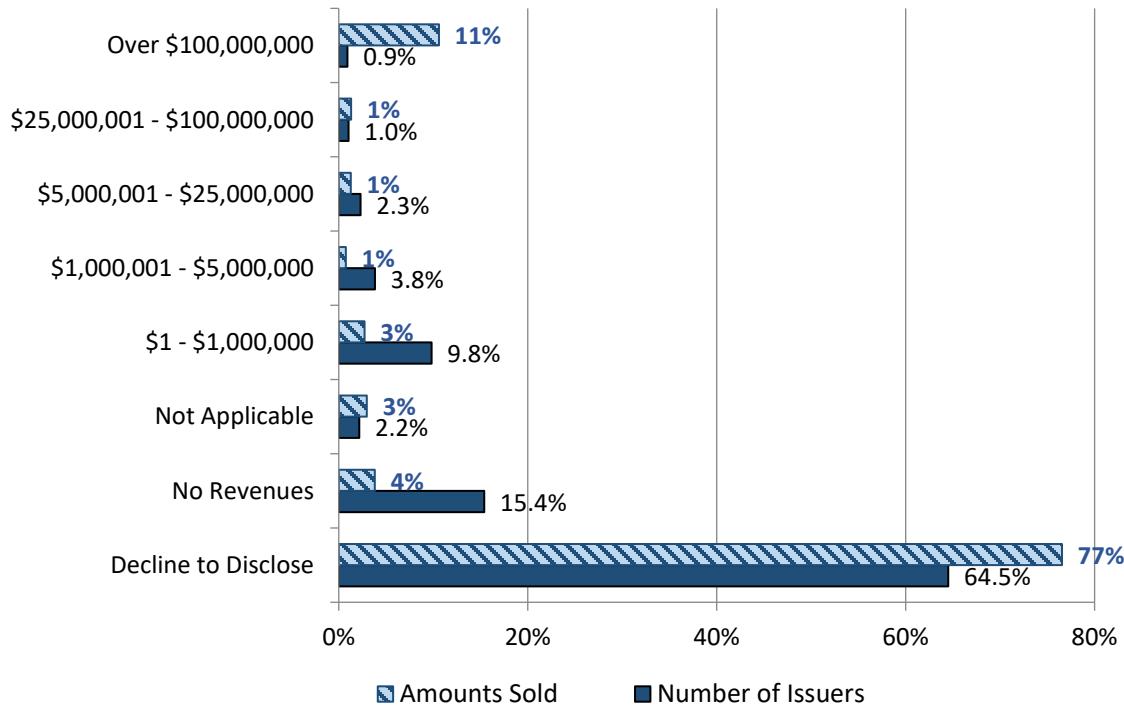
Issuer Size and Age Distribution

Figure 4 below shows the distribution of issuer revenue ranges as reported in Item 5 of Form D. Most issuers conducting Regulation D offerings that report their revenues on Form D tend to be small. Although most non-fund issuers decline to disclose their revenues (65%), for those that do, most have revenues of less than \$1 million. Issuers that report more than \$100 million in revenues account for only about 1% of the number of all new offerings.²⁰ Not surprisingly, among Regulation D issuers that report size, large issuers (greater than \$100 million in revenue) account for a greater share of proceeds. Large Regulation D issuers include private companies as well as exchange-listed companies and large OTC companies. By comparison, 65% of reporting companies and 83% of reporting companies that conducted a follow-on registered offering during 2009 through 2019 reported revenues exceeding \$100 million.²¹

²⁰ Form D also contains information on NAV of hedge funds and other investment funds. Since 2009, more than three-quarters of issuers have declined to disclose NAV, but of those that do, a trend similar to revenue is reported—the largest number of issuers is in the smallest NAV categories.

²¹ Calculated based on DERA analysis of SEC reporting companies that had a class of equity security with a market price reported in Compustat at the end of fiscal year 2018 and as reported during calendar year 2019 or later. Data for fiscal year 2019 were still being filed as of the time of this analysis and will be comprehensively available in Compustat with a lag.

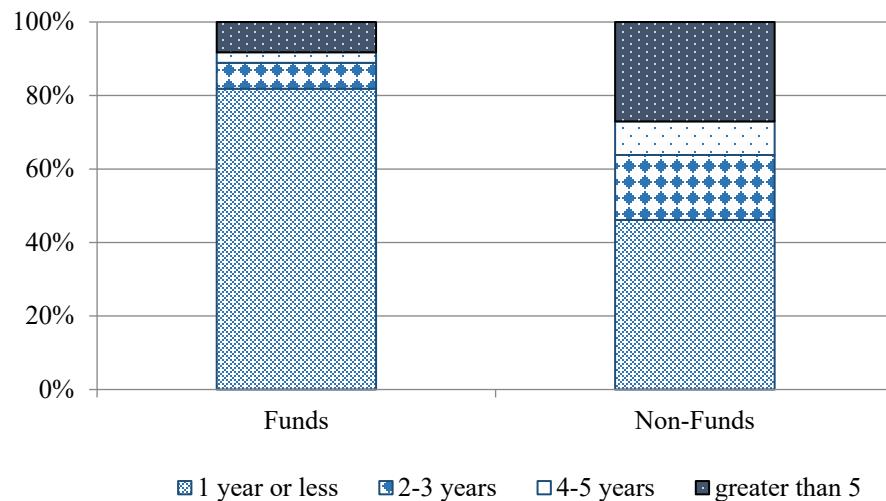
Figure 4. Size Distribution of Non-Fund Regulation D Issuers (2009–2019)



The small reported size of Regulation D issuers is also consistent with their young age, as measured by years since incorporation. Seventy percent of Regulation D issuers were incorporated for less than 3 years when they initiated their offering. This includes 87% of fund issuers and 63% of non-fund issuers. (See Figure 5 below.) While data on date of incorporation is not available for reporting companies in our data source, previous research has indicated that reporting companies tend to be older than 3 years when they have their IPOs.²² Among reporting companies with available data on the date of their IPO, more than 80% had their IPO prior to 2015.

²² Prior empirical research finds that the median age of firms conducting an IPO during 1980–2003 was relatively stable at seven years. See, e.g., Tim Loughran and Jay Ritter, *Why Has IPO Underpricing Changed Over Time?*, 33 FIN. MGMT. 5 (2004).

Figure 5. Regulation D Issuer Age, 2009–2019

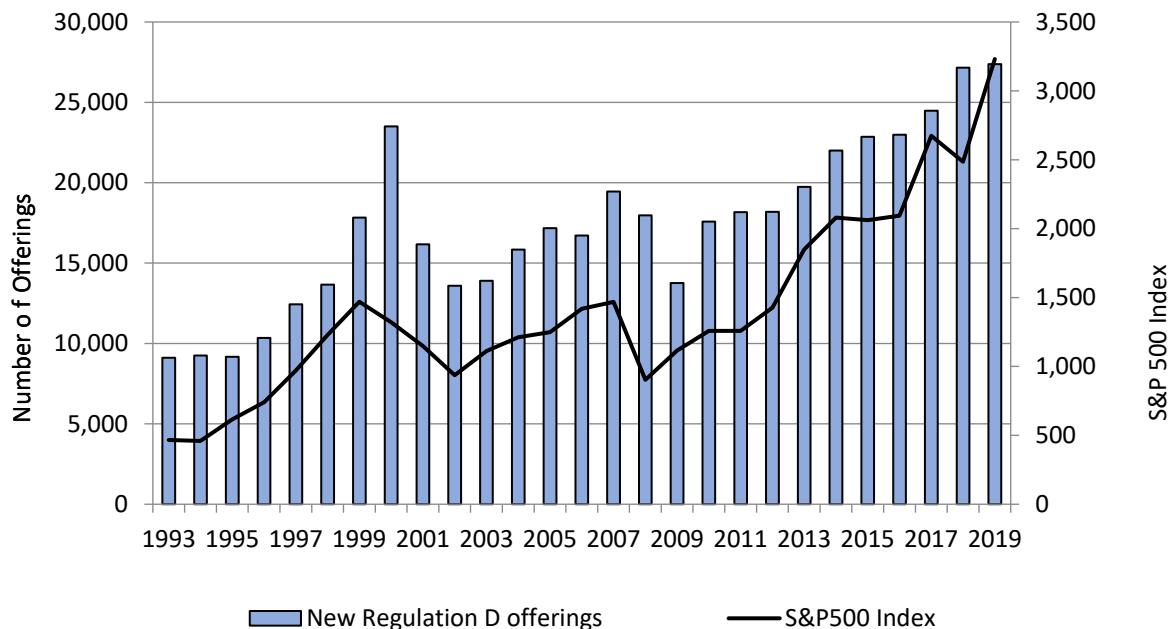


Trends in Regulation D Offerings

Almost 90% of offerings by non-fund issuers raise capital through equity securities. A substantial amount of empirical research has documented that public capital markets are pro-cyclical and appear to be affected by business cycles, investor sentiment, and time-varying information asymmetry.²³ Figure 6 below shows Regulation D offering activity on the basis of the number of new Form D filings (excluding amendments) on EDGAR, by calendar year, plotted alongside the S&P 500 index levels, for the period 1993 through 2019. The data indicate that Regulation D offerings, similar to public capital markets, are also driven by business cycles.

²³ See, e.g., Michelle Lowry, *Why Does IPO Volume Fluctuate So Much?*, 67 J. FIN. ECON. 3 (2003); Aydogan Alti, *IPO Market Timing*, 18 REV. FIN. STUD. 1105 (2005); Chris Yung, Gonul Colak, & Wei Wang, *Cycles in the IPO Market*, 89 J. FIN. ECON. 192 (2008).

Figure 6. Number of Regulation D Offerings (1993-2019)



B. Regulation A

1. Institutional and Regulatory Background

The Commission originally adopted Regulation A in 1936 as an exemption for small issuers under Section 3(b) of the Securities Act, the Commission's exemptive authority for offerings of up to \$5 million.²⁴ Title IV of the JOBS Act redesignated Section 3(b) as Section 3(b)(1) and added new Sections 3(b)(2) through 3(b)(5) to the Securities Act.²⁵ Section 3(b)(2) directed the Commission to adopt rules adding a class of securities exempt from the registration requirements of the Securities Act for offerings of up to \$50 million of securities within a 12-month period. Sections 3(b)(2) through (5) specify certain terms and

²⁴ See Release No. 33-632 (Jan. 21, 1936).

²⁵ See Release No. 33- 9741 (Mar. 25, 2015).

conditions for such exempt offerings and authorize the Commission to adopt other terms, conditions, or requirements as necessary in the public interest and for the protection of investors.

In 2015, the Commission adopted final rules to implement Section 401 of the JOBS Act by creating two tiers of Regulation A offerings: Tier 1, for offerings of up to \$20 million in a 12-month period; and Tier 2, for offerings of up to \$50 million in a 12-month period.

In adopting the two-tiered structure for Regulation A in 2015, the Commission stated that it expected the requirements for Tier 1 to result in securities offerings that would be more local in character, while Tier 2 offerings would likely be more national in character. While an issuer of \$20 million or less of securities can elect to proceed under either Tier 1 or Tier 2, Tier 2 issuers are subject to additional requirements. For example, Tier 2 issuers are required to include audited financial statements in their offering circulars (Part F/S of Form 1-A) and must provide ongoing reports on an annual and semiannual basis with additional requirements for interim current event updates, therefore providing a continuous flow of information to investors and the market (Rule 257 of Regulation A). Tier 2 offerings are not subject to state securities law registration and qualification requirements, while Tier 1 offerings remain subject to those state requirements.

In addition to expanding the Regulation A offering limit and establishing an ongoing reporting regime for Tier 2 issuers, the 2015 amendments sought to modernize the Regulation A filing process (including by requiring electronic filing), align practice in certain areas with prevailing practice for registered offerings, and create additional flexibility for issuers in the offering process. In 2018, the Commission amended Regulation A, making reporting companies eligible under Regulation A.

2. Offering and Issuer Characteristics

Table 6 below summarizes information on issuer and offering characteristics in qualified Regulation A offerings during the period from the 2015 Regulation A amendments through the end of 2019 (the most recently completed calendar year).

Table 6. Regulation A Issuer and Offering Characteristics²⁶

Metric	Mean	Median
Total assets	\$32,582,700	\$311,500
Employees	38.9	2.5
Age (years since incorporation)	6.6	3.0
Revenue	\$2,642,800	\$0
% revenue >0	47%	
Net income	-\$490,100	-\$14,000
% net income >0	21%	
Cash and cash equivalents	\$1,842,700	\$31,200
Property, plants, and equipment	\$4,677,200	\$0
Long-term debt	\$5,758,900	\$0
% continuous offerings	80%	
% testing the waters	27%	
% offerings with affiliate selling security holders	6%	
States of solicitation	38	51
% equity offerings	93%	

Although issuers are highly heterogeneous, to date, most issuers in qualified Regulation A offerings have been small (based on assets and revenues) and relatively young. Among the issuers with revenue information available, just under one-half had generated revenue. Turning

²⁶ Statistics are based on qualified offering statements. The information is based on Part I of Form 1-A of Regulation A offering statements or latest amendment qualified between June 2015 and December 2019. See *infra* footnote 110. Certain security types characterized as “other” were reclassified as equity or debt based on description. Revenue information was not available for approximately 5.5% of issuers.

to offering characteristics, most offerings (93%) involved equity securities, were conducted on a continuous basis (80%), and did not report sales by affiliated security holders (94%). Offerings were generally conducted on a best-efforts basis.²⁷ Over one-quarter of qualified offerings used testing the waters (solicitation of investor interest), almost all of which were Tier 2 offerings. The median offering involved national solicitation by the issuer or intermediary, but solicitation was generally limited to a handful of states in Tier 1 offerings (median of three among qualified Tier 1 offerings).

Secondary Trading Market

Between June 2015 and December 2019, the majority of Regulation A issuers lacked a liquid secondary trading market for their securities. Table 7 and Figure 7 below summarize data on secondary trading markets for Regulation A issuers.

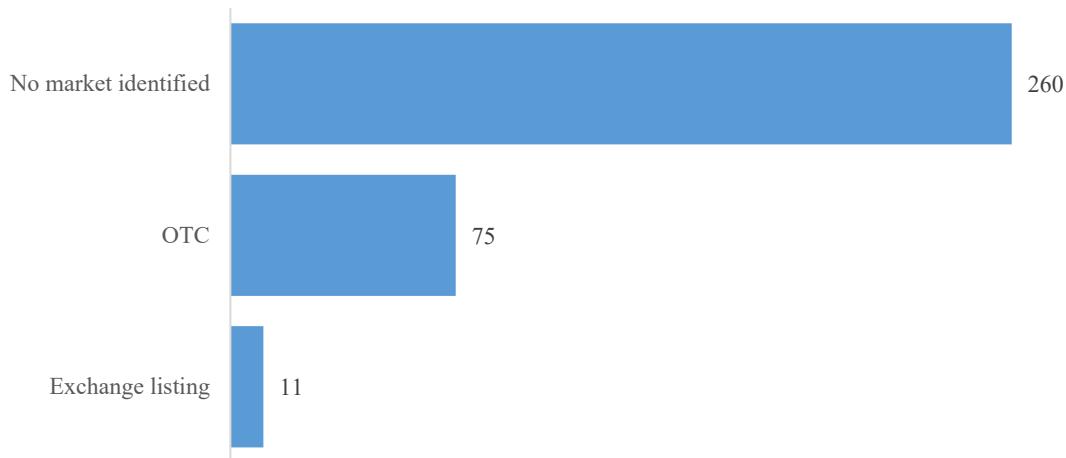
Table 7. Secondary Trading Market of Regulation A Issuers²⁸

Market	Issuers	%
Exchange-listed	11	3.2%
OTC	75	21.7%
No market identified	260	75.1%
Total	346	100%

²⁷ Information in Part I of Form 1-A across qualified offerings (or latest amendment qualified between June 2015 and December 2019) indicates that 93% of the offerings reported being best-efforts offerings. Some of the remaining offerings were associated with mergers and dividend reinvestment plans, while some others may reflect inaccuracies in tagging. We are not aware of firm commitment underwriting in this market segment.

²⁸ Information on exchange listing was based on searches of CERT submissions and news searches and excludes issuers delisted as of December 31, 2019. Information on OTC quotation was based on data from OTC Markets as of the end of December 2019. Among OTC issuers, 14 were identified as being quoted on either OTCQX or OTCQB and 61 were identified as being quoted on OTC Pink. No issuers were identified as being quoted on the OTC Bulletin Board. For issuers with multiple classes of securities, we cannot determine whether the class issued in a Regulation A offering is quoted on the OTC market. Grey market issuers are excluded. Among securities quoted on the OTC market, liquidity can vary significantly from issuer to issuer and is on average lower than the liquidity of securities listed on major exchanges. Many filers mention a lack of a public market for their securities in their disclosures.

Figure 7. Secondary Trading Market of Regulation A Issuers



Relatively few reporting companies relied on Regulation A during this period. The amendments to permit reporting companies to use Regulation A became effective on January 31, 2019. Approximately 17 reporting companies sought to use Regulation A to conduct an offering in 2019, of which 11 offerings were qualified. The impact of reporting companies' eligibility to rely on Regulation A on capital formation and investor protection remains to be seen.

Industry Distribution

The industry distribution reflects a heavy concentration of offerings in the finance sector (primary Standard Industrial Classification (SIC) codes between 6000 and 6999).

Figure 8 below shows the industry distribution of the amounts sought in qualified Regulation A offerings. Finance, insurance, and real estate accounted for 53% of financing sought in qualified Regulation A offerings. Examining more granular SIC code data suggests that financial issuers were frequently real estate investment trusts (REITs) and other real estate companies, other holding companies, non-depository credit institutions, and commercial banks. The most common industry among nonfinancial issuers in qualified offerings was business services (which includes software), followed by chemicals.

Figure 8. Capital Sought in Qualified Regulation A Offerings, by Issuer Industry²⁹

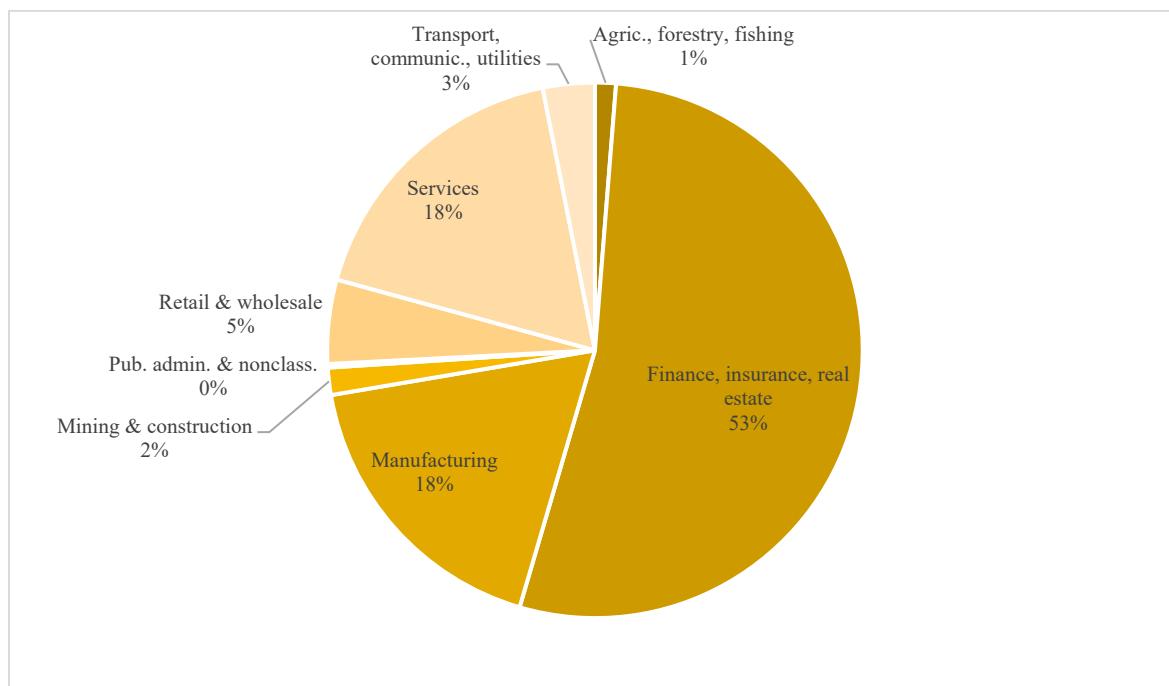
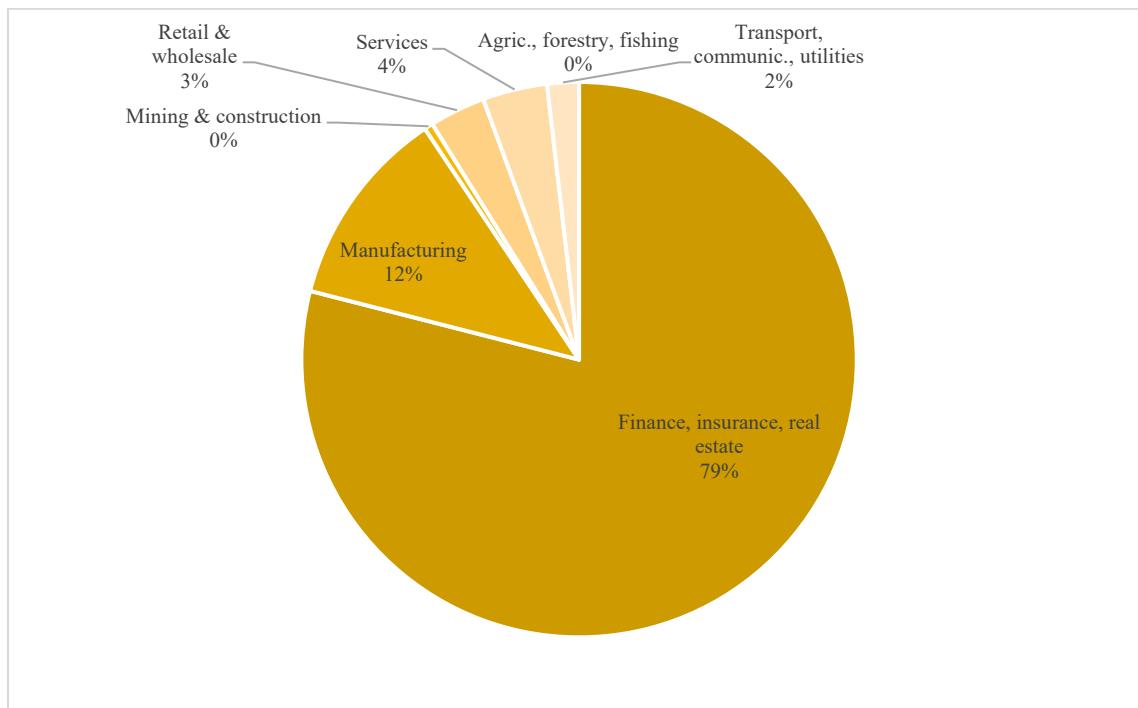


Figure 9 below shows the industry distribution of the proceeds reported in Regulation A offerings. The finance sector accounted for 79% of reported proceeds (with real estate issuers accounting for 69% of all reported proceeds). The most common industry among nonfinancial issuers was transportation equipment, followed by business services.

²⁹ See *infra* footnotes 110 and 111. The industry is based on the primary SIC code as reported in Part I of Form 1-A or the latest amendment to it.

Figure 9. Proceeds Reported in Regulation A Offerings, by Issuer Industry³⁰



Geographic Distribution

Close to 50% of qualified offerings were by issuers incorporated in Delaware, with an additional 13% by issuers incorporated in Nevada. As with reporting companies, headquarters location often differs from the state of incorporation.

Figure 10 below summarizes the geographic distribution of financing sought in qualified Regulation A offerings, by state of issuers headquarters location. Issuers headquartered in California accounted for 24% of the aggregate amounts sought, followed by Washington, D.C. (16%) and Florida (9%). Figure 11 below summarizes the geographic distribution of the proceeds reported in Regulation A offerings, by state of issuer headquarters location. Issuers headquartered in Washington, D.C., accounted for 36% of reported proceeds (due to one large

³⁰ See *infra* footnote 111. The industry is based on the primary SIC code as reported in Part I of Form 1-A or the latest amendment to it.

REIT sponsor headquartered in Washington, D.C.), followed by California (13%) and Utah (7%).

Figure 10. Capital Sought in Qualified Regulation A Offerings, by Issuer Location³¹

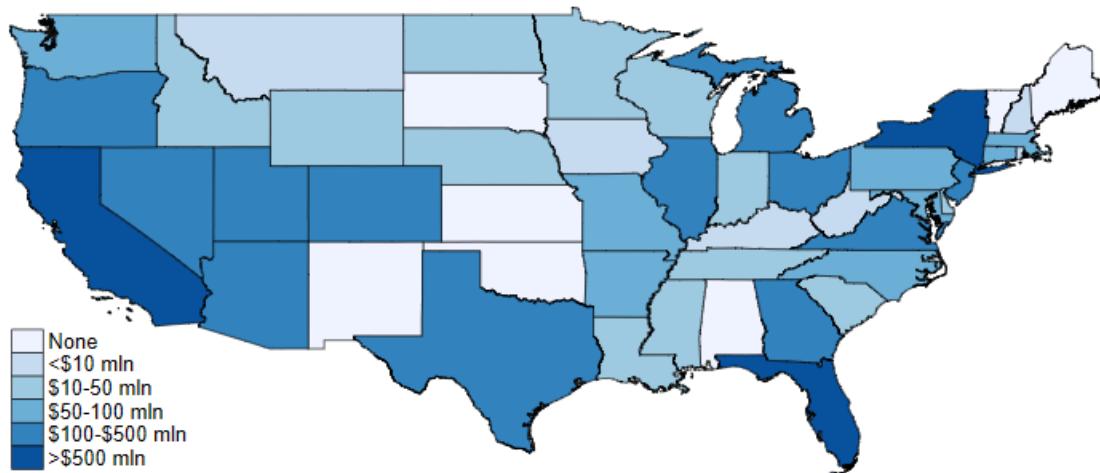
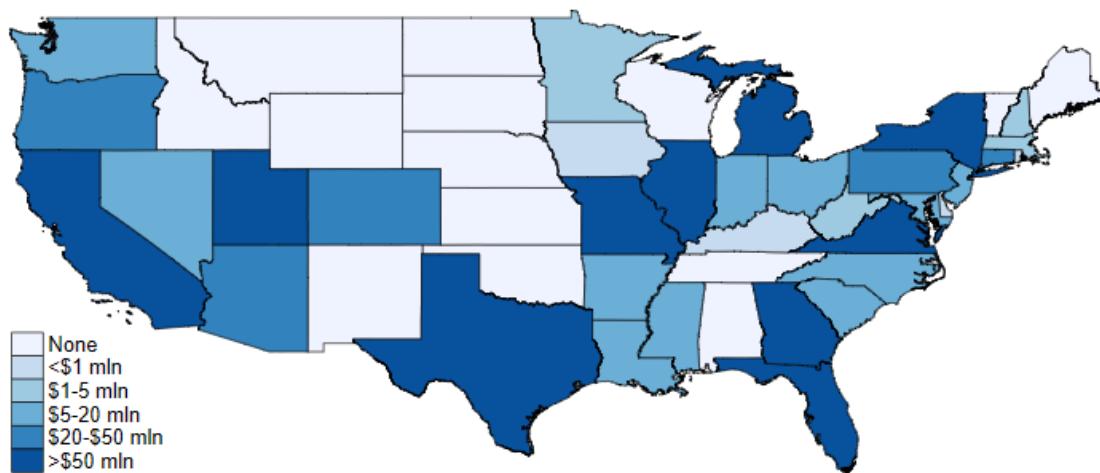


Figure 11. Proceeds Reported in Regulation A Offerings, by Issuer Location³²



mln = million

³¹ See *infra* footnote 110. The state of location is based on the state of headquarters location as reported in Part I of Form 1-A or the latest amendment. The maps exclude Alaska, Hawaii, and U.S. territories. Those areas did not have issuers with qualified Regulation A offerings between June 2015 and December 2019.

³² See *supra* footnote 31 and *infra* footnote 111.

III. Evidence on the Performance of Regulation A and Regulation D offerings and issuers

Below we analyze evidence on the performance of Regulation A and Regulation D offerings, based on primary data, where they are available, and the analysis of data from research studies and other external reports. We start by discussing the performance measures and data limitations (Section III.A). Next, we present the evidence on the performance of Regulation D (Section III.B) and evidence on the performance of Regulation A (Section III.C).

A. Performance Measures and Data Considerations

Measures

At the outset, we acknowledge that “performance” can mean different things for issuers, investors, and capital markets. From the perspective of issuers relying on exemptions under Regulation A and Regulation D, offering performance can be assessed as a capital-raising tool. Issuers choosing to rely on a particular offering method to meet their external financing needs may weigh the amount of capital they can raise to fund their businesses or investment projects against the cost of raising capital using that offering method.

From the perspective of investors, performance can be measured in several ways: (1) subsequent operating and financial performance of the issuer (e.g., profitability and growth); (2) for private issuers, the incidence of subsequent financing rounds, public market exits, acquisition exits, and business survival; and (3) for public issuers (and the subset of private issuers with return information, such as those private funds that provide such information), returns. A binary metric of issuer performance that can also be highly relevant for investors in a Regulation A or Regulation D offering is the incidence of fraud or another securities law violation. Finally, the breadth of additional investment opportunities that become available when issuers can utilize these exemptions, which can be used to diversify investor portfolios relative to investing only in

public companies, can also be used to characterize the performance of the Regulation A and Regulation D exemptions from the standpoint of investors.

Data Sources

We collect the data for the discussed performance measures from the following sources. We extract data on the exemptions' performance as a capital-raising tool from EDGAR filings. We use Form D filings to obtain data for Regulation D issuers. Data on Regulation A issuers are based on Form 1-A filings and amendments to those filings, offering circular supplements, annual reports on Form 1-K, semi-annual reports on Form 1-SA, current reports on Form 1-U, exit reports on Form 1-Z for Regulation A issuers, as well as Exchange Act reports for Regulation A issuers that are, or become, Exchange Act reporting companies. We obtain data on issuer financial and operating performance from EDGAR filings and Compustat, where available. We gather market data for traded issuers from Center for Research in Security Prices (CRSP)/Compustat and OTC Markets, where specified. Information on mergers and acquisitions (M&A) and public market exits and follow-on capital raises is collected from EDGAR filings, SDC Platinum, and S&P Capital IQ. Information on private fund returns is obtained from commercial databases (Preqin for private equity (PE) funds and HFM Global (HFM) (formerly known as Hedge Fund Intelligence (HFI)), Eureka, TASS, and BarclayHedge for hedge funds). Primary data on the performance of Regulation A and Regulation D offerings are supplemented with statistics obtained from external sources, including research studies and industry reports.

Data Limitations

We acknowledge several limitations on our analysis related to the features of exemptions and availability of data. Because of the nature of the market, with most issuers not publicly traded on an exchange or quoted on the OTC market, as well as the scaled or very limited

disclosure requirements applicable to most issuers offering securities under Regulation A and Regulation D, comprehensive performance data are not available for all issuers and offerings, and some of the available data are noisy.³³ For example, trading information is available only for a subset of operating company issuers in Regulation D offerings that are either exchange-listed or quoted on the OTC market; and even where trading information is available, the traded class of securities generally does not have the same terms and characteristics as the securities offered under Regulation D.³⁴ Trading information is also available only for a small number of Regulation A issuers that have obtained an exchange listing after the offering, as well as for those Regulation A issuers that are quoted on the OTC market.

Return information is available for a subset of private funds, including hedge funds and PE funds that rely on Regulation D. Such data may be an incomplete representation of the risk-adjusted performance of the full set of private fund issuers relying on Regulation D for several reasons. Comprehensive data on returns of all pooled investment funds relying on Regulation D are not required to be disclosed. Data from commonly used databases is provided voluntarily and so may be affected by selection bias, resulting in overrepresentation of funds and fund-years with better risk-adjusted performance. Further, because of the differences in reporting entity identifiers, we are not able to match such data to individual Regulation D offerings. Thus, some offerings conducted under other exemptions from registration under the Securities Act and Investment Company Act of 1940 (“Investment Company Act”) may be represented in the

³³ For instance, some of the performance data are manually collected from filings in an unstructured format or automatically collected from filings in a structured format, such as XML. Data may contain noise, particularly in cases of unaudited or restated financial statements or filings with tagging errors.

³⁴ For example, securities issued under Regulation D are restricted securities that may only be resold in a limited set of circumstances, in particular, pursuant to an effective registration statement under the Securities Act or a valid exemption from registration for the resale, such as Section 4(a)(1) of the Securities Act, or the non-exclusive safe harbor of Rule 144. See <https://www.sec.gov/fast-answers/answersrestrict.htm>.

statistics, and some fund offerings conducted under Regulation D may not be included in the presented statistics.

Data on survivorship of issuers in Regulation A and Regulation D offerings are also affected by noise. Measuring survivorship through the presence of subsequent EDGAR filing activity significantly underestimates survivorship because many Regulation A and Regulation D issuers do not incur ongoing reporting obligations under either the Exchange Act or Regulation

A. Measuring survivorship through the absence of bankruptcy filings may significantly overestimate survivorship because many smaller issuers that either do not have significant liabilities or that do not have significant assets recoverable through a bankruptcy proceeding will likely liquidate without a bankruptcy filing.

Performance data available for private issuers are not directly comparable to the data for public issuers on the basis of similar metrics. For example, return data for Regulation A and Regulation D issuers quoted on the OTC market are not directly comparable to return data on exchange-listed securities, because the OTC market has significantly lower liquidity and a higher incidence of days with no trading. As another example, where return data for private securities are available (e.g., in the case of private fund returns), a direct comparison to the returns on publicly traded assets may be difficult because of a lack of comparability. Private investments are characterized by different risk exposures (e.g., nontraditional systematic risk factors in private fund portfolios), illiquidity (e.g., because of restricted status of securities, contractual provisions such as lock-up periods, and/or a lack of a secondary trading market), and high transaction costs (including trading, due diligence, and search costs). This lack of comparability is an outgrowth of individual market segments being designed to meet specific needs of different types of issuers and attract specific investor clienteles through offering transactions.

It is unclear whether our findings can be extrapolated beyond the specific time period under consideration. Unless specified otherwise, our data end at the end of the most recently completed full year of data (2019). For Regulation D, the analysis begins in 2009 because electronic data on Regulation D became available in the second quarter of 2009. For Regulation A, the analysis begins in mid-2015, when the amendments became effective and electronic data on issuers and offerings became available. The 2009-2019 period coincided with generally favorable market conditions. We recognize that evidence on performance obtained during boom periods may not apply to other periods. Therefore, where available, we supplement primary performance data on private investments with evidence from related academic literature spanning earlier periods and greater variation in macroeconomic cycles.

Sections III.B. and III.C below present the available evidence on the performance of Regulation A and Regulation D. These exemptions have unique characteristics and associated differences in data availability, sample construction, and appropriate benchmarks. Further, the two market segments are vastly different in size, with annual Regulation D proceeds exceeding annual reported Regulation A proceeds by an order of magnitude of 1000x. Therefore, we present the analysis for the two exemptions separately.

B. Regulation D

Below we present evidence from primary data analysis and synthesis of existing studies on the performance of Regulation D as a capital-raising tool and on the performance of Regulation D investments. In line with prior work, we analyze performance of funds and non-fund issuers separately because of the unique institutional characteristics and aspects of performance data and metrics applicable to these two categories of issuers.

1. Performance of Regulation D as a Capital-Raising Tool

First, we consider the performance of Regulation D as a capital-raising tool and as a source of diverse investment opportunities. As described above, Regulation D has accounted for a large amount of capital formation. Total capital raised annually in the private capital market is large both in absolute terms and when compared to the amounts raised in the public markets. (See Figure 12 below.) In 2019, registered offerings of equity and debt accounted for approximately \$1.2 trillion of new capital, compared to more than \$2.7 trillion reported raised through all unregistered offering channels.³⁵ Of this, the largest amount was raised by Regulation D offerings—approximately \$1.6 trillion—which is considerably larger than the amount of public debt (straight and convertible) and public equity (common and preferred) offerings over the same time. Over the 2009 through 2019 period, \$13.6 trillion was raised through Regulation D offerings compared to \$14.1 trillion raised through registered offerings of debt and equity, including IPOs. As shown in Figure 12 below, in each of the years since 2017 through 2019, the amounts raised in the Regulation D market have surpassed aggregate amounts raised through registered offerings of debt and equity.

³⁵ See Harmonization Proposing Release, at n. 12. Besides Regulation D, other unregistered offerings include offerings relying on Rule 144A, Regulation A as described above, Regulation Crowdfunding, Regulation S, and Section 4(a)(2) of the Securities Act. By its terms, Rule 144A is available solely for resale transactions. However, market participants use it to facilitate capital raising by issuers by means of a two-step process, in which the first step is a primary offering on an exempt basis to one or more financial intermediaries, and the second step is a resale to “qualified institutional buyers” in reliance on Rule 144A.

Figure 12. Aggregate Capital Reported Raised in 2009–2019 through Regulation D Offerings and Registered Offerings³⁶ (\$ billion)

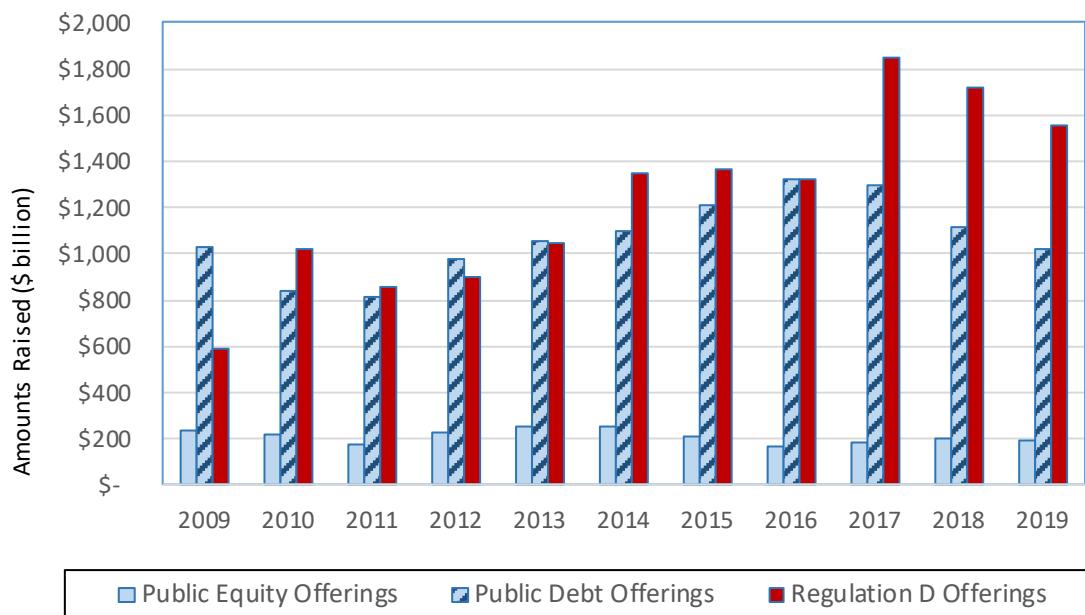


Table 8 below estimates the size of the private and public markets in terms of number of offerings per year. As the table shows, offerings in the private market occur with a significantly higher frequency compared to public market issuances. Regulation D offerings occur with far greater frequency than any other offering method surveyed, indicating that the accumulation of capital raised through Regulation D occurs by way of much smaller offering denominations than other methods. This finding is consistent with Regulation D being the primary tool for capital raising by smaller entities.

Table 8. Number of Regulation D Offerings and Registered Offerings by Year (2009–2019)

Year	Public Equity Offerings- IPOs	Registered Follow-on Equity Offerings	Registered Debt Offerings	Regulation D Offerings ³⁷
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³⁶ In this figure, amounts raised in public equity offerings include amounts raised in IPOs.

³⁷ These represent offerings that were initiated during the year or were active during the year. Generally, offerings by pooled investment funds are continuous in nature and extend into multiple years.

2009	68	874	1,445	18,295
2010	200	872	1,930	25,993
2011	201	662	1,465	27,336
2012	206	748	1,473	28,184
2013	283	967	1,510	30,429
2014	347	829	1,576	33,429
2015	218	767	1,565	34,877
2016	119	702	1,636	35,793
2017	178	798	1,846	37,785
2018	269	723	1,641	40,417
2019	244	685	1,484	41,196

Relative to registered markets, where the majority of capital is raised through fixed maturity debt, approximately two-thirds of Regulation D offerings represent new equity capital. Registered offerings of new equity capital constitute less than 17% of the overall capital raised through registered offerings.

Next, we characterize the available data on the composition and diversity of investment opportunities available in Regulation D offerings. The largest category of issuers in the Regulation D capital market, based on the amount sold, are pooled investment funds (predominantly private funds), which include hedge funds, venture capital (VC) funds, PE funds, and other pooled investment funds, according to the classification on Form D.³⁸ Since the

³⁸ Other pooled investment funds include, for example, commodity pools and registered investment companies. Commodity pools are investment trusts, syndicates, or similar enterprises that are operated for the purpose of trading commodity futures. Registered investment companies are entities such as mutual funds that issue securities to investors, hold pools of securities and other assets, and are registered with the Commission under the Investment Company Act. Other pooled investment funds also include private funds that would be investment companies but for the exclusion provided in Sections 3(c)(1) or 3(c)(7) of the Investment Company

Commission first required electronic filing of Forms D in 2009, pooled investment funds have accounted for \$11.7 trillion of new capital raised through Regulation D offerings and reported on Form D, compared to approximately \$2 trillion raised by non-funds. Hedge funds are the largest category of fund issuers in the Regulation D market, having raised more than \$4 trillion of new capital during this period. In terms of the amounts raised by fund type, PE funds raised the largest mean amount. A breakdown of the number of offerings and amount of capital raised during 2009 through 2019 by type of pooled investment fund, as reported by issuers in Item 4 of Form D, is presented in Table 9 below.

Table 9. Number of Offerings and Amounts Raised by Fund Type, 2009–2019

	Number of Offerings	Aggregate Amounts Reported Sold (\$ billion)	Mean Amounts Reported Sold (\$ million)	Median Amounts Reported Sold (\$ million)
Pooled Investment Funds	65,591	\$11,738.0	\$179	\$16
Hedge Funds	20,242	\$4,022	\$199	\$26
Private Equity Funds	17,939	\$3,215	\$179	\$33
Venture Capital Funds	8,437	\$308	\$37	\$3
Other Investment Funds	18,973	\$4,193	\$221	\$6

While funds dominate in terms of amounts sold in the Regulation D market, non-fund issuers initiated almost three-fourths of new offerings. (See Figure 13 below.) Of the non-fund offerings that identified a specific industry, most were from the Finance/Banking/Insurance, Technology, and Real Estate industries. Almost 22% of offerings check “Other” for industry, for

Act. While some registered investment companies use Regulation D, based on our analysis of Form D data, the overwhelming majority (99.7%) of pooled investment fund offerings reported on Form D are excluded from the definition of “investment company” under the Investment Company Act. Very few Form D fund issuers are identified as mutual funds in Morningstar data (based on CIK identifiers, where available). Thus, for purposes of evaluating the performance of pooled investment fund Regulation D issuers, we focus on private fund returns.

which further information is not available. In terms of total amounts reported to be raised, the top industries were Banking & Financial, Technology, and Real Estate. (See Figure 14 below.) Similar to Regulation D, industries with the largest amounts raised in registered offerings were Banking & Financial and Technology, followed by Manufacturing and Energy.

Figure 13. Number of Offerings and Amounts Raised by Fund and Non-Fund Regulation D Issuers: 2009–2019

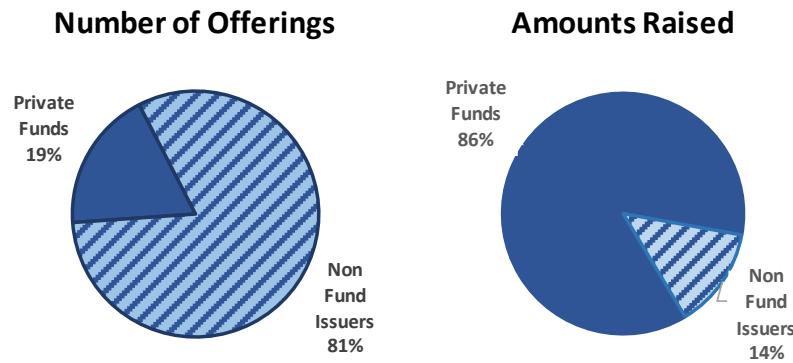
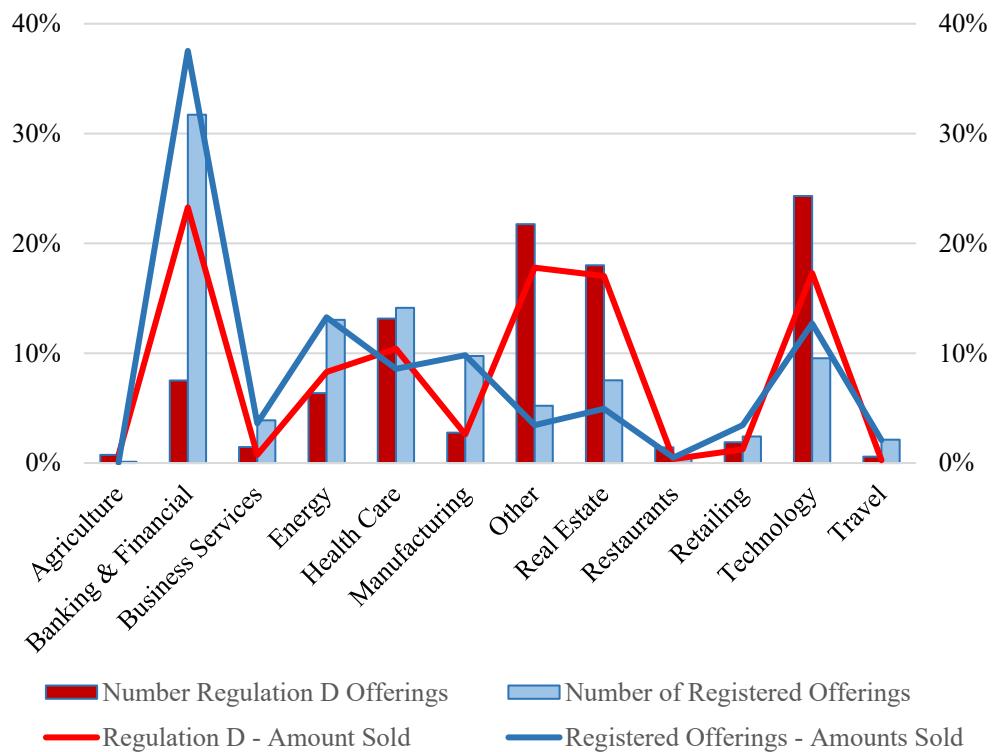


Figure 14. Number of Offerings and Amounts Raised by Non-Fund Industry (2009–2019)



Consistent with the large number of non-fund offerings and the smaller proportion of capital they raised in the Regulation D market, the median offering size for non-fund issuers is substantially lower than the median offering size for funds. During 2009 through 2019, the median offer size of non-fund issuers was \$1 million (see Table 10 below). This indicates a large number of small offerings by non-fund issuers, consistent with the original regulatory objective to target the capital formation needs of small businesses. As the table below shows, mean and median amounts raised in Regulation D offerings are significantly smaller than the amounts raised in registered offerings, across all industries.

Table 10. Mean and Median Amount Raised by Offering and Industry Type (2009–2019)

<i>Offering Type</i>	Regulation D		Public Equity (non-IPO) ³⁹		Public Debt	
	<i>Amounts Raised (\$ million)</i>	Mean	Median	Mean	Median	Mean
Private Funds	\$179	\$16	n.a.	n.a.	n.a.	n.a.
Agriculture	\$10	\$1	\$86	\$11	\$528	\$500
Banking/Financial	\$40	\$2	\$362	\$75	\$581	\$400
Business Services	\$6	\$1	\$200	\$80	\$580	\$399
Energy	\$18	\$1	\$288	\$170	\$550	\$449
Health Care	\$9	\$2	\$83	\$30	\$753	\$595
Manufacturing	\$12	\$1	\$206	\$81	\$582	\$498
Other	\$10	\$1	\$172	\$82	\$438	\$399
Real Estate	\$12	\$2	\$250	\$146	\$393	\$349
Restaurants	\$4	\$1	\$252	\$105	\$604	\$499
Retailing	\$8	\$1	\$289	\$208	\$866	\$650
Technology	\$8	\$1	\$169	\$59	\$993	\$750
Travel	\$6	\$1	\$417	\$200	\$466	\$447

Intermediaries in securities offerings serve an important role in reducing information asymmetry about issuers and in lowering search costs involved in matching issuers with investors. While intermediation is widespread in registered offerings of debt and equity, it is much less common among unregistered offerings. On the basis of Form D data, we find approximately 20% of Regulation D offerings initiated during 2009 through 2019 reported using an intermediary to raise capital. The use of intermediaries is different across issuer types and

³⁹ See *supra* footnote 11.

industries. Among Regulation D issuers, 28% of offerings by financial issuers and 21% of private fund offerings reported using an intermediary, while approximately 15% of offerings by operating companies (i.e., non-fund, non-financial companies) used an intermediary in their offerings. The biggest users of intermediaries are issuers in the real estate industry (35%) and energy industry (32%). There is also significant variation in fees paid between fund and non-fund issuers. Private funds, on average, paid approximately 2% during the 2009 through 2019 period, while non-fund issuers paid approximately 5.4% on average.

A large proportion of investors in Regulation D offerings are accredited investors. While Rule 506(c) prohibits sales to non-accredited investors, up to 35 non-accredited investors can purchase securities in a Rule 506(b) offering. Based on the analysis of data from initial Form D filings, including by pooled investment funds, we estimate that approximately 3.4% to 6.9% of all offerings initiated during 2009 through 2019 had one or more non-accredited investor participating in the offering.⁴⁰

On the basis of information in initial Form D filings and amended filings, we estimate that approximately 5.9 million investors participated in Regulation D offerings initiated during 2009 through 2019. However, these counts do not adjust for any repeat participation among investors in offerings. Because the data do not identify individual investors, we cannot estimate the number of unique investors participating in Regulation D offerings.

⁴⁰ This estimated range is based on DERA staff analysis of Form D data on initial Form D filing among all Rule 506(b) offerings from 2009 to 2019. In particular, the 3.4% estimate is based on offerings that report that at least one non-accredited investor already have invested in the offering as of the Form D filing and may represent a lower bound because it relies on available Form D filings, and because a final Form D upon the conclusion of an offering is not required to be filed. If we also include Rule 506(b) offerings on Form D that accept non-accredited investors but reported having zero non-accredited investors in the initial filing, the estimated percentage of offerings involving accredited investors during the 2009-2019 period is approximately 6.9%, which may be viewed as an upper bound estimate.

2. Performance of Private Funds

As discussed in Section II.A.2 above, private funds account for the largest share of Regulation D market activity. Below we present available evidence on the performance of private funds. First, we present data on the performance of hedge funds. Next, we turn to other private funds (notably, PE and VC funds). Because of the nature of the data and the long-term cash flow structure of PE and VC funds, we consider these funds' performance separately from hedge funds. We conclude with a summary of the evidence on the performance of mutual funds, which are registered investment companies, and returns on the market index.

Hedge Funds⁴¹

Table 11 and Figure 15 below present data on hedge fund performance. We obtain information on all funds covered in four major commercial data sources on hedge fund returns: BarclayHedge, HFM, Eureka, and TASS. Different databases vary in their coverage of hedge funds reporting their performance. Following the sample period used for Regulation D data, we present mean and median returns, as well as the 25th (P25) and 75th percentiles of the return distribution (P75) and the number of observations (Obs.) for each year during 2009 through 2019.

⁴¹ As used in this sub-section, except where defined otherwise, the reference to “hedge funds” is based on the use of the term by commercial data vendors that aggregate and check the accuracy of data self-reported by funds, which has also been used in academic research, and not on a strict application of any legal definition of a hedge fund. For example, one of the vendors whose data we use below, EurekaHedge, explains that “[h]edge funds are investment vehicles that explicitly pursue absolute returns on their underlying investments. . . the ‘Hedge Fund’ definition has come to incorporate any absolute return fund investing within the financial markets (stocks, bonds, commodities, currencies, derivatives, etc.) and/or applying non-traditional portfolio management techniques including, but not restricted to, shorting, leveraging, arbitrage, swaps, etc. Hedge funds can invest in any number of strategies and they are perhaps most readily identifiable by their structure, which is typically a limited partnership (the manager acting as the general partner and investors acting as the limited partners) with performance related fees, high minimum investment requirements and restrictions on types of investor, entry and exit periods.” See <https://www.eurekahedge.com/Research/News/1829/What-is-a-Hedge-Fund>. This definition may differ from that used by the other vendors whose data we use.

Table 11. Hedge Fund Returns (2009–2019)⁴²

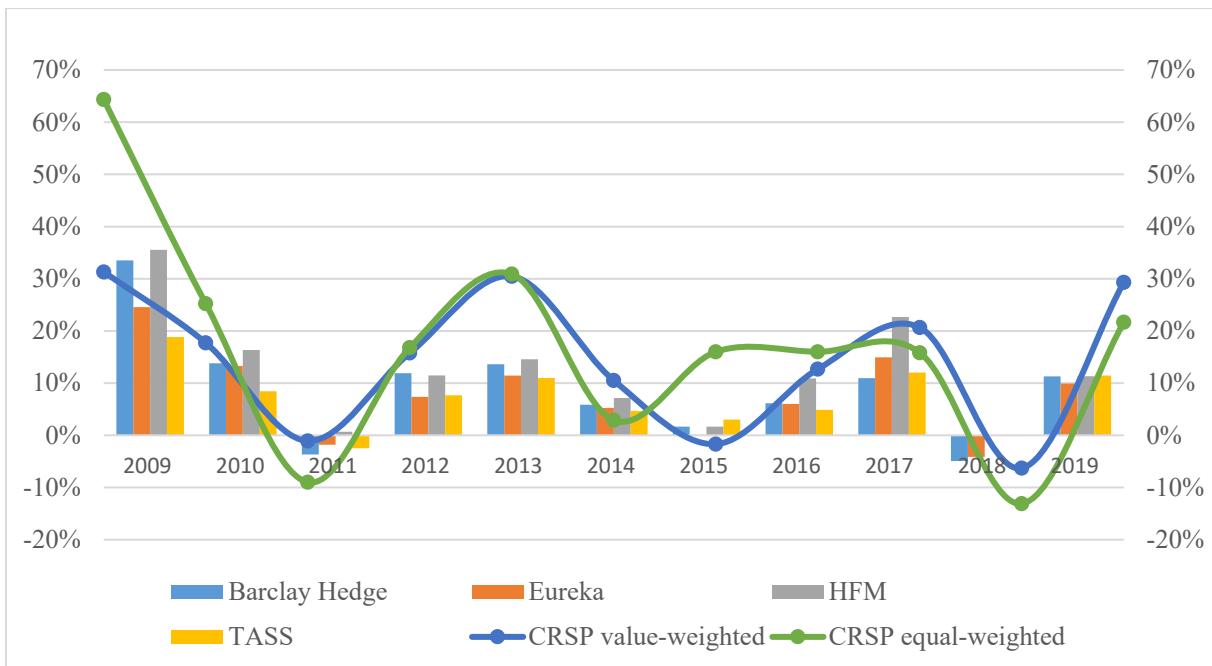
Year	Mean	Median	P25	P75	Obs.
Barclay Hedge					
2009	33.5%	23.0%	12.2%	43.7%	1,646
2010	13.8%	10.2%	5.1%	18.7%	1,902
2011	-3.7%	-3.1%	-9.4%	2.8%	2,193
2012	11.9%	10.0%	5.1%	16.5%	2,572
2013	13.6%	10.7%	4.1%	20.2%	3,072
2014	5.9%	4.6%	1.2%	9.3%	3,607
2015	1.7%	1.3%	-2.7%	6.2%	4,059
2016	6.1%	4.1%	0.0%	9.8%	4,568
2017	10.9%	7.9%	3.4%	15.4%	5,063
2018	-4.9%	-4.4%	-10.1%	-0.1%	5,444
2019	11.3%	8.6%	3.9%	16.7%	5,782
2009-2019	7.4%	5.2%	-0.6%	12.7%	
HFM					
2009	35.5%	24.7%	11.6%	47.3%	784
2010	16.4%	12.8%	7.4%	21.9%	872
2011	0.7%	1.2%	-6.3%	7.3%	959
2012	11.5%	10.4%	3.8%	16.9%	1,047
2013	14.6%	11.8%	5.2%	21.6%	1,154
2014	7.1%	5.8%	0.7%	11.4%	1,270
2015	1.7%	1.6%	-4.9%	8.1%	1,338
2016	10.9%	7.6%	1.9%	15.4%	1,438
2017	22.7%	9.0%	3.3%	15.5%	1,523
2018	-0.1%	0.5%	-7.3%	6.8%	1,499
2019	11.3%	8.5%	3.5%	15.7%	1,317
2009-2019	11.2%	7.3%	0.4%	15.3%	
Eureka					

⁴² Returns are annual returns for all funds reported in the respective database, including funds of funds (FOFs) and global as well as U.S. funds reporting data. For each database used here, funds report returns, which generally are expected to be reported net of fees. Twelve months of monthly return data are required for a fund-year observation to be included in the estimate. Thus, funds entering or exiting in the course of a calendar year are not included in the statistics for that calendar year. Due to differences in fund identifiers and overlaps, we are unable to consolidate data on all funds, so the data are presented for each database. Also, self-reporting may result in upward-biased estimates of average performance.

2009	24.6%	16.4%	3.6%	35.7%	2,650
2010	13.3%	10.2%	3.4%	19.0%	2,785
2011	-1.8%	-1.4%	-8.4%	5.1%	2,848
2012	7.4%	6.8%	0.5%	13.9%	2,817
2013	11.4%	9.6%	0.5%	19.1%	2,822
2014	5.3%	4.1%	-1.6%	9.7%	2,724
2015	0.0%	-0.1%	-6.2%	6.1%	2,631
2016	6.0%	4.6%	-1.0%	10.7%	2,541
2017	14.9%	6.6%	1.5%	12.9%	2,411
2018	-4.1%	-3.1%	-9.9%	2.5%	2,161
2019	9.9%	7.9%	2.8%	15.6%	1,827
2009-2019	8.0%	5.1%	-2.1%	13.3%	
TASS					
2009	18.8%	12.1%	5.5%	23.5%	8,023
2010	8.4%	7.0%	2.8%	11.4%	8,118
2011	-2.5%	-2.9%	-8.3%	6.0%	7,823
2012	7.7%	6.9%	2.0%	12.0%	7,146
2013	11.0%	8.0%	3.4%	13.8%	6,343
2014	4.7%	4.1%	-0.2%	8.9%	5,887
2015	3.0%	2.3%	-2.2%	9.5%	5,330
2016	4.9%	3.0%	-2.5%	12.0%	5,084
2017	12.0%	7.1%	2.5%	12.6%	4,742
2018	-0.1%	-2.0%	-8.3%	4.4%	4,344
2019	11.5%	7.0%	2.8%	12.5%	3,880
2009-2019	7.4%	5.6%	-0.8%	11.7%	

On the basis of the data presented above, we note considerable variance in return statistics over time, which were also somewhat sensitive to sample coverage in different sources. However, the hedge fund asset class as a whole reported generally strong returns in absolute terms during this period. As an important caveat, this period has coincided with favorable market performance. Thus, Figure 15 below plots mean annual hedge fund returns from the four databases alongside annual market portfolio returns from CRSP.

Figure 15. Average Hedge Fund Returns versus Market Returns (2009–2019)



For most years of the sample period, the market portfolio realized higher returns than the return reported in the hedge fund data. However, as hedge funds may invest in a variety of non-equity assets and have a distinct risk and illiquidity profile, comparisons with stock market returns should be treated with caution.

Evidence on Hedge Fund Returns from External Studies

A number of studies have considered hedge fund returns. For example, a recent academic study has found mean (median) annual net hedge fund returns to be approximately 9% (8%).⁴³ Extensive research has analyzed risks of hedge fund investments and found that systematic risk exposures of hedge funds often differ from those of public market investments.⁴⁴

⁴³ See Vikas Agarwal, T. Clifton Green, & Honglin Ren, *Alpha or Beta in the Eye of the Beholder: What Drives Hedge Fund Flows?*, 127 J. FIN. ECON. 417 (2018) (“Agarwal et al. (2018)”) at Table 1 (examining 71,117 observations from Eurekahedge, HFR, Lipper TASS, and Morningstar for 16,185 hedge funds and FOFs from 1994 through 2012. Average (median) CAPM alpha was 4.9% (3.4%); average (median) multi-factor alphas were 2.7-5.1% (1.4-3.4%), depending on the risk adjustment model).

⁴⁴ See, e.g., William Fung & David A. Hsieh, *Hedge Fund Benchmarks: A Risk-Based Approach*, FIN. ANALYSTS J., Sept./Oct. 2004, at 65; William Fung & David A. Hsieh, *Measurement Biases in Hedge Fund*

A small number of recent studies examine the subset of larger private funds subject to Form PF reporting requirements.⁴⁵ For example, a recent study examining quarterly Form PF data on returns of larger hedge funds from 2012Q4 through 2016Q4 reports average (median) quarterly gross returns of 2.5% (2.2%) with a 25th-75th percentile range of -0.5% to 5.1% and average (median) quarterly net returns of 1.8% (1.7%), with a 25th-75th percentile range of -0.7% to 4.2%, respectively.⁴⁶ Another recent report, examining all Form PF filers' private fund returns from 2012 through 2016, finds median annual gross returns of 12.1%, with the median fee of 1.9%,

Performance Data: An Update, FIN. ANALYSTS J., May/June 2009, at 36; Manuel Ammann, Otto R. Huber, & Markus Schmid, *Benchmarking Hedge Funds: The Choice of the Factor Model* (Working Paper, 2011); Zheng Sun, Ashley W. Wang, & Lu Zheng, *Only Winners in Tough Times Repeat: Hedge Fund Performance Persistence over Different Market Conditions*, 53 J. FIN. AND QUANTITATIVE ANALYSIS 2199 (2018); Charles Cao et al., *What Is the Nature of Hedge Fund Manager Skills? Evidence from the Risk-Arbitrage Strategy*, 51 J. FIN. AND QUANTITATIVE ANALYSIS 929 (2016); Agarwal et al. (2018), *supra* footnote 43; Jakub W. Jurek & Erik Stafford, *The Cost of Capital for Alternative Investments*, 70 J. FIN. 2185 (2015); Turan G. Bali, Stephen J. Brown, & Mustafa O. Caglayan, *Systematic Risk and the Cross Section of Hedge Fund Returns*, 106 J. FIN. ECON. 114 (2012); Turan G. Bali, Stephen J. Brown, & Mustafa O. Caglayan, *Macroeconomic Risk and Hedge Fund Returns*, 114 J. FIN. ECON. 1 (2014); Andrea Buraschi, Robert Kosowski, & Fabio Trojani, *When There Is No Place to Hide: Correlation Risk and the Cross-Section of Hedge Fund Returns*, 27 REV. FIN. STUD. 581 (2014); Ravi Jagannathan, Alexey Malakhov, & Dmitry Novikov, *Do Hot Hands Exist Among Hedge Fund Managers? An Empirical Evaluation*, 65 J. FIN. 217 (2010); Andrea Buraschi, Robert Kosowski, & Worrawat Sritrakul, *Incentives and Endogenous Risk Taking: A Structural View on Hedge Fund Alphas*, 69 J. FIN. 2819 (2014); Ronnie Sadka, *Liquidity Risk and the Cross-Section of Hedge-Fund Returns*, 98 J. FIN. ECON. 54 (2010); and Ilia D. Dichev & Gwen Yu, *Higher Risk, Lower Returns: What Hedge Fund Investors Really Earn*, 100 J. FIN. ECON. 248 (2011).

⁴⁵ Form PF must be filed by any adviser (a) that is registered or required to register with the SEC as an investment adviser, (b) that manages one or more private funds and (c) together with its related persons, collectively, had at least \$150 million in private fund assets under management as of the last day of the most recently completed fiscal year. See <https://www.sec.gov/about/forms/formpf.pdf>.

⁴⁶ The study focused on the subset of Form PF filers that are qualifying hedge funds (i.e., with a NAV of at least US\$500 million as of the last day in any month in the fiscal quarter immediately preceding the adviser's most recently completed fiscal quarter). See Mathias S. Kruttli, Phillip J. Monin, & Sumudu W. Watugala, *Investor Concentration, Flows, and Cash Holdings: Evidence from Hedge Funds* (Fed. Reserve Board, Fin. & Econ. Discussion Series No. 2017-121, 2017), at Table 1. See also Mark D. Flood & Phillip Monin, *Form PF and Hedge Funds: Risk-Measurement Precision for Option Portfolios* (Office of Fin. Research, Working Paper No. 16-02, 2016).

significant dispersion across funds, and near-zero net returns for the bottom 25% of reporting funds.⁴⁷

Other Private Funds

Below we discuss the performance of other private funds, including PE and VC funds. For purposes of the analysis below, we follow Preqin, our data source, in presenting data on buyout, VC, and certain other private fund strategies (such as private debt investing, infrastructure, natural resources, real estate PE, etc.) as part of the broader “PE” category, applying that term in a broader sense not limited to buyout funds.⁴⁸ All of these strategies share certain commonalities, such as the nature of fundraising from limited partners (LPs), a lack of liquidity, long-term focus, and irregular cash flows that must be considered in evaluating performance. We also present breakdowns showing performance of these types of private fund strategies.

According to a Preqin analysis, in 2019 global PE fund assets under management (AUM) accounted for approximately \$4 trillion,⁴⁹ and fundraising was estimated at \$595 billion across

⁴⁷ See David Johnson & Francis Martinez, *Form PF Insights on Private Equity Funds and Their Portfolio Companies* (Office of Fin. Research, Brief Series No. 18-01, 2018), at 4 and Figure 8.

⁴⁸ Preqin notes that it “collects performance data from a variety of sources to ensure a high degree of accuracy and confidence.” Sources of data include institutional investors that are limited partners, fund managers (with over 2,200 firms choosing to submit performance data to date), listed firm financial reports, public filings, and annual reports. See <https://docs.preqin.com/pro/Private-Capital-Performance-Guide.pdf> and <https://docs.preqin.com/pro/Preqin-Glossary.pdf>. This approach to sample construction not limited to buyout and VC funds has also been used, for example, in Arthur Korteweg & Morten Sorensen, *Skill and Luck in Private Equity Performance*, 124 J. FIN. ECON. 535 (2017) (“Korteweg & Sorensen (2017)”). See also J. Martin and R.-D. Manac *Varieties of Funds and Performance: The Case of Private Equity*, WORKING PAPER, University of Amsterdam (2018); Nathalie Gresch and Rico von Wyss, *Private Equity Funds of Funds vs. Funds: A Performance Comparison*, 14 J. PRIVATE EQUITY 43 (2011); Daniel Hobohm, *Investors in Private Equity Funds: Large-Scale Performance Analysis and the Question if Location Matters*, WORKING PAPER, Ludwig Maximilian University of Munich (2008).

⁴⁹ See Elisângela Mendonça, *Global Private Equity Crosses the \$4tn Assets Mark - Report*, PRIVATE EQUITY NEWS, Feb. 5, 2020, <https://www.penews.com/articles/global-private-equity-crosses-the-4tn-assets-mark-report-20200205>.

1,316 funds.⁵⁰ According to a different recent report, in 2019 the U.S. VC industry had \$444 billion in AUM across 5,733 funds by 2,371 VC firms.⁵¹ The same study estimated that in 2019 new VC fundraising reached \$50.5 billion across 272 funds, while VC funds invested \$133.4 billion across 11,360 deals with 10,430 portfolio companies.

PE and VC fund performance is frequently measured using annualized internal rates of return (IRR) on the basis of fund contributions and distributions (which include the value of any unrealized investments).⁵² Thus, in our analysis below, we use IRR as a measure of performance.⁵³ Table 12 below presents the analysis of performance of PE and VC funds covered in Preqin data, as described above, grouped by fund size, where fund size is measured by capital committed to the funds.⁵⁴ From the results, it appears that the top quartile of PE and

⁵⁰ See Chris Cumming, *Private-Equity Fundraising Dips in 2019 for First Time Since 2010*, WALL ST. J., Feb. 2, 2020, <https://www.wsj.com/articles/private-equity-fundraising-dips-in-2019for-first-time-since-2010-11580651367>.

⁵¹ See NVCA Yearbook 2020, Public Data Pack, https://nvca.org/recommends/nvca-2020-yearbook_public-data-pack-2/ (“NVCA (2020)”). The median fund was relatively small (\$80 million), reflecting right skewness.

⁵² IRR is a time-weighted return that uses the present value of cash contributed, distributions, and the value of unrealized investments as of measurement date, and excludes performance fees.

One alternative measure is a multiple of invested capital (also referred to as total value to paid in capital), defined as the sum of all fund distributions and value of unrealized investments divided by the value of all fund contributions by LPs. See, e.g., Korteweg & Sorensen (2017) (performing the main analysis using IRRs and obtaining similar results in robustness tests using multiples).

⁵³ Data are obtained from Preqin Ltd. The data are as of 2018, with an update in 2019 covering 19 PE strategies, including buyout, and VC strategies and 9 regional focuses around the globe, including the United States and North America. Due to a low number of funds in certain strategies, some strategies were combined into a broader strategy. Real Estate strategy includes Real Estate Co-Investment, Real Estate Secondaries, Real Estate Fund of Funds and Real Estate. Infrastructure strategy includes Infrastructure Secondaries, Infrastructure Fund of Funds, and Infrastructure. Early Stage includes Early Stage (Seed), Early Stage (Start-Up) and Early Stage. Venture strategy includes Venture Debt and Venture (General). Net IRR is calculated using capital calls, management fees, distributions, and the fair value of unrealized investments and is expressed as an annualized rate of return. For definitions of these and other strategies used in this data, see <https://docs.preqin.com/pro/Preqin-Glossary.pdf>.

⁵⁴ Some literature has found diseconomies of scale in fund performance. See, e.g., Mark Humphery-Jenner, *Private Equity Fund Size, Investment Size, and Value Creation*, 16 REV. FIN. 799 (2012); Florencio Lopez-de-Silanes, Ludovic Phalippou and Oliver Gottschalg, *Giants at the Gate: Investment Returns and Diseconomies of Scale in Private Equity* 50 J. Fin. Quant. Anal. 377 (2015); Korteweg & Sorensen (2017), *supra* note 52; Douglas Cumming and Na Dai, *Fund Size, Limited Attention and Valuation of Venture Capital Backed Firms*,

VC funds has generated substantial returns for its investors. Overall, PE and VC funds exhibited strong performance. The median IRR across all PE and VC funds is approximately 14%, which is close to the 10% historical average annual return on the S&P 500 index. This result is generally consistent with what academic studies on the performance of PE funds document.⁵⁵ However, PE and VC fund investments are less liquid and generally have a greater risk exposure than an investment in the S&P 500 index.

18 J. EMPIR. FIN. 2 (2011) (finding diseconomies of scale in the VC industry). *But see* Harris et al. (2014), *supra* note 55 (finding no significant relation between performance and fund size for buyout funds and finding that VC funds in the bottom quartile of size underperform while top size quartile VC funds have the best performance although they do not differ significantly from funds in the second and third size quartiles).

⁵⁵ See, e.g., Robert S. Harris, Tim Jenkinson, & Steven N. Kaplan, *Private Equity Performance: What Do We Know?*, 69 J. FIN. 1851 (2014) (“Harris et al. (2014)”).

Table 12. Net Internal Rate of Return (%) by Fund Size (2009–2019)

Size (\$ million)	Mean	Median	P25	P75	Obs.
< 100	19.4	15.7	9.5	24.9	736
100 - 250	15.1	13.5	8.2	20.0	804
250 -1000	15.7	13.7	8.8	20.2	1194
1000 - 5000	13.9	13.2	8.1	18.7	486
> 5000	17.3	16.1	13.4	21.2	68
All funds	16.2	14.0	8.7	20.9	3,288

Tables 13 through 15 below provide additional breakdowns of fund performance data by vintage year, fund strategy, and region. On the basis of average IRRs, it appears that early-stage VC and secondaries have performed the best over the time period under consideration.⁵⁶ In terms of regional focus, PE funds with primary regional focus on deals in North America, Asia, and Middle East have generated the highest average IRRs.

⁵⁶ Secondaries funds are funds that purchase stakes in privately held companies directly from the holder of the securities. Early-stage VC funds invest in companies at an early stage of their lifecycle (seed or startup). For definitions of these and other strategies used in this data, see <https://docs.preqin.com/pro/Preqin-Glossary.pdf>.

Table 13. Net Internal Rate of Return (%) by Vintage Year

Vintage Year	Mean	Median	25%	75%	Obs.
2009	16.8	13.0	8.6	20.2	238
2010	14.3	13.2	8.9	19.0	361
2011	15.9	14.5	9.8	20.4	438
2012	16.5	14.0	10.0	20.1	404
2013	14.5	13.2	8.5	18.4	488
2014	16.6	14.0	9.0	21.0	523
2015	15.4	14.4	8.4	22.0	505
2016	19.2	15.0	8.4	24.2	289
2017	17.4	12.5	3.0	27.1	220

Table 14. Net Internal Rate of Return (%) by Fund Strategy (2009–2019)

Main Focus	Mean	Median	P25	P75	Obs.
Balanced	18.9	13.4	8	21.3	31
Buyout	16.5	15.7	8.7	23	685
Co-investment	19.4	17.7	10.8	23.4	142
Direct Lending	9.2	9.4	6.6	11.9	92
Direct Secondaries	20.8	17.1	10.4	22.3	26
Distressed Debt	13.4	11	7.4	15.1	88
Early Stage	21.9	17.4	8.6	29.2	251
Expansion / Late Stage	17.5	13.2	9.3	20.2	66
Fund of Funds	13.2	13.3	9.3	17.4	486
Growth	16.2	12.8	7.9	21.5	253
Infrastructure	15.6	9.7	6.8	14.5	96
Mezzanine	10.9	9.9	8.1	13.9	80
Natural Resources	9.2	8.2	-0.7	21.3	75
Real Estate	15.4	14	10	19.6	654
Secondaries	22.5	17.5	13.9	23.8	135
Special Situations	10.6	10.5	5.5	14.5	39
Timber	4.6	4.4	2.9	7.7	18
Turnaround	16	20.2	7.8	30.3	19
Venture	18.7	15	7	27.7	230
All Funds	16.1	13.9	8.7	20.6	3,466

Table 15. Net Internal Rate of Return (%) by Regional Focus (2009–2019)

Main Region	Mean	Median	P25	P75	Obs.
Africa	11.0	10.2	7.6	13.6	18
Middle East & Israel	21.1	17.9	9.5	27.0	32
Australasia	17.9	15.6	11.6	24.6	47
Diversified Multi-Regional	10.2	9.5	4.1	14.4	73
Americas	10.8	10.0	3.3	16.6	76
Asia	17.9	14.4	9.2	22.5	320
Europe	16.1	13.2	8.5	19.4	693
US	13.8	12.5	8.1	18.1	914
North America	17.7	15.8	9.9	23.0	1,293
All Funds	16.1	13.9	8.7	20.6	3,466

Evidence on PE and VC Fund Returns from External Studies

Various academic studies have examined PE and VC returns during earlier time periods, providing somewhat mixed evidence about the performance of those funds.⁵⁷ Several studies find strong outperformance of PE and VC fund investments compared to public equity markets.⁵⁸ For example, one study finds that buyout and VC funds outperform the S&P 500 on average by 20% to 27% over the life of a fund.⁵⁹ Other studies find that PE funds on average either do not

⁵⁷ See, e.g., the survey of the literature in Andrew Metrick & Ayako Yasuda, *Venture Capital and Other Private Equity: A Survey*, 17 EUR. FIN. MGMT. 619 (2011).

⁵⁸ See, e.g., John H. Cochrane, *The Risk and Return of Venture Capital*, 75 J. FIN. ECON. 3 (2005) (“Cochrane (2005”); Arthur Korteweg & Morten Sorensen, *Risk and Return Characteristics of Venture Capital-Backed Entrepreneurial Companies*, 23 REV. FIN. STUD. 3738 (2010) (“Korteweg & Sorensen (2010”); Harris et al. (2014), *supra* footnote 55.

⁵⁹ See Harris et al. (2014), *supra* footnote 55.

outperform public equity markets, or perform only marginally better, on a risk-adjusted basis.⁶⁰

Another important feature of PE fund performance documented by the academic literature is long-term performance persistence. PE funds that are high performers tend to continue to do well, while underperformers tend to continue to underperform.⁶¹ One recent study finds, however, that as the PE industry has matured, the persistence in performance has substantially declined.⁶²

A number of studies have focused on VC performance.⁶³ A few studies have focused on the performance of FOFs that invest in buyout and VC funds. For instance, one recent study finds that, net of fees, FOFs “provide returns equal to or above public market indices for both buyout and venture capital. While FOFs focusing on buyouts outperform public markets, they underperform direct fund investment strategies in buyout. In contrast, the average performance of FOFs in venture capital is on a par with results from direct venture fund investing.”⁶⁴ The study reports data, as of December 2012, for FOFs with vintage years 1997 through 2007 on the

⁶⁰ See, e.g., Steven N. Kaplan & Antoinette Schoar, *Private Equity Performance: Returns, Persistence, and Capital Flows*, 60 J. FIN. 1791 (2005) (“Kaplan & Schoar (2005)”; Francesco Frazoni, Eric Nowak, & Ludovic Phalippou, *Private Equity Performance and Liquidity Risk*, 67 J. FIN. 2341 (2012); Narasimhan Jegadeesh, Roman Kräussl, & Joshua M. Pollet, *Risk and Expected Returns of Private Equity Investments: Evidence Based on Market Prices*, 28 REV. FIN. STUD. 3269 (2015); Ludovic Phalippou & Oliver Gottschalg, *The Performance of Private Equity Funds*, 22 REV. FIN. STUD. 1747 (2009); Joost Driessen, Tse-Chun Lin, & Ludovic Phalippou, *A New Method to Estimate Risk and Return of Nontraded Assets from Cash Flows: The Case of Private Equity Funds*, 47 J. FIN. & QUANTITATIVE ANALYSIS 511 (2012) (finding annual underperformance of -12% for VC funds and no underperformance for Leveraged Buyout (LBO) funds).

⁶¹ See Kaplan & Schoar (2005), *supra* footnote 60; Korteweg & Sorensen (2017), *supra* footnote 52 (finding that the spread in expected net-of-fee future returns between top and bottom quartile PE firms is 7–8 percentage points annually.)

⁶² See Reiner Braun, Tim Jenkinson, & Ingo Stoff, *How Persistent Is Private Equity Performance? Evidence from Deal-Level Data*, 123 J. FIN. ECON. 273 (2017).

⁶³ See, e.g., Cochrane (2005), *supra* footnote 58; Arthur Korteweg & Stefan Nagel, *Risk-Adjusting the Returns to Venture Capital*, 71 J. FIN. 1437 (2016) (“Korteweg & Nagel (2016)”); Axel Buchner, Abdulkadir Mohamed, & Armin Schwienbacher, *Does Risk Explain Persistence in Private Equity Performance?*, 39 J. CORP. FIN. 18 (2016).

⁶⁴ See Robert S. Harris et al., *Financial Intermediation in Private Equity: How Well Do Funds of Funds Perform?*, 129 J. FIN. ECON. 287 (2018) (“Harris et al. (2018)”).

basis of information from Burgiss and Preqin databases, respectively, finding average (median) annualized IRRs of 8.1% (7.2%) and 7.9% (6.7%), respectively.⁶⁵ Across vintage years 1997 through 2007, average public market equivalent (PME)⁶⁶ performance of all FOFs in the study relative to S&P 500 was 1.16 and median was 1.15; average and median PME relative to Russell 2000, which captures small cap stocks, was 1.03 (1.00), respectively.⁶⁷ According to a recent industry study, as of mid-2018, net IRRs for buyout funds in the United States averaged 15% for five years ending June 2018 (just over 10% for 10- and 20-year investment horizons), outperforming S&P 500 modified PME performance.⁶⁸

The presented data on private fund performance uses common performance measures without adjusting for risk.⁶⁹ In extrapolating from the presented data, it is important to note that

⁶⁵ See *id.* at Table 1.

⁶⁶ A PME measure compares an investment in a PE fund to an equivalently timed investment in the relevant public market index. For more detail on PME, see also Kaplan & Schoar (2005), *supra* footnote 60. PME takes into account irregular cash flows associated with the PE asset class. The measure does not account for risk differentials between PE and public market investments. See also, e.g., Harris et al. (2018), *supra* footnote 64.

⁶⁷ See Harris et al. (2018), *supra* footnote 64, at Table 2.

⁶⁸ See *Global Private Equity Report 2019*, BAIN & COMPANY, available at https://www.bain.com/contentassets/875a49e26e9c4775942ec5b86084df0a/bain_report_private_equity_report_2019.pdf, at Figure 1.27.

⁶⁹ Some studies have sought to adjust private funds' returns for risk. See, e.g., Korteweg & Nagel (2016), *supra* footnote 63. The study examines VC fund cash flows between 1979 and 2012, obtained from Preqin, yielding a sample of 545 funds, raised by 278 firms, with vintage years between 1979 and 2008. Mean (median) IRR is 8.84% (4.37%), respectively, while mean (median) investment multiple is 1.57 (1.16), respectively. See *id.* at Table 1. The study finds average PME (normalized by deducting 1) is 0.048 (not statistically significantly different from 0). See *id.* at Table 2. For nearly liquidated funds, the average PME is 0.276. The study finds that the PME understates the PME premium because VC funds have betas in excess of 1 and thus overstate the abnormal returns of VC funds relative to public market investments during periods of favorable market conditions. See also Arthur Korteweg, *Risk Adjustment in Private Equity Returns*, 11 ANN. REV. FIN. EC. 131 (2019). The study indicates that "risk-adjusted return estimates vary substantially by method, time period, and data source" and further notes that "[t]he weight of evidence suggests that, relative to a similarly risky investment in the stock market, the average venture capital (VC) fund earned positive risk-adjusted returns before the turn of the millennium, but net-of-fee returns have been zero or even negative since. Average leveraged buyout (BO) investments have generally earned positive risk-adjusted returns both before and after fees, compared with a levered stock portfolio."

PE valuations, and associated returns, tend to be affected by aggregate conditions.⁷⁰ Time-to-liquidity for PE funds is also likely to be affected by market conditions. For example, according to one report, on the basis of data from 2011 through 2019, the average time-to-liquidity for active buyout funds was around 3.2 years (2.7 in 2019).⁷¹ The report also suggests that, when faced with adverse market conditions, active buyout funds are likely to delay exits, leading to increasing average time-to-liquidity.

Mutual Fund Returns and Market Portfolio Returns

For comparison with the performance of hedge funds and other private funds, in this section we provide summary statistics for the performance of U.S. mutual funds (net of fees),⁷² as well as market portfolio returns. Table 16 below presents return statistics of U.S. mutual funds from 2009 through 2019 as a function of fund size. The statistics in the P25 and P75 columns represent the 25th and 75th percentiles of the return distribution, respectively. Tables 17 and 18 below present mutual fund returns by year and by fund category, respectively.

⁷⁰ See, e.g., *Private Equity Valuations During Downturns*, EFRONT, Apr. 30, 2020, available at <https://www.efront.com/research-papers/private-equity-valuations-during-downturns/>.

⁷¹ See *Returns, Risks, and Liquidity of LBO Funds in Q4 2019*, EFRONT, May 11, 2020, at 8, available at <https://www.efront.com/research-papers/returns-risks-and-liquidity-of-lbo-funds-in-q4-2019/>.

⁷² The analysis of U.S. mutual fund performance is based on CRSP Survivor-Bias-Free Mutual Fund database. We exclude all ETFs, money market funds, and variable annuities. We report summary statistics of returns net of fees at the fund level. We aggregate share classes to the fund level using weights based on total net assets in the prior month. Annual returns are subsequently calculated by compounding the fund's monthly returns. If a monthly return is missing, then no return would be calculated for that year. We group funds into different broad investment categories using CRSP objective codes.

Table 16. U.S. Mutual Funds Returns by Fund Size (2009–2019)

Size (\$ million)	Mean	Median	P25	P75	Obs.
<100	9.41	7.44	-0.30	18.04	33,791
100-250	9.46	6.93	0.34	17.13	12,562
250-1000	9.40	7.01	0.28	17.16	18,466
1000-5000	8.97	6.89	0.03	16.93	13,102
>5000	8.84	6.95	-0.13	16.95	4,603
All	9.31	7.11	0.06	17.43	73,978

Table 17. Historical Returns of U.S. Mutual Funds (2009–2019)

Year	Mean	Median	P25	P75	Obs.
2009	28.13	26.86	16.92	35.88	6,021
2010	13.30	12.87	7.29	18.26	6,088
2011	-1.82	-0.74	-6.14	3.85	6,143
2012	12.17	12.81	7.64	16.53	6,390
2013	16.65	17.58	0.44	31.57	6,598
2014	4.77	4.92	1.01	9.15	6,906
2015	-2.23	-1.18	-4.30	1.08	7,211
2016	7.38	6.31	1.80	11.26	7,321
2017	14.88	13.90	5.87	21.72	7,180
2018	-6.76	-5.78	-11.08	-1.30	7,145
2019	18.95	19.93	9.73	26.59	6,975

Table 18. U.S. Mutual Fund Returns by Fund Category (2009–2019)

Fund Category	Mean	Median	P25	P75	Obs.
Alternative Strategy	2.69	2.20	-3.87	8.42	4,065
Foreign Bonds	4.64	4.30	-1.85	10.21	1,677
Foreign Equity	9.87	9.25	-4.67	22.66	12,426
General Bonds	5.37	3.84	0.69	7.91	6,951
Mixed Strategy	7.98	7.72	0.25	14.26	8,086
Mortgage-Backed Securities	4.64	3.95	1.09	6.72	1,041
US Corporate Bonds	6.33	5.97	0.58	9.67	910
US Equity	12.98	12.87	0.98	23.84	30,773
US Government Bonds	2.71	1.81	0.27	4.84	1,752
US Municipal Bonds	4.83	3.64	0.79	8.02	6,297

We also report annual value- and equal-weighted market portfolio returns from the CRSP database in Table 19 below.

Table 19. Market Portfolio Returns (2009–2019)⁷³

Year	Market Return (Value-Weighted)	Market Return (Equal-Weighted)
2009	31.3%	64.3%
2010	17.7%	25.2%
2011	-1.1%	-9.0%
2012	15.8%	16.8%
2013	30.5%	30.9%
2014	10.5%	2.9%
2015	-1.7%	-6.9%
2016	12.7%	16.0%
2017	20.7%	15.8%
2018	-6.3%	-13.1%
2019	29.3%	21.7%

Because of differences in the measures of performance and sources of data applicable to different categories of private funds versus mutual funds and the market index portfolio, as well as, importantly, substantial differences in risk exposures, underlying investment portfolios, liquidity, timing of cash flows, nature of data reporting, and extent of regulatory oversight

⁷³ Annual returns are calculated by compounding monthly returns, including distributions, of an equal-weighted or value-weighted market portfolio, as indicated, obtained from CRSP. These returns are gross of trading costs.

applicable to private funds versus registered investment companies, it is difficult to draw a meaningful comparison of performance between these very different asset classes.

3. Performance of Non-Fund Regulation D Issuers

Various studies have compared the behavior of private and public companies, arriving at mixed conclusions.⁷⁴ Small private companies often face significant financing constraints, which can both limit growth during booms and increase downside risk during contractions. In particular, small businesses typically have limited access to securities markets and commonly rely on personal savings, business profits, outside debt, and friends and family as initial sources of capital.⁷⁵ According to one survey, approximately 64% of small businesses relied on personal or family savings, compared to 0.6% receiving VC capital. The survey also finds that about one-

⁷⁴ As a general caveat, there may be differences in methodology and data definitions in the performance estimates reported in various sources cited in this section. See, e.g., Huasheng Gao, Po-Hsuan Hsu, & Kai Li, *Innovation Strategy of Private Firms*, 53 J. FIN. QUANTITATIVE ANALYSIS 1 (2018) (finding that public companies' patents rely more on existing knowledge, while private companies' patents are broader in scope and more exploratory); Viral Acharya & Zhaoxia Xu, *Financial Dependence and Innovation: The Case of Public Versus Private Firms*, 124 J. FIN. ECON. 223 (2017) (showing that public companies in external-finance-dependent industries spend more on R&D and generate a better patent portfolio than their private counterparts); John Asker, Joan Farre-Mensa, & Alexander Ljungqvist, *Corporate Investment and Stock Market Listing: A Puzzle?*, 28 REV. FIN. STUD. 342 (2015) (finding that listed companies invest less and are less responsive to changes in investment opportunities compared to observably similar, matched private companies); Naomi Feldman et al., *The Long and the Short of It: Do Public and Private Firms Invest Differently?* (Fed. Reserve Board, Fin. & Econ. Discussion Series No. 2018-068, 2018) (finding that public companies invest more in long-term assets—particularly innovation—than private companies); Vojislav Maksimovic, Gordon M. Phillips, & Liu Yang, *Do Public Firms Respond to Investment Opportunities More than Private Firms? The Impact of Initial Firm Quality*, (Nat'l Bureau of Econ. Research, Working Paper No. 24104, 2017) (finding that public companies respond more to demand shocks after their IPO and are more productive than their matched private counterparts, particularly in industries that are capital intensive and dependent on external financing); Menachem Abudy, Simon Benning, & Efrat Shust, *The Cost of Equity for Private Firms*, 37 J. CORP. FIN. 431 (2016) (finding that private companies are associated with a higher cost of equity); Ilan Cooper & Richard Priestley, *The Expected Returns and Valuations of Private and Public Firms*, 120 J. FIN. ECON. 41 (2016) (finding that the cost of capital and valuations are similar across private and public companies).

⁷⁵ See U.S. DEP'T OF TREASURY, *A Financial System that Creates Economic Opportunities: Banks and Credit Unions* (June 2017), available at <https://www.treasury.gov/press-center/press-releases/Documents/A%20Financial%20System.pdf>. See also Alicia M. Robb & David T. Robinson, *The Capital Structure Decisions of New Firms*, 27 REV. FIN. STUD. 153 (2014), at Table 4 (showing that while entrepreneurial companies frequently rely on outside loans, outside equity use is uncommon).

third of businesses used banks and other financial institutions as a source of capital for financing business operations in 2014. The survey further finds that a significant share of businesses that established new funding relationships continued to have unmet credit needs. Further, according to the survey, small businesses owned by underrepresented minorities faced significantly higher hurdles in obtaining external financing.

Below, we present available evidence and research on the performance of non-fund issuers in the Regulation D market. Comprehensive data on returns of private placements by non-fund issuers, including securities issued under Regulation D, are not available because many issuers in unregistered offerings do not experience liquidity events (and data on returns in those cases are limited) and most securities purchased in unregistered offerings do not trade in a secondary market.⁷⁶ Thus, with few exceptions, academic studies have focused on private fund returns, discussed in Section III.B.2 above.

Evidence on Returns

A 2016 study has analyzed U.S. angel investment returns for a sample of 245 companies that received investment from an angel investor group and that either reported a successful exit or shut down.⁷⁷ The study found an average 2.5x investment multiple and 22% IRR (gross of

⁷⁶ Most private securities are restricted. A limited secondary market for private securities exists, which includes the market for limited partnership (LP) interests in private funds and the direct market for the stock of private companies. See Robert Loveland, Eric Fricke, & Sinan Goktan, *Do Private Firms Benefit from Trading in the Private Securities Market?*, J. ENTREPRENEURIAL FIN., Fall 2017 (“Loveland et al. (2017)”). See also Darian M. Ibrahim, *The New Exit in Venture Capital*, 65 VAND. L. REV. 1 (2012); William A. Birdthistle & M. Todd Henderson, *One Hat Too Many? Investment Desegregation in Private Equity*, 76 U. CHI. L. REV. 45 (2009); David F. Larcker, Brian Tayan, & Edward Watts, *Cashing It In: Private-Company Exchanges and Employee Stock Sales Prior to IPO* (Stanford Closer Look Series, Sept. 12, 2018). We lack trading data from such marketplaces in order to construct return, risk, or liquidity measures.

⁷⁷ See Robert E. Wiltbank & Wade T. Brooks, *Tracking Angel Returns: 2016 Report with 2017 Update*, ANGEL RES. INST. (2017), available at <https://angelresourceinstitute.org/reports/tracking-angel-returns-2017-update.pdf>.

legal and other investment costs), with an average 4.5-year holding period. The study found that returns were skewed, with 10% of all exits generating 85% of all cash, while 70% of investments generated negative returns. According to the study, a 2017 update identified 20 additional outcomes (exits or closures), yielding an average 2.3x investment multiple and a 19.3% average IRR for the full sample. Another industry study considering 684 AngelList investments with nonnegative returns finds a mean (median) IRR of 35% (21%), and a mean (median) investment multiple of 1.7x (2.7x), net of fees and carried interest.⁷⁸

Certain additional data are made available by individual intermediaries. For example, one intermediary reports a 41% unrealized net IRR and a 3.3x investment multiple (based on unrealized value divided by amount invested) for Regulation D investments in companies funded through its website from 2013 through 2016, based on 119 startup investments.⁷⁹ This intermediary also reported, as of December 2018, that 81% (96 of 119) startups were still active, 40% raised a subsequent Series A round in excess of \$3 million, and 9% (11 out of 119) were valued over \$100 million.

Some studies have examined financial returns to individuals or households from the choice to become an entrepreneur.⁸⁰ For instance, a 2002 study finds that that, although entrepreneurial investment is extremely concentrated, the returns to PE are no higher than the

⁷⁸ See Abraham Othman, *Startup Growth and Venture Returns*, ANGELLIST (Dec. 2019), available at <https://angel.co/pdf/growth.pdf>. AngelList is a platform that allows accredited investors to make VC-like investments in startups. Data on all investments are not available in the cited source. *But see also, e.g.,* Olga Itenberg & Erin E. Smith, *Syndicated Equity Crowdfunding: The Trade-Off Between Deal Access and Conflicts of Interest* (Simon Bus. Sch., Working Paper No. FR 17-06, Mar. 2017).

⁷⁹ See <https://wefunder.com/funds> (retrieved March 23, 2020).

⁸⁰ For a review of the evidence on earnings from entrepreneurship, *see, e.g.*, Thomas Astebro, *The Returns to Entrepreneurship*, in OXFORD HANDBOOK OF ENTREPRENEURIAL FINANCE (Douglas Cumming ed. 2012).

returns to public equity.⁸¹ The study attributes the willingness of households to invest substantial amounts in a single privately held firm with a seemingly far worse risk-return trade-off to large nonpecuniary benefits, a preference for skewness, or overestimated probability of survival. In turn, a 2011 study finds that owners of private companies require compensation for a lack of diversification in the form of higher returns.⁸²

Evidence on Exits

In instances where a private non-fund issuer has a subsequent registered offering or an M&A exit, returns on a private company investment can be examined on the basis of the “exit” valuation. Prior work has thus considered IPO and M&A exits, with some of those studies providing information on returns attained through such exits, for a subset of the companies.⁸³ As an important caveat, where IPO and M&A exits are observed, data on the terms of such exits compared to the terms of pre-exit private investments are scarce and valuations are difficult to compare because of variation in legal and contractual terms of securities and limited disclosure available about pre-exit private placement rounds. Terms of private company exits involving a private financial or corporate acquirer are not required to be disclosed and acquirers may have competitive or other commercial reasons to prefer non-disclosure.

⁸¹ See Tobias J. Moskowitz & Annette Vissing-Jørgensen, *The Returns to Entrepreneurial Investment: A Private Equity Premium Puzzle?*, 92 AM. ECON. REV. 745 (2002)

⁸² See Elisabeth Müller, *Returns to Private Equity – Idiosyncratic Risk Does Matter!*, 15 REV. FIN. 545 (2011).

⁸³ See, e.g., Umit Ozmel, David T. Robinson, & Toby E. Stuart, *Strategic Alliances, Venture Capital, and Exit Decisions in Early Stage High-Tech Firms*, 107 J. FIN. ECON. 655 (2013); Susan Chaplinsky & Swasti Gupta-Mukherjee, *The Decline in Venture-Backed IPOs: Implications for Capital Recovery*, in HANDBOOK OF RESEARCH ON IPOs (Mario Levis & Silvio Vismara eds. 2013), at 35; Eric Ball, Hsin Hui Chiu, & Richard Smith, *Can VCs Time the Market? An Analysis of Exit Choice for Venture-Backed Firms*, 24 REV. FIN. STUD. 3105 (2011); Richard Smith, Robert Pedace, & Vijay Sathe, *VC Fund Financial Performance: The Relative Importance of IPO and M&A Exits and Exercise of Abandonment Options*, 40 FIN. MGMT. 1029 (2011).

For instance, a 2016 study⁸⁴ examined Thomson Reuters' Venture Economics data, supplemented with Thomson Reuters' SDC Platinum New Issues and Mergers and Acquisitions data, EDGAR filings, and hand collection of data, for "all U.S.-based portfolio companies with reported investments from VC firms that had final outcomes during the period 1986–2008 resulting in (1) mergers, acquisitions or buyouts (categorized broadly as "M&A" exits); (2) IPOs; or (3) failures." The study counted as failures companies classified as bankrupt (Chapter 7 or Chapter 11), defunct, or "living dead." Because of underreporting of failures, the study classified "active investments as living dead if they have not received a financing round for at least five years as of December 2008," which was the end of the sample period. The study found that "[o]f the 4468 total companies identified as failures in our sample, 126 are bankruptcies, 1869 are defunct, and 2473 are living dead." Calculation of exit returns results in sample attrition. The study notes that "[a] total of 1222 M&A exits and 1436 IPO exits have sufficient post-money valuation data to calculate returns." The study notes a sharp rise in the frequency of M&A exits over time, stating that "with the exception of 2007, M&A make up more than the majority of exits in every year from 2001 onwards." The study further finds that "the mean [non-annualized] return to VCs from M&A exits is 99.5% compared to 211.7% for IPO exits, a difference of 112.2% that is significant at the 1% level. Both forms of exit display highly skewed returns where the mean returns substantially exceed the median returns (-31.5% for M&A; 109.7% for IPOs)."

Like IPO activity more generally, VC-backed IPO exits are highly cyclical. According to a recent report, there were 82 VC-backed IPO exits in 2019, totaling \$199 billion, compared to

⁸⁴ See Susan Chaplinsky & Swasti Gupta-Mukherjee, *Investment Risk Allocation and the Venture Capital Exit Market: Evidence from Early Stage Investing*, 73 J. BANKING & FIN. 38 (2016).

89 exits totaling \$65 billion in 2018 and 59 exits totaling \$51 billion in 2017.⁸⁵ By comparison, in 2008 and 2009, there were only 13 and 11 IPO exits, respectively, according to the same report. The report also estimates that, in 2019, among IPO exits, the average time from first VC funding round to exit was approximately 7 years; the average ratio of IPO pre-money valuation to total VC invested was 5.7. Because of the impact of exits of a few private companies with high valuations on means in samples with a relatively small number of observations, the ratio has varied significantly over time (even during the boom years), from as low as 2.5 in 2016 to as high as 12.0 in 2012.

Some sources self-report exit outcomes for angel and other private investors. For example, according to one industry survey of angel investors, approximately 40% of all exits resulted in positive returns (41.7% for angels with an entrepreneurial background and 34.7% for angels without an entrepreneurial background).⁸⁶ In some other instances, funds and other investors in private companies may rely on follow-on financing rounds to calculate updated valuations of private companies they hold in their portfolios. Such valuations may be confounded by differences in the terms of securities offered in different financing rounds, as well as any deviations from fundamental value due to information frictions.⁸⁷

⁸⁵ See NVCA (2020), *supra* footnote 51, at 21–22.

⁸⁶ Because some investments did not have an exit, the study also considered the percentage of positive exits as a proportion of all companies, with estimates ranging from 7–8% for angels with 1–10 investments, 12% for angels with 11–50 investments, and 15% for angels with over 50 investments. See Laura Huang et al., *The American Angel*, AM. ANGEL CAMPAIGN (Nov. 2017), at 13, 17, available at <https://www.theamericanangel.org/>. Data on returns, net of fees, obtained from such exits are not available in the cited source. The source obtained data from a survey of angel investors between March 2016 and February 2017, which may contain biases and may not be representative of the performance of all Regulation D angel investors.

⁸⁷ For a recent analysis of venture-backed company valuations, see, e.g., Will Gornall & Ilya A. Strebulaev, *Squaring Venture Capital Valuations with Reality*, 135 J. FIN. ECON. 120 (2020). Focusing on 135 U.S. private companies with reported valuations above \$1 billion, the study finds that “reported ‘unicorn’ post-money valuations average 48% above fair value, with 14 being more than 100% above.” They attribute the difference to the difference in legal terms of preferred shares issued in recent financing rounds and other

Identifying an appropriate benchmark return for evaluating returns of private companies is challenging for several reasons. Because of more limited disclosure requirements for exempt offerings, it is difficult to observe comprehensive, standardized information on the risk profile of the underlying investment. Finally, the illiquidity and the nature of data on private firm returns make it difficult to construct an appropriate benchmark.⁸⁸ Such risk, liquidity, and measurement differentials can have important effects on the returns of private securities.⁸⁹

Performance of Reporting Companies Using Regulation D

As discussed above, most non-fund Regulation D issuers are private companies for which financial and operating performance data are scarce. However, a small minority of Regulation D issuers are public companies, for which such data are available. Approximately 4% of non-fund Regulation D issuers were reporting companies with data in Compustat North America when

share classes, which may lack such protections as IPO return guarantees, vetoes over down-IPOs, or seniority to all other investors.

⁸⁸ See, e.g., Douglas Cumming, Lars Helge Hass, & Denis Schweizer, *Private Equity Benchmarks and Portfolio Optimization*, 37 J. BANKING & FIN. 3515 (2013) (stating that “institutional investments in PE are both long-term and illiquid, and it is thus somewhat difficult to establish optimal portfolio weights, particularly relative to more liquid asset classes.”). The study shows that listed PE indices, transaction-based PE indices, and appraisal value-based PE indices do not appropriately capture risk/return inputs for portfolio optimization or for risk models. See also Korteweg & Sorensen (2010), *supra* footnote 58 (stating that because “[v]aluations of entrepreneurial companies are only observed occasionally, albeit more frequently for well-performing companies. . . estimators of risk and return must correct for sample selection to obtain consistent estimates. . . Our selection correction leads to markedly lower intercepts and higher estimates of risks compared to previous studies.”); Antti Ilmanen, Swati Chandra, & Nicholas McQuinn, *Demystifying Illiquid Assets: Expected Returns for Private Equity*, J. ALTERNATIVE INVESTMENTS, Winter 2020, at 8 (noting that “modeling private equity is not straightforward, due to a lack of good quality data and artificially smooth returns,” the study attempts to assess “private equity’s realized and estimated expected return edges over lower-cost public equity counterparts” and finds “a decreasing trend over time, which does not seem to have slowed the institutional demand for private equity. We conjecture that this is due to investors’ preference for the return-smoothing properties of illiquid assets in general.”).

⁸⁹ For example, many issuers in private placements are smaller. Small companies, even among listed companies, tend to be more financially constrained and disproportionately affected by downturns. See, e.g., Gabriel Perez-Quiros & Allan Timmermann, *Firm Size and Cyclical Variations in Stock Returns*, 55 J. FIN. 1229 (2000); Murillo Campello & Long Chen, *Are Financial Constraints Priced? Evidence from Firm Fundamentals and Stock Returns*, 42 J. MONEY, CREDIT, & BANKING 1185 (2010).

they conducted their Regulation D offering.⁹⁰ This category of issuers reported approximately \$400 billion in Regulation D proceeds during 2009 through 2019. This represents approximately 3% of capital reported to be raised by all issuers and 22% of capital raised by non-fund issuers in the Regulation D market during 2009 through 2019. By comparison, reporting companies raised approximately \$11.7 trillion and \$1.8 trillion in registered debt offerings and registered follow-on equity offerings, respectively, during the same period.⁹¹

Characteristics of Reporting Company Regulation D Issuers

This small subset of reporting companies that conducted Regulation D offerings has distinct characteristics and is not representative of all Regulation D non-fund issuers. Therefore, inference from the performance of this subset of companies should be treated with significant caution. Past studies of private investments in public equity (PIPEs) found that public companies that undertake PIPE offerings have a distinct set of characteristics. For example, one study finds that public companies with lower stock performance, higher burn rates, and more uncertain cash flows that tend to have fewer financing options in public equity markets are more likely to choose a PIPE.⁹² As a caveat, past studies of PIPEs that we found used commercial

⁹⁰ To obtain financial data we merge our Regulation D data with Compustat North America by year, using CIK as the issuer identifier. This is to account for multiple offerings by an issuer. Based on the merge using issuer and year criteria, the number of unique issuers which have financial data for the year of offering and subsequent year falls from 4,108 to 3,720. Excluding issuers with missing data in the year of the offering or the year after the offering and applying various filters reduces the sample size further. As a caveat, some issuers may conduct continuous Regulation D offerings over several years, resulting in confounding effects (a close-out Form D filing upon completion of the offering is not required).

⁹¹ We merge data related to companies conducting registered debt and registered follow-on equity offerings obtained from SDC Platinum with Compustat North America (Fundamentals Annual) to obtain financial and accounting data for the set of reporting companies relying on registered offerings during 2009 through 2019. We exclude reporting companies that conducted both registered offerings and Regulation D offerings to avoid confounding effects.

⁹² See, e.g., Susan Chaplinsky & David Haushalter, *Financing under Extreme Risk: Contract Terms and Returns to Private Investments in Public Equity*, 23 REV. FIN. STUD. 2789 (2010) (“Chaplinsky & Haushalter (2010)”). They find, for example, that 84% of PIPE issuers had negative net income, return on assets was -0.39 on average, and almost 22% of these issuers had sales less than \$1 million. The book-to-market ratio, which is

data on PIPEs from earlier time periods and did not differentiate between PIPE offerings under Regulation D and under Section 4(a)(2).

Consistent with past studies, we observe that reporting companies that use Regulation D are very different from reporting companies that undertake only registered offerings.⁹³ Table 20 below presents available data on the initial size and profitability of reporting issuers in the year that they conducted a Regulation D offering or a registered offering. Similar to the selection effect documented in prior studies, we find reporting companies that conduct registered offerings are on average larger and more profitable than reporting companies that conduct Regulation D offerings.

sometimes used as a proxy for financial distress, placed many PIPE issuers in the lowest decile of all companies on the New York Stock Exchange. The study also highlights the substantial differences in PIPE issuers' risks and shows that the riskiest companies issue stock at a high discount. *See also, e.g.,* Ioannis V. Floros & Travis R.A. Sapp, *Why Do Firms Issue Private Equity Repeatedly? On the Motives and Information Content of Multiple PIPE Offerings*, 36 J. BANKING & FIN. 3469 (2012) (confirming these findings in an analysis of repeat PIPE issuers and showing that issuers in successive PIPE transactions increasingly rely on hedge funds, which extract greater purchase price discounts); Hsuan-Chi Chen, Na Dai, & John D. Schatzberg, *The Choice of Equity Selling Mechanisms: PIPEs versus SEOs*, 16 J. CORP. FIN. 104 (2010) ("Chen et al. (2010)") (concluding that companies lacking access to traditional alternatives of equity offerings due to information asymmetry and low operating performance and undervalued issuers seeking to raise capital at a lower cost rely on PIPEs).

⁹³ Data on registered debt and equity offerings for 2009 through 2019 are obtained from SDC Platinum's New Issues database. As explained above, we consider follow-on equity offerings and debt offerings as a better benchmark for Regulation D offerings, in terms of being a capital-raising tool. We exclude IPOs for the purposes of this analysis as previous research has shown that companies pursue IPOs for many reasons other than raising capital. *See supra* footnote 11.

We merge SDC data with Compustat data for companies that did not rely on Regulation D offerings during 2009 through 2019. We use various firm identifiers—CUSIP, CIK, and Ticker—to merge SDC data with Compustat. Companies that conduct both Regulation D offerings and registered offerings are included in only the Regulation D issuers group. Approximately one-third of Regulation D reporting companies in our sample also conducted a registered offering during the 2009-2019 period. We find that excluding such dual issuers from the Regulation D group as well, does not alter the principal implications presented in the following paragraphs.

Table 20. Characteristics of Reporting Company Regulation D Issuers

Panel A: Characteristics of Reporting Companies in Regulation D versus Registered Offerings in the Offering Year⁹⁴

Companies	Reporting Companies with Regulation D Offerings		Reporting Companies with Debt or Follow-On Equity Offerings	
	Mean (\$ million)	Median (\$ million)	Mean (\$ million)	Median (\$ million)
Sales	\$672	\$6	\$9,965	\$2,025
Assets	\$1,658	\$40	\$46,263	\$6,085
Net Income	\$31	-\$5	\$875	\$145
Number of Firm-Year Observations		6,198		5,840

Panel B: Financial Condition of Reporting Company Regulation D Issuers

Variable	Proportion of Firm-Year Observations with Available Data
Sales < \$1 million	38%
Assets < \$10 million	29%
Negative Net Income	77%
Penny Stock	40%
OTC companies	46%

Panel C: Distribution of Financial Metrics of Reporting Company Regulation D Issuers

Metric	Number of Firm-Years	Median	Mean	Standard Deviation	Minimum	Maximum
Sales (\$ million)	6,198	\$6	\$672	\$3,304	\$0	\$27,027

⁹⁴ Financial metrics are winsorized at 1% and 99% levels before averages of financial metrics are calculated.

Assets (\$ million)	6,240	\$40	\$1,658	\$7,887	\$0	\$67,499
Net Income (\$ million)	6,197	-\$5	\$31	\$274	-\$262	\$2,243
Market Valuation (\$ million)	5,140	\$58	\$916	\$4,216	\$1	\$36,932
Return on Assets	6,191	-0.2	-1.5	4.9	-38.1	0.3
Stock Price (\$, close of fiscal year)	5,433	\$1.7	\$7.9	\$14.9	\$0.01	\$85.2

Data in Panels A and B above show that reporting company Regulation D issuers tend to be small.⁹⁵ Almost 40% had sales less than \$1 million, and almost 30% had assets less than \$5 million. The median reporting company Regulation D issuer had a net loss in the year of the offering and more than three-quarters of such issuers had a net loss during the year they conducted a Regulation D offering (compared to one-fifth of reporting companies that undertook a registered offering). As described above, prior studies have found that low profitability and small size, often considered as proxies of a firm's financial constraints, can be major factors for the self-selection of reporting companies into private placements instead of public capital markets. These differentials point to difficulty in comparing performance of reporting company Regulation D issuers and reporting companies with registered offerings.

Data in Panel C above show significant variability in pre-offering financial and operating characteristics within the subset of reporting company Regulation D issuers. Large standard deviations, mean values that are much higher than median values, and wide ranges indicate that

⁹⁵ Seventy percent of reporting issuers relying on Regulation D offerings during 2009 through 2019 met the current definition of smaller reporting company (SRC) in the year they conducted their Regulation D offering. In contrast, only about 20% of reporting companies that relied on registered offerings during 2009 through 2019 met the current SRC definition in the year they conducted their follow-on equity or debt offering. An SRC is defined in Securities Act Rule 405, Exchange Act Rule 12b-2, and Item 10 of Regulation S-K to include an issuer with: (1) a public float of less than \$250 million or (2) revenues of less than \$100 million and either no public float or a public float of less than \$700 million. See <https://www.sec.gov/smallbusiness/goingpublic/SRC>.

while the typical issuer is small and has a net loss, the distribution has long tails, with some issuers that are much larger. This variability may complicate inference about performance of reporting company Regulation D issuers as a group.

Financial and Return Performance of Reporting Company Regulation D Issuers

We next analyze the financial and stock return performance of reporting company Regulation D issuers one year after the offering. As a caveat, because some reporting companies using Regulation D are very small, there is considerable skewness in percentage changes.⁹⁶ To mitigate extreme tails and data noise, we correct for outliers through winsorization and impose minimum initial size filters (excluding issuer-years with initial assets less than \$10 million and penny stocks). These filters result in the exclusion of a significant proportion of OTC-quoted companies from this analysis.⁹⁷ Before calculating percentage changes, we standardize sales, assets, and profits by the number of shares outstanding to account for fluctuations due to issuance of equity and/or stock-based mergers.

⁹⁶ The long right tail in the distribution of asset and revenue growth rates persists even after corrections for extreme observations, with the resulting high means, both relative to medians and to mean growth rates documented for large public companies. Conversely, because most issuers in this small subset had a net loss, the distribution of post-offering profitability changes after the offering has a long left tail, with means below medians. This is in line with prior studies. A long right tail means that the distribution contains some extremely high growth rate values. *See, e.g.*, Emma Schultz & Garry J. Twite, *Are PIPEs a Bet on Growth Options?* (Working Paper, 2016) (noting that common stock PIPEs are “risky bets on low probability positive outcomes. . . Firms are issuing common stock PIPE financing because they have not yet achieved the level of operations [that would] reveal their potential success to public investors, whereas firms that have achieved these levels issue SEOs. . . Common stock PIPEs are investments in firms with large highly uncertain growth opportunities, having more dispersed long-run returns than SEOs, with large positive extreme values.”); *see also* Table 3 in the same Working Paper, showing mean sales growth rates that are very high in absolute terms and compared to medians. *See also* Jongha Lim, Michael Schwert, & Michael S. Weisbach, *The Economics of PIPEs*, J. FIN. INTERMEDIATION (forthcoming 2019) (“Lim et al. (2019)”; David J. Brophy, Paige P. Ouimet, & Clemens Sialm, *Hedge Funds as Investors of Last Resort?*, 22 REV. FIN. STUD. 541 (2009) (“Brophy et al. (2009)”).

⁹⁷ These are generally in line with previous studies that focused on the exchange-listed subset of PIPE issuers in their sample construction. *See, e.g.*, Chen et al. (2010), *supra* footnote 92; Chaplinsky and Haushalter (2010), *supra* footnote 92; Lim et al. (2019), *supra* footnote 96; Brophy et al. (2009), *supra* footnote 96.

Table 21 below presents average and median percentage changes in size and profitability one year after the offering for reporting company Regulation D issuers. The data show that exchange-listed reporting Regulation D issuers grew faster in terms of sales and assets. They had, on average, lower profitability (return on assets) than OTC-quoted Regulation D issuers, but profits for the median exchange-listed company grew faster than for the median OTC company in the combined reporting company Regulation D subset. Overall, a number of reporting company Regulation D issuers (both OTC and exchange-listed) exhibit very high growth potential, as evidenced by high mean growth rates for sales and assets.

Table 21. Financial Performance of Reporting Company Regulation D Issuers One Year after Offering⁹⁸

Companies	Exchange-Listed Regulation D Issuers		OTC-Quoted Regulation D Issuers		
	Growth Metric	Mean Growth	Median Growth	Mean Growth	Median Growth
Sales	39%	9%	36%	2%	
Assets	23%	3%	2%	-6%	
Return on Assets	-1.4%	0.15%	2%	0.14%	
Obs.	2,285-2,608		631-790		

Table 22 below examines performance of reporting company Regulation D issuers relative to reporting companies that relied on registered offerings and follow-on equity offerings. As an important caveat, performance differentials between reporting company Regulation D issuers and reporting companies that undertake registered offerings should not be interpreted

⁹⁸ Performance growth metrics are winsorized at 1% and 99% levels for all matched Regulation D-Compustat companies before average growth is calculated for each group. Because most issuers in this small subset report net losses, we scale net income by assets for purposes of analyzing changes in profitability.

causally. As discussed above, prior studies find that public companies pursuing private placements are associated with smaller size, more financial constraints, lower profitability, and greater uncertainty about their growth options and thus are systematically different from public companies pursuing registered offerings.⁹⁹ Because most companies in the registered offering sample are exchange-listed, in this table we focus on exchange-listed Regulation D issuers to somewhat facilitate comparability. Despite this adjustment, considerable differences in comparability, and in within-group distributions, are likely to remain.¹⁰⁰

⁹⁹ See *supra* footnote 92 and accompanying discussion.

¹⁰⁰ Another approach is matching reporting companies in Regulation D and registered offerings based on *ex ante* financial characteristics.

Table 22. Performance of Reporting Company Regulation D Issuers and Benchmark Groups of Registered Offering Issuers One Year after Offering¹⁰¹

Growth Variable	Exchange-Listed Regulation D Issuers		Issuers in Registered Debt and Follow-on Equity Offerings		Issuers in Registered Follow-on Equity Offerings	
	Mean	Median	Mean	Median	Mean	Median
Sales	39%	9%	6%	4%	6%	3%
Assets	23%	3%	4%	3%	3%	0.46%
Return on Assets	-1.4%	0.15%	1.0%	0.27%	1.2%	0.23%
Stock Return ¹⁰²	1.2%	0.0%	1.4%	1.2%	1.7%	1.4%
Number of Issuer-Years	1,843-2,608		4,906-5,029		2,770-3,486	

Exchange-listed reporting companies that conduct Regulation D offerings have higher asset and sales growth (and greater variability in growth), but reporting companies relying on registered offerings have higher profitability.¹⁰³ The post-offering performance likely reflects *ex ante* characteristics of the underlying companies, which may have also led the company to raise capital through private placements in lieu of registered offerings. Also, as discussed above, very high mean sales and asset growth rates are indicative of a significant positive right tail of growth

¹⁰¹ Performance growth metrics are also winsorized at 1% and 99% levels for exchange-listed companies before average growth is calculated. Growth rates are based on financial data available in Compustat. Returns are calculated as compounded returns over 12 months from the month of the Regulation D offering.

¹⁰² CRSP data's coverage is biased towards exchange-listed companies. For consistency, we maintain minimum size caps at the same level (assets of at least \$10 million and stock price of at least \$1 at the end of the fiscal year) and include only exchange-listed companies.

¹⁰³ We also calculated growth rates after filtering out observations with firm size exceeding the 95th percentile of asset size of Regulation D companies. Our conclusions do not change. We also considered overall growth rates, in lieu of per-share growth rates, and the conclusions remained similar.

rates that skews means. Nevertheless, high mean asset and sales growth rates indicate that a number of Regulation D issuers have strong growth potential.

We emphasize that the financial characteristics and performance data presented above are based on a small subset of non-fund Regulation D issuer companies with available data on financial characteristics and post-offering performance and thus are not representative of the performance of over 105,000 non-fund Regulation D issuers that are private companies.

Survival Outcomes of Regulation D Issuers

Below we look at business outcomes of Regulation D issuers. Data on post-offering outcomes are similarly scant, with incomplete coverage and, as a result, the data may not be representative of the universe of Regulation D issuers.

Going Public

We estimate that approximately 918 issuers conducted an IPO during 2009 through 2019 subsequent to a Regulation D offering. Figure 16 below presents the time-series distribution of the number of Regulation D issuers' IPOs following their Regulation D offerings. On average, IPOs by issuers that had made a prior (paper or electronic) Form D filing on EDGAR accounted for approximately 36% of the total number of IPOs per year. (Other IPO issuers may have raised private financing without filing a Form D, for instance, under Section 4(a)(2).)

Figure 16. Number of IPOs by Year (2009–2019)

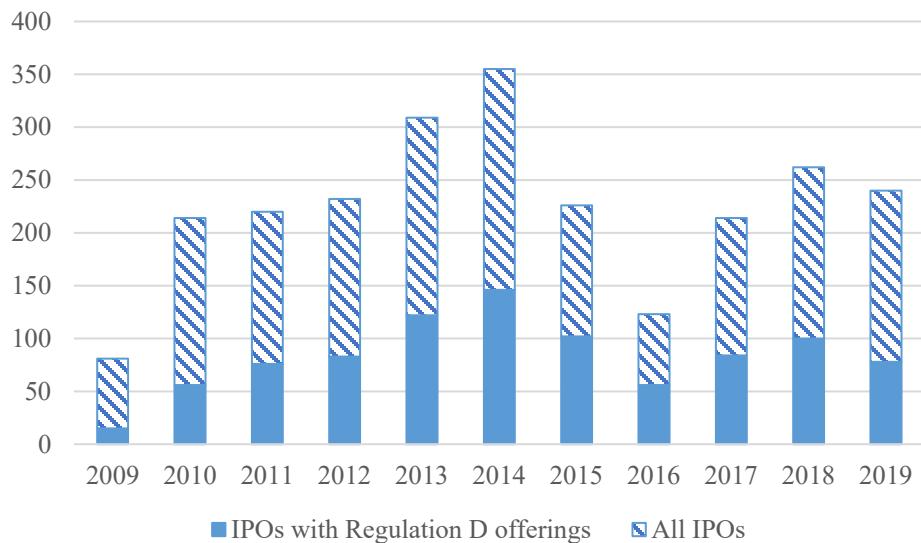
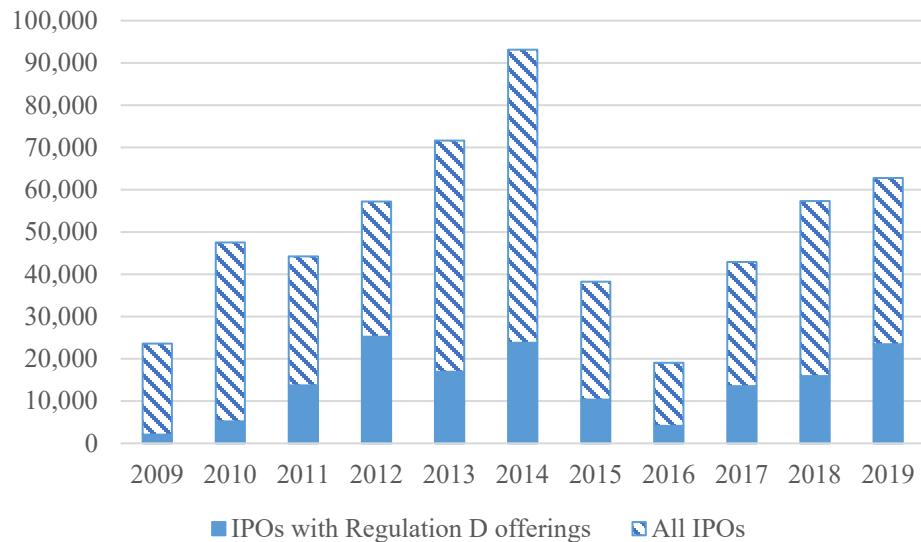


Figure 17 below presents the total capital raised by issuers with prior Regulation D offerings as well as the total amounts raised during the period 2009 through 2019. On average, IPOs by issuers that had made a prior Form D filing on EDGAR raised approximately 26% of the total annual IPO proceeds during the period under consideration.

Figure 17. IPO Proceeds by Year (2009–2019)



Mergers and Acquisitions

Using data available on M&A in the United States, we estimate that—of the 102,542 reported M&A transactions conducted in the U.S. during 2009 through 2019—9,759 M&A transactions involved target companies that previously had a Regulation D offering, and 4,688 transactions involved acquirers that previously had a Regulation D offering.¹⁰⁴ Since the SDC database covers transactions involving both private and public companies, the target and acquiring Regulation D issuers are a mix of private companies and reporting companies at the time of transaction.

Table 23 below presents summary statistics of target companies and acquirers that previously had a Regulation D offering, relative to all M&A transactions. The data show that Regulation D issuers were more likely to be targets (7,969 companies) than acquirers (2,284 companies). Though acquirers of Regulation D issuers are mostly U.S. companies (68%), a higher proportion of Regulation D targets than non-Regulation D targets have been acquired by foreign companies (mostly located in Canada, United Kingdom, Japan, and Germany). The table below also lists the top industries of target companies, which are somewhat similar between Regulation D issuers and non-Regulation D issuer targets.

Table 23. Summary Statistics for M&A Transactions Involving Regulation D Issuers

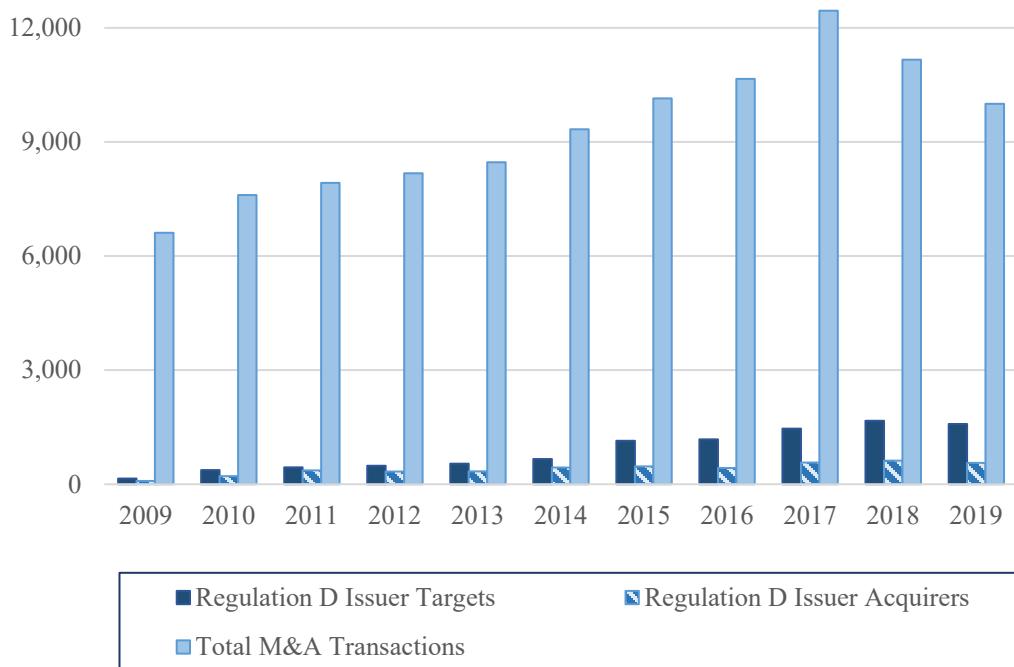
Targets that are Regulation D Issuers	Acquirers that are Regulation D Issuers	All M&A Companies
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¹⁰⁴ M&A data are from SDC Platinum's Mergers and Acquisitions database. As there was no common identifier available, we used fuzzy matching techniques to perform a merge based on issuer name, principal state of business, and industry. This approach identifies 5,132 (89,407) transactions involving Regulation D issuers that are targets and 3,953 transactions where Regulation D issuers are acquirers. The data are subject to limitations of the matching technique and coverage in the database. For example, coverage of transactions involving private acquirers may be incomplete and, thus, acquisition exit estimates may be under-inclusive. Each transaction involves a unique acquirer and target firm. We consider multiple acquisitions in a target in a year as one transaction. The proportion acquired is added across stakes acquired during the year. We consider only targets that had M&A transactions after a Regulation D offering. We report industry classifications provided in SDC.

Number of Transactions (Unique Acquirer, Target, Year)	9,688	4,424	102,542
Number of Unique Acquirer-Target Transactions	9,230	4,417	101,479
Number of Unique Target Companies	7,969	2,284	95,400
Number of Targets/Acquirers with ticker information	959 (Targets)	696 (Acquirers)	4,918 (Acquirer or Target)
Proportion of Equity acquired – Mean (Median)	92% (100%)	98% (100%)	96% (100%)
Proportion of U.S. Acquirers	68%	na	84%
Top Industries of Target Companies	<ul style="list-style-type: none"> • Pre-packaged Software (25%) • Business Services (22%) • Measuring Equipment (7%) • Pharmaceuticals 	<ul style="list-style-type: none"> • Business Services (30%) • Pre-packaged Software (21%) • Investment & Commodity Firms (20%) 	<ul style="list-style-type: none"> • Business Services (18%) • Pre-packaged Software (9%) • Health Services (7%) • Measuring Equipment

Figure 18 below presents time-series data on M&A transactions for Regulation D issuers relative to all transactions. These estimates are sensitive to database coverage and the matching technique.

Figure 18. M&A Transactions by Year (2009–2019)



Bankruptcies

To determine how frequently issuers that previously had a Regulation D offering go bankrupt, we match our sample of Regulation D issuers with bankruptcy data from SDC. Because the bankruptcy database includes public companies, we are able to match only Regulation D issuers that are registered companies. This limits our ability to estimate bankruptcy outcomes for the whole Regulation D sample.

We find that during the period 2009 through 2019, 143 reporting companies that previously had a Regulation D offering filed for bankruptcy. Over the same period, there were a total of 4,108 reporting companies that previously had a Regulation D offering. This results in an estimated rate of bankruptcy outcomes of approximately 3.5% for that sample. Over the same period, there were 14,111 reporting companies that did not have Regulation D offerings. Of

those, 170, or approximately 1%, filed for bankruptcy. Thus, it appears that a larger fraction of reporting companies that previously had a Regulation D offering went bankrupt compared to reporting companies that did not undertake Regulation offerings.

Misconduct

Another measure of performance of Regulation D issuers is the prevalence of fraud and other misconduct associated with these issuers. As an important caveat, data on fraud, particularly among private issuers, are scarce and subject to latency. Available data reflect fraud, whether related to offerings or to disclosure violations, that is detected and results in litigation against the issuer. Given the difficulty of detecting fraud or misconduct and numerous factors affecting whether it ultimately results in litigation, this data represent only a subset of potential fraud or misconduct and underestimates the actual rate of fraud.

We use information on SEC litigation against issuers related to potential misconduct as a measure of the outcomes of Regulation D issuers. Based on Ives Group's Audit Analytics data on litigation and private placements from 2009 through 2019, we have identified relatively few SEC civil cases involving Form D filers. As a caveat, these estimates are limited by any gaps in coverage of individual CIKs in the Audit Analytics litigation database and do not distinguish offering fraud from financial reporting and other violations that resulted in SEC litigation. In particular, we identified 221 (6) SEC-related civil complaints, some of which did not involve securities offerings, during this time involving non-fund (fund) Form D filers, excluding cases that were dismissed or ruled in favor of the defendant. By comparison, we estimate from Audit Analytics data that there were 108,158 (69,642) unique non-fund (fund) Form D filers during this period. Given the scarcity of data, we have identified very few research or other external studies of private company securities fraud. One study focuses on the sample of SEC securities fraud

cases brought against private companies during the period from October 1, 2015, to September 30, 2019.¹⁰⁵ Another study uses survey data on financial reporting fraud.¹⁰⁶ A different study focuses on fraud-related lawsuits involving the small subset of private companies that conducted an IPO.¹⁰⁷

C. Regulation A

1. Offering Performance

Below we discuss available information on qualified Regulation A offerings and the number of issuances and amount raised under the exemption by both Tier 1 and Tier 2 offerings.¹⁰⁸

Capital Raising under Regulation A

In Table 24 below, we analyze the available evidence on offering activity under Regulation A. Except where specified otherwise, we consider evidence from the effectiveness of the 2015 amendments (June 19, 2015) through December 31, 2019. During this period, we estimate that 442 issuers filed offering statements in connection with 487 offerings, of which

¹⁰⁵ See Verity Winship, *Private Company Fraud* (Univ. of Ill. Coll. of Law, Legal Studies Research Paper No. 20-13, 2020).

¹⁰⁶ See A. Scott Fleming et al., *Financial Reporting Fraud: Public and Private Companies*, 1 J. FORENSIC ACCT. RES. A27 (2016).

¹⁰⁷ See Xuan Tian, Gregory F. Udell, & Xiaoyun Yu, *Disciplining Delegated Monitors: When Venture Capitalists Fail to Prevent Fraud by their IPO Firms*, 61 J. ACCT. & ECON. 526 (2016). The study considers “423 SEC AAERs [Accounting and Auditing Enforcement Releases] and 1,085 private class-action lawsuits, among which 212 suits were subject to both SEC enforcement and private class-action litigation” for IPOs from 1995 through 2005.

¹⁰⁸ As discussed in greater detail in Section II.B.1 above, the 12-month maximum offering limit for Tier 1 is \$20 million and for Tier 2 is \$50 million. Tier 2 offerings are not subject to state securities law registration and qualification requirements, while Tier 1 offerings remain subject to those state requirements. However, Tier 2 issuers are subject to additional requirements. For example, Tier 2 issuers are required to include audited financial statements in their offering circulars and must provide ongoing reports on an annual and semiannual basis with additional requirements for interim current event updates.

approximately 382 offering statements filed by 346 issuers were qualified.¹⁰⁹ The total amount sought was approximately \$11.2 billion across all offerings, including approximately \$9.1 billion across qualified offerings.

Table 24. Capital Sought under Regulation A (June 19, 2015 – December 31, 2019)¹¹⁰

All Offerings with Filed Offering Statements (\$ million)	Tiers 1 & 2	Tier 1	Tier 2
Aggregate dollar amount sought	\$11,170.2	\$1,101.5	\$10,068.6
Number of offerings	487	145	342
Average dollar amount sought	\$22.9	\$7.6	\$29.4
Offerings Qualified by Commission Staff (\$ million)	Tiers 1 & 2	Tier 1	Tier 2
Aggregate dollar amount sought	\$9,094.8	\$759.0	\$8,335.8
Number of offerings	382	105	277
Average dollar amount sought	\$23.8	\$7.2	\$30.1

Table 25 and Figure 19 below summarize information about the proceeds reported in Regulation A offerings. From June 2015 through December 2019, approximately \$2.4 billion in proceeds was reported by 183 issuers.

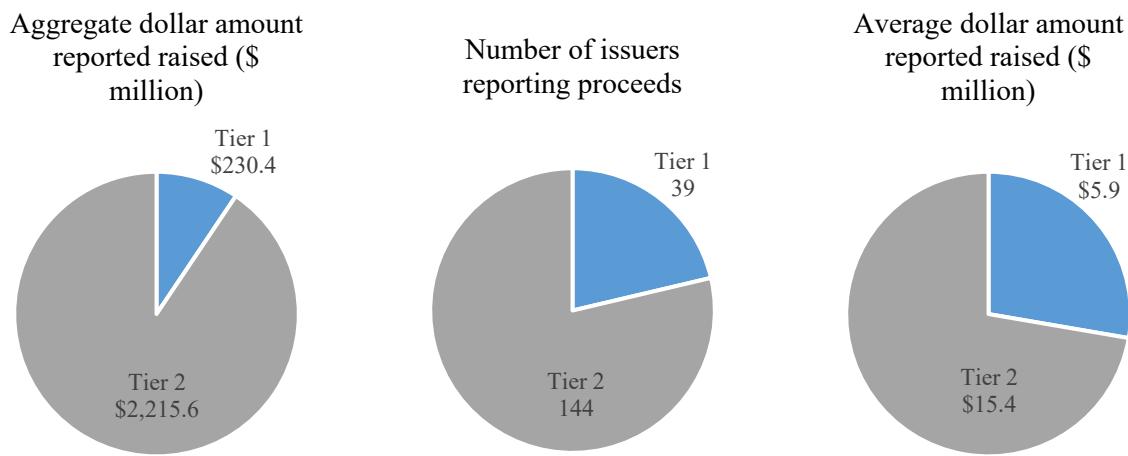
¹⁰⁹ Regulation A requires an issuer to file an offering statement that must be qualified before sales can occur.

¹¹⁰ These data exclude offerings identified as withdrawn or abandoned. Some offerings included in our data may have been effectively halted and may be withdrawn or abandoned at a future date. Unless noted otherwise, the analysis relies on the information reported by issuers in the most recent amendment between June 2015 and December 2019, including post-qualification amendments. Offerings were identified based on CIK and file number; offerings identified as duplicates were consolidated; and amendments were consolidated with the original offering for purposes of the number of offerings. Rounding affects totals. After a prospective Regulation A issuer files an offering statement with the Commission, the offering statement is subject to review by Commission staff. The offering statement may then be declared qualified by a notice of qualification. After a Regulation A offering statement has been qualified, issuers may begin selling securities.

Table 25. Capital Reported Raised under Regulation A (June 2015 – December 2019)¹¹¹

Capital Reported Raised (\$ million)	Tiers 1 & 2	Tier 1	Tier 2
Aggregate dollar amount reported raised	\$2,445.9	\$230.4	\$2,215.6
Number of issuers reporting proceeds	183	39	144
Average dollar amount reported raised	\$13.4	\$5.9	\$15.4

Figure 19. Capital Reported Raised under Regulation A



Turning to a comparison of different offering tiers, as illustrated in Figure 19 above, Tier 2 accounted for the majority of Regulation A offerings (70% of filed and 73% of qualified offerings), amounts sought (90% of amounts sought in filed offerings and 92% of amounts

¹¹¹ Capital raised is based on information reported by companies in Forms 1-Z, 1-K, 1-SA, 1-U, and offering circular supplements pertaining to completed and ongoing Regulation A offerings and post-qualification amendments, and for issuers whose shares have become exchange-listed, information from other public sources. Estimates represent a lower bound on the amounts raised given the timeframes for reporting proceeds following completed or terminated offerings and that offerings qualified during the report period may be ongoing. In particular, proceeds in ongoing offerings disclosed in periodic reports of Tier 2 issuers are likely to be amended at a future date. Issuers that report proceeds of zero are excluded from the count. Some of the issuers that have not yet made reports of proceeds may have ongoing offerings. Other issuers may have halted attempts to raise capital under Regulation A but have not made subsequent EDGAR filings. If an issuer reported proceeds both from a Tier 1 and a Tier 2 offering, that issuer is counted twice (once under Tier 1 and once under Tier 2).

sought in qualified offerings), and reported proceeds (91%) during this period. The larger Tier 2 offering limit does not appear to be the sole factor for issuers' decision between tiers, given that approximately 43% of filed Tier 2 offerings and 41% of qualified Tier 2 offerings sought amounts not exceeding the Tier 1 offering limit of \$20 million.¹¹² We estimate that 112 Tier 2 issuers reported raising up to \$20 million in financing under Regulation A, even though that amount would have made them eligible to use Tier 1 as well. Blue sky law preemption, facilitating nationwide solicitation and solicitation over the Internet, may have contributed to the popularity of Tier 2 offerings among issuers conducting Tier 2 offerings below the Tier 1 offering limit.¹¹³

Trends in Regulation A

Aggregate Regulation A financing levels were significantly higher after the 2015 amendments because of the increase in the offering limit as well as an increase in the number of offerings.¹¹⁴ As can be seen from Table 26 and Figure 20 below, issuer interest in Regulation A has grown during the June 2015 through December 2019 period.

¹¹² See note 108 above.

¹¹³ See, e.g., U.S. SEC. AND EXCHANGE COMM’N, Transcript of the the 38th Annual SEC Government-Business Forum on Small Business Capital Formation (Aug. 14, 2019), at 132–135, available at <https://www.sec.gov/files/2019-sec-government-business-forum-small-business-capital-formation-transcript.pdf>.

¹¹⁴ Prior to June 19, 2015, Regulation A issuers could raise up to \$5 million in a 12-month period. See also 2015 Regulation A Release, at text accompanying n. 893 (noting that 26 offerings, excluding amendments, were qualified by the Commission in calendar years 2012 to 2014, which amounts to an average of 8–9 qualified offerings per year).

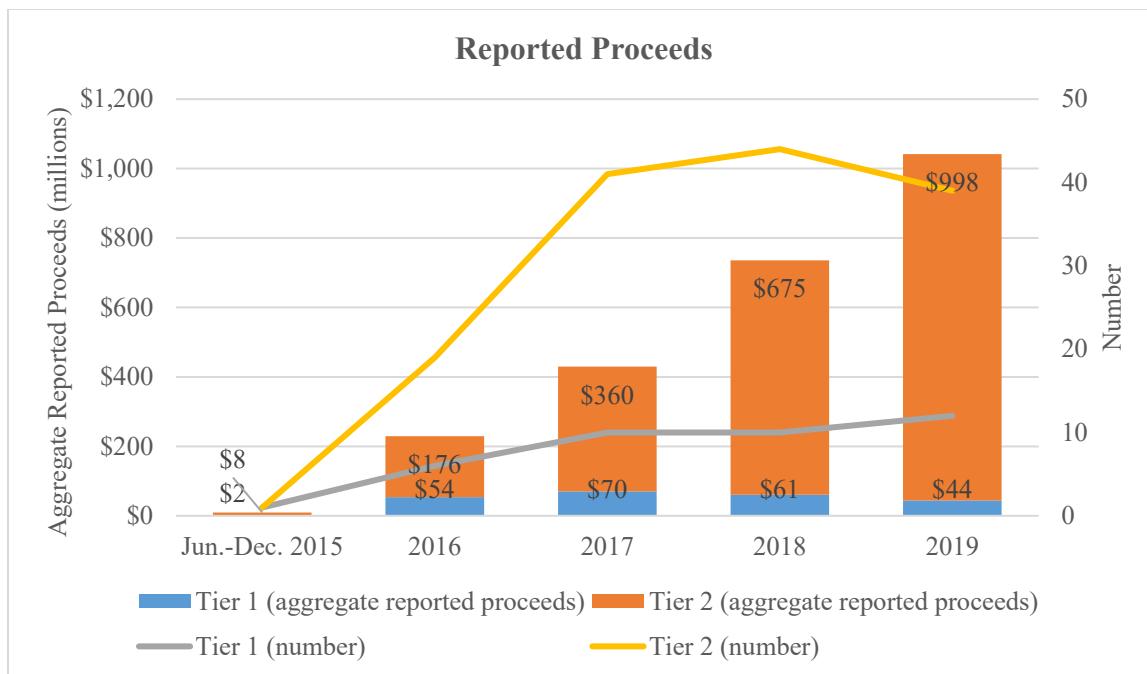
Table 26. Trends in Financing under Regulation A (June 2015 – December 2019)¹¹⁵

Filed Jun. 2015 to	All		Tier 1		Tier 2	
	Aggregate amount sought (\$ million)	Number of offerings	Aggregate amount sought (\$ million)	Number of offerings	Aggregate amount sought (\$ million)	Number of offerings
Dec. 2015	1,109.1	55	306.0	26	803.1	29
Dec. 2016	3,289.3	174	724.1	78	2,565.2	96
<i>Change in 2016</i>	2,180.2	119	418.1	52	1,762.1	67
Dec. 2017	5,909.7	265	856.8	93	5,053.0	172
<i>Change in 2017</i>	2,620.4	91	132.7	15	2,487.7	76
Dec. 2018	8,195.9	362	979.8	119	7,216.1	243
<i>Change in 2018</i>	2,286.2	97	123.0	26	2,163.1	71
Dec. 2019	11,170.2	487	1,101.5	145	10,068.6	342
<i>Change in 2019</i>	2,974.3	125	121.7	26	2,852.5	99
Qualified Jun. 2015 to	All		Tier 1		Tier 2	
	Aggregate amount sought (\$ million)	Number of offerings	Aggregate amount sought (\$ million)	Number of offerings	Aggregate amount sought (\$ million)	Number of offerings
Dec. 2015	181.9	15	68.8	10	113.1	5
Dec. 2016	1,892.1	100	305.7	42	1,586.4	58
<i>Change in 2016</i>	1,710.2	85	236.9	32	1,473.4	53
Dec. 2017	4,153.1	185	488.1	57	3,665.1	128
<i>Change in 2017</i>	2,261.0	85	182.4	15	2,078.6	70
Dec. 2018	6,332.1	280	724.5	86	5,607.6	194
<i>Change in 2018</i>	2,179.0	95	236.4	29	1,942.5	66
Dec. 2019	9,094.8	382	759.0	105	8,335.8	277
<i>Change in 2019</i>	2,762.7	102	34.5	19	2,728.2	83
Reported Proceeds Jun. 2015 to	All		Tier 1		Tier 2	
	Aggregate proceeds (\$ million)	Number of issuers	Aggregate proceeds (\$ million)	Number of issuers	Aggregate proceeds (\$ million)	Number of issuers
Dec. 2015	9.6	2	2.0	1	7.6	1
Dec. 2016	238.7	27	55.6	7	183.1	20
<i>Change in 2016</i>	229.2	25	53.7	6	175.5	19
Dec. 2017	668.7	78	126.0	17	542.7	61
<i>Change in 2017</i>	430.0	51	70.3	10	359.6	41
Dec. 2018	1,404.4	132	186.5	27	1,218.0	105
<i>Change in 2018</i>	735.7	54	60.5	10	675.3	44
Dec. 2019	2,445.9	183	230.4	39	2,215.6	144
<i>Change in 2019</i>	1,041.5	51	43.9	12	997.6	39

¹¹⁵ See *supra* footnotes 110 and 111. Totals as of the end of the respective period reflect exclusion of abandoned or withdrawn offerings. Changes over time in cumulative amounts reported raised may reflect the timing of reporting by the company rather than the time at which the capital was raised, and therefore should not be used to gauge trends in capital raising activity.

Figure 20. Trends in Regulation A





The characteristics of Regulation A issuers were discussed in Section II.B.2 above.

2. Performance of Regulation A issuers¹¹⁶

Financial and Operating Performance

Regulation A performance can be gauged on the basis of financial and operating performance of issuers after the offering. Such information is not available for all issuers with qualified Regulation A offering statements. Where available (because an issuer has filed a periodic report for a fiscal period ending after the offering date, or because a Tier 1/Tier 2 issuer has included financial statements for a fiscal period ending after the offering date in a subsequent offering or registration statement or amendment to it), we can analyze changes in profitability, assets, and revenues after the offering.

¹¹⁶ The analysis in this section excludes qualified Regulation A offerings that did not report any proceeds to focus on post-offering performance and to avoid confounding with other factors involved in failed or postponed offerings. This yields an initial sample of 182 issuers (one issuer reported proceeds for separate Tier 1 and Tier 2 offerings). Data availability reduces sample size in individual tables.

Table 27 below summarizes available data. As can be seen from the table, most issuers have small pre-offering assets and revenues. The average and median issuer with available financial data for the year of the offering experiences a big jump in assets and revenues, but the typical issuer also experiences a widening of net losses as part of expanding its operations. The changes are more modest in the first full post-offering year. As discussed above in the context of Regulation D issuers, the large magnitude of the jump relative to initial performance metrics is driven by the generally low initial levels of sales and assets among issuers in the sample. The typical issuer, however, does not experience an improvement in profitability, continuing to realize a net loss. This is consistent with the majority of issuers being at an early stage and having net losses prior to the offering and the relatively short timeframe of post-offering analysis. As an important caveat, the subset of Regulation A issuers with available post-offering financial data is not a random subset of Regulation A issuers. Data availability is skewed towards issuers in Tier 2 offerings that have continued to file periodic reports, rather than ceased operations and reporting, and towards Tier 1 issuers that have filed post-qualification amendments and follow-on offerings, reporting new financial data.

Table 27. Financial and Operating Performance of Regulation A Issuers¹¹⁷

Offering Year vs. Pre-Offering		Pre-Offering		Change in Offering Year	
(\$000s)	Obs.	Mean	Median	Mean	Median
Assets	144	\$5,338	\$138	\$11,245	\$1,310
Revenues	144	\$5,146	\$0	\$572	\$3
Net income	144	-\$1,138	-\$30	-\$1,157	-\$194
Post-Offering Year vs. Offering Year		Offering Year		Change in Post-Offering Year	
(\$000s)	Obs.	Mean	Median	Mean	Median
Assets	88	\$15,381	\$3,260	\$10,554	\$1,420
Revenues	88	\$2,045	\$105	\$1,702	\$124
Net income	88	-\$2,005	-\$417	-\$1,285	-\$88

The Regulation A market and the issuers it attracts are on the continuum between private and traditional public markets. Performance of private companies was discussed in Section III.B.3 above. There are limits on comparability of performance of Regulation A issuers to that

¹¹⁷ For this analysis, only Regulation A issuers that reported some proceeds under Regulation A are considered, and offerings conducted in connection with stock-based mergers (largely, Tier 1 offerings) are excluded due to potential confounding in post-offering assets and other financial statement metrics. Pre-Offering data are based on the latest fiscal year prior to the initial qualification of the first Regulation A offering, or financial data as of inception of the issuer, for issuers with less than one full fiscal year of data at the time of the offering statement qualification. Offering Year data are based on the fiscal year during which the first offering was qualified. Post-Offering Year data are based on the fiscal year following the year during which the offering was qualified. Post-Offering Data are missing for a large number of the offerings, particularly more recently qualified offerings. Data on assets, revenue, and net income are gathered from EDGAR offering statements and periodic report filings from June 2015 through April 2020. Some data noise is possible due to filer restatements and manual data gathering. Further, we do not observe the date when the financing was actually raised, which may occur over a period of time after initial qualification, and various offerings are conducted on a continuous basis and may be ongoing. Changes are expressed in dollar terms to address the extreme right tail in growth rates due to observations with close-to-zero values in the denominator. Because Tier 1 filers (other than Exchange Act reporting companies, who were first permitted to conduct Regulation A offerings on January 31, 2019) do not file periodic reports, their post-offering performance data are more likely to be missing. For robustness we also considered changes in per-share values (where data on common shares outstanding was found in filings) to account for the effects of issuance and other changes in shares outstanding; the results were qualitatively similar, but changes were smaller in magnitude.

of traditional public companies. Given the small size and pre- or low-revenue profile of the typical Regulation A issuer (median revenues of \$0 and 90th (95th) percentile of \$4.7 (\$10.9) million among issuers with a qualified offering statement; median assets of \$0.3 million and the 90th (95th) percentile of \$47 million (\$175 million)),¹¹⁸ performance comparisons with smaller public company issuers are more appropriate than performance comparisons with either the full universe of public companies or the subset of larger exchange-listed companies included in major indexes.

Therefore, in Table 28 below we report data on key operating and financial performance metrics from 2015 through 2019 (for comparability with the Regulation A sample period) for reporting companies with information in CRSP/Compustat, irrespective of trading venue, with revenues below \$10 million and assets below \$200 million, which approximates the 95th percentile of the distribution of revenues and assets of Regulation A issuers. As can be seen from the table, such a company is typically considerably larger and more profitable than a Regulation A issuer, suggesting a lack of comparability. The typical smaller public company therefore experiences much smaller changes in assets and revenues relative to the previous year's assets and revenues on a year-to-year basis. This is consistent with a significant number of Regulation A issuers being in the early stages of their business lifecycle and attempting to expand their business through financing under Regulation A.

Table 28. Financial and Operating Performance of the Comparison Group of Public Companies (2015–2019)¹¹⁹

Public Companies with Lagged Revenues <\$10 million &

¹¹⁸ The Nth percentile of revenues is the level of revenues below which N% of the sample falls. For example, 90% (95%) of issuers with a qualified offering statement had revenues below \$4.7 million (\$10.9 million).

¹¹⁹ Based on CRSP/Compustat North America data for fiscal years ending during 2015 through 2019, irrespective of trading venue. Issuers incorporated outside the United States and Canada and issuers with missing data on assets are excluded. Data for fiscal year 2019 are incomplete, reflecting information

(\$000s)	Lagged Assets <\$200 million				
	One-Year Lag	One-Year Change, \$			
	Obs.	Mean	Median	Mean	Median
Assets	1,459	\$50,045	\$31,018	\$14,584	-\$464
Revenue	1,459	-\$23,720	-\$16,144	-\$1,947	-\$832
Net Income	1,459	\$2,030	\$419	\$4,256	\$0

Survival Outcomes

In Table 29 below, we summarize the survival outcomes, on the basis of different sources of available data, for issuers in qualified Regulation A offerings with some proceeds. As a caveat, estimating survival from EDGAR filing data is very noisy because one-time Tier 1 issuers do not have periodic reporting obligations and because making an EDGAR filing is not an indication that the issuer has continued significant operations or is on a path towards profitability. Estimates of EDGAR-based survival rates are not available for issuers with recently qualified offerings, and because of data limitations, we lack other information on issuer survival.

retrieved as of March 29, 2020. Database coverage of smaller issuers is less comprehensive. To be included in the sample, an issuer must have non-missing prior year assets below \$200 million and prior year sales below \$10 million.

Table 29. Survival Rates and Outcomes of Regulation A Issuers¹²⁰

Metric	Statistic	Obs.
% continued on EDGAR +1 year	81.3%	160
% continued on EDGAR +2 years	63.2%	114
% continued on EDGAR +3 years	45.8%	59
% identified as bankrupt	0.5%	182
% identified as acquired	4.4%	182
% raised follow-on financing, other than under Regulation A	31.9%	182
% listed on an exchange and not delisted	6.0%	182

Return Performance

Next, we summarize data on returns of issuers that raised capital under Regulation A, which are available for the small subset of Regulation A issuers with market price data available, including issuers that became exchange-listed after the offering or issuers that either had been, or

¹²⁰ Data are as of December 31, 2019, except where specified otherwise. The percentages do not add up to 100% because an issuer may fall under multiple categories.

% continued on EDGAR is based on periodic report or offering or registration statement filings (excluding comment letters, offering withdrawals, or non-timely filing notices) within the specified period after the initial Regulation A offering qualification. The respective time period since the initial qualification must elapse for a filer to be included in the statistic.

% identified as bankrupt is based on searches of S&P Capital IQ and Ives Group's Audit Analytics data. Identification of filers filing for bankruptcy protection may be underinclusive and companies with limited debt or collateral would likely liquidate outside of a bankruptcy proceeding.

% identified as acquired is based on S&P Capital IQ data on M&A transactions from June 2015 through December 2019 where the Regulation A issuer is identified as the target and that were announced after the initial Regulation A offering qualification. This estimate may be underinclusive of deals involving targets and acquirers that are not reporting companies.

% raised follow-on financing is based on S&P Capital IQ data on financing transactions and Ives Group's Audit Analytics data on Form D filings of Regulation A issuers after the initial Regulation A offering qualification. This estimate may be underinclusive of unregistered offerings, particularly unregistered offerings that are not reliant on Regulation D.

became, OTC-quoted after the offering. Available trading data for those issuers are obtained from CRSP and OTC Markets and summarized in Table 30 below. (Investment companies, or funds, are ineligible to rely on Regulation A, therefore we do not report information on fund performance for the Regulation A portion of the analysis.)

Table 30. Returns of Traded Regulation A Issuers¹²¹

Companies	Exchange-Listed		OTC-Quoted		
	Metric	Mean	Median	Mean	Median
Number of Companies with Available Data		13		28	
Number of Trading Days Per Company	420	531	404	393	
Annualized Buy-and-Hold Returns from Offer	-15.1%	-45.4%	11.3%	-14.4%	
Annualized Buy-and-Hold Returns from Listing	-23.5%	-47.7%	-2.9%	-23.9%	
Annualized Buy-and-Hold Returns from Offer, in Excess of Market return	-23.1%	-55.1%	17.0%	-55.0%	
Annualized Buy-and-Hold Returns from Listing, in Excess of Market Return	-33.9%	-58.4%	2.3%	-61.7%	

¹²¹ For exchange-listed Regulation A issuers, returns are based on CRSP daily data, covering the period from listing date or the first available date with CRSP data to delisting date or December 31, 2019, whichever is earlier. Buy-and-hold returns are constructed by compounding daily returns assuming investment at offer date or listing date as specified. For three issuers that were delisted during the sample period, delisting returns are incorporated in the final daily return. Distributions are excluded. Returns are adjusted for stock splits. Unlike the case of a traditional exchange-listed IPO, an exchange listing may follow a Regulation A offering with a considerable lag. For OTC-quoted issuers, returns are based on prices reported in OTC Markets. In some cases the OTC-quoted share class may not be the same share class as issued in the Regulation A offering, which we cannot determine with certainty due to limitations of available data. Issuers that were listed on an exchange after the offering but subsequently delisted are not included in the OTC subsample, to avoid double-counting. Five additional issuers were OTC-quoted at some point but lacked sufficient trading data to construct returns during the specified period. Regulation A offer dates and prices are obtained from Regulation A offering statements (for exchange-listed issuers, confirmed via news searches), even in case where an issuer pursues a subsequent registered offering. Returns are compounded and annualized. Returns are sensitive to market conditions, thus, returns in excess of market return (return of the CRSP value-weighted market index) are also reported.

Because most of the exchange-listed Regulation A issuers have not previously sought financing in a public offering, one potential way to provide context for evaluating their returns is to look at the average returns of traditional (registered, exchange-listed) IPOs. Three-year buy-and-hold post-IPO returns averaged 22.4% during 1980 through 2018, with considerable variation based on issuer size, profitability, and the presence of VC/PE backing (three-year post-IPO returns averaged -9.0% for companies with under \$10 million in revenue, 3.3% for unprofitable companies, and 17.0% for IPOs without a financial sponsor, categories which may be more in line with the characteristics of a typical Regulation A company).¹²² These estimates exclude first-day returns (from offer price to first market close), which during 1980 through 2018 were estimated to be 17.9% for the average IPO (21.6% for issuers with revenues under \$10 million, 25.6% for unprofitable issuers, and 13.5% for issuers without a financial sponsor).¹²³ Thus, one approximate benchmark for first-year returns from offer price for exchange-listed Regulation A companies could be 26% for all issuers (18% for issuers with revenues below \$10 million, 27% for unprofitable issuers, and 20% for issuers without a financial sponsor).¹²⁴ Post-offering performance of exchange-listed Regulation A issuers was below those benchmarks in

¹²² See Jay R. Ritter, *Initial Public Offerings: Updated Statistics on Long-Run Returns* (Mar. 10, 2020), at Tables 16, 17, and 19, available at https://site.warrington.ufl.edu/ritter/files/IPOStatistics2019_Longrun.pdf. Equal-weighted average three-year buy-and-hold percentage returns (capital gains plus dividends) are calculated from the first closing market price to the earlier of the three-year anniversary price, the delisting price, or December 31, 2019. Buy-and-hold returns for IPOs occurring after Dec. 31, 2018 are not calculated. During 2015 through 2018, the equal-weighted average of post-IPO three-year returns calculated in this source was estimated to be approximately 29.8% (obtained by weighting annual data on average three-year returns by the number of IPOs per year).

¹²³ See *id.* During 2015 through 2018, the equal-weighted average of post-IPO three-year returns was approximately 16.7% (obtained by weighting annual average first-day returns by the number of IPOs per year).

¹²⁴ These numbers are rough approximations obtained as the product of one plus the average first-day return and one plus the annualized average three-year return from first close (assuming a three-year period).

absolute terms, but in light of the small sample size, it was statistically indistinguishable from the benchmarks.

Another potential benchmark is the return of a comparison group of non-Regulation A issuers during 2015-2019. Since most of the subset of Regulation A issuers that are listed or quoted are OTC-quoted or small listed companies, we consider the returns of (1) reporting OTC issuers (excluding the grey market) and (2) exchange-listed companies with revenues below \$10 million and assets below \$200 million.¹²⁵ Table 31 below presents the results. Using the average annual return shown in Table 31 as a benchmark, we observe that the returns of this subset of Regulation A issuers were on average below the benchmark. Given high variance and small sample size, Regulation A issuers' returns were not statistically significantly below the benchmark.

¹²⁵ As discussed above, these thresholds approximate the 95th percentile of revenues and assets, respectively, among issuers with a qualified Regulation A offering during this period, although the typical reporting company meeting this maximum size cap is still considerably larger than a typical Regulation A issuer. We consider listed companies separately due to differences in data sources.

Table 31. Returns of the Comparison Groups of Public Companies (2015–2019)¹²⁶

Companies	Reporting OTC Companies			Exchange-Listed Companies with Revenues <\$10 million & Assets <\$200 million		
Return Metric	Obs.	Mean	Median	Obs.	Mean	Median
Annual Returns	9,259	25.1%	-22.2%	2,607	3.1%	0.0%
Annual Returns in Excess of the Market Index	9,259	14.2%	-33.0%	2,607	1.2%	-2.1%

Important caveats apply. Small sample size significantly limits the power of the analysis. Changes in aggregate conditions and Regulation A market practices affect the extent to which past Regulation A performance may be indicative of the outcomes of future offerings.¹²⁷ As discussed in the context of Regulation D, significant differences in the initial characteristics of Regulation A and non-Regulation A issuers likely remain. Further, return differentials should not be interpreted causally because of the highly non-random nature of issuer choice to use Regulation A.

¹²⁶ Statistics reflect data from an unbalanced panel (i.e., companies may leave and enter the sample) to avoid survivorship bias. Return statistics are reported separately for OTC-quoted and exchange-listed securities due to different data sources. Returns are winsorized at 1% and 99% of the distribution to address outliers. Returns of OTC-quoted securities are based on daily close prices in OTC Markets data. Only common or preferred shares are considered. If there are multiple share classes, the share class with the largest market cap is retained. The market index return is the annual return of the value-weighted CRSP portfolio as provided by Kenneth French. We exclude grey market securities, investment funds, and issuers incorporated outside the United States and Canada, but we do not exclude REITs or penny stocks. If no close price at the end of the year is available, the latest close price in that calendar year is used to calculate the annual return. Returns of exchange-listed securities are based on CRSP data, excluding distributions. We exclude companies with missing information on revenues or assets in Compustat, investment funds, and issuers incorporated outside the United States and Canada.

¹²⁷ Nasdaq has amended listing eligibility requirements for Regulation A companies seeking to list on Nasdaq to require issuers to have a minimum operating history of two years at the time of approval of its initial listing application. See *Order Granting Approval of a Proposed Rule Change to Adopt Additional Requirements for Listings in Connection with an Offering under Regulation A of the Securities Act*, Release No. 34-86246 (June 28, 2019) [84 FR 32245 (July 5, 2019)]. Recently, the Commission also has proposed amending Regulation A to, among other provisions, expand the Regulation A offering limit. See Harmonization Proposing Release.

Finally, the 2020 Regulation A Lookback Report presented available evidence on the rate of misconduct by Regulation A issuers: From the effective date of the 2015 Regulation A amendments through December 2019, there have been relatively few instances of legal proceedings involving issuers or intermediaries relying on Regulation A, some of which are ongoing.¹²⁸

IV. Conclusions

This report has examined available data and evidence on the state and performance of the U.S. exempt offering market, focusing on offerings under Regulation A and Regulation D. Throughout the analysis, we have examined available evidence from primary data sources, academic research, and external studies to the extent applicable, as well as outlined the limitations of presented inference and underlying performance data.

Unregistered offerings under Regulation D, particularly Rule 506(b) offerings by private investment funds, have dominated the examined offering activity. As a capital-raising tool, Regulation D accounts for a large share of the offering market and offers a robust choice for issuers seeking to raise capital. Over the past decade, Regulation D offerings have seen a steady increase in number of offerings and amounts raised. In terms of both amounts raised and number of offerings, the Regulation D market has surpassed registered offerings in the past few years. In 2019, over \$1.5 trillion was reported raised under Regulation D. By comparison, approximately \$1.2 trillion was raised through registered offerings, and just over \$1 billion was reported raised

¹²⁸ See Regulation A Lookback Report, *supra* footnote 6, at Section E.1 and n. 39–41. The report notes that the “ability to quantify the risk of fraud in Regulation A offerings is limited by a relatively small sample size; latency of fraud (not all incidences may be detected or result in observable legal actions); and high business risk and failure rates of small and startup businesses under normal conditions. . .”. As an important caveat, the Lookback Report looked at all instances of alleged violations of securities laws and SEC regulations that resulted in SEC litigation or administrative proceedings against the issuer, which is not limited to fraud and thus may overestimate the rate of incidence of fraud.

under Regulation A during the same timeframe. Much like public capital markets, capital raising through Regulation D offerings is also pro-cyclical.

The dominant issuers in the Regulation D market are private funds, which raised more than \$11 trillion of the \$15.5 trillion sold in Regulation D markets during 2009 through 2019. However non-fund issuers dominate in terms of number of offerings. The Banking/Financial, Technology, and Real Estate industries raised the most amounts among non-fund issuers. The top five states in terms of number of offerings are California, New York, Florida, Texas, and Massachusetts.

Private funds account for the majority of capital raised under Regulation D. We have considered the performance of private funds during this period, to the extent data are available. PE and VC funds exhibited strong net IRRs, with significant variation across funds. Similarly, hedge funds exhibited generally strong returns in absolute terms during this period. However, this period has also coincided with favorable market performance, resulting in high market portfolio returns. As an important caveat, the distinct risk and illiquidity profile of private funds, as well as differences in data sources and methodologies for measuring performance, make direct comparisons with mutual fund and market portfolio returns difficult.

As more than 95% of Regulation D non-fund issuers are private companies, performance data are scarce. Based on an analysis of a small subset of public companies with Regulation D offerings, in line with prior studies, we find such companies tend to be smaller, less profitable, and more financially constrained than public companies conducting registered offerings. The small subset of public companies relying on Regulation D grew faster one year after the offering but had lower profitability and stock returns, compared to public companies undertaking registered offerings. As an important caveat, because a reporting company's choice of the

financing method is not random and the distribution of firm characteristics is very different, these performance differentials should not be interpreted causally. Further, these conclusions are based on an analysis of only 2% of Regulation D issuers (4% of non-fund Regulation D issuers) and therefore are not representative of the universe of non-fund Regulation D issuers. Analyzing survival outcomes of Regulation D issuers, on the basis of limited data coverage, we find that a number of Regulation D issuers go on to become public companies through an IPO, while some companies get acquired by other companies and some declare bankruptcy. Further, with the caveat about latency of violations of securities laws and regulations, we have identified relatively few civil actions involving Regulation D issuers.

Next, we have considered available data on Regulation A from the effectiveness of the amendments that dramatically expanded Regulation A (mid-2015) through the end of 2019. Examining the performance of Regulation A as a capital-raising tool, we observed that Regulation A met with somewhat mixed offering success during this period. While the use of Regulation A has increased over time, amounts reported raised were generally below amounts sought, with the caveat that proceeds information is incomplete because of lags in reporting and most offerings being made on a continuous basis.

Among Regulation A offerings, Tier 2 accounted for most of the issuer activity, successful offerings, and growth in proceeds. This is consistent with both larger offering limits and higher issuer interest (because of offering limits and other features that may make Tier 2 attractive, including blue sky preemption). Among issuers with some offering proceeds, close to 80% of issuers continue to file reports on EDGAR one year after the offering, and just under one-half of issuers continue to report three years after the offering. Further, with the caveat

about latency of violations of securities laws and regulations, we have identified relatively few enforcement actions involving Regulation A issuers.

We have also considered post-offering financial, operating, and market performance of Regulation A issuers, where data were available. We find that the typical issuer experienced a considerable increase in assets and revenues, but not in profitability, following the offering. The magnitude of the jump is related to the small initial size and early stage of the typical issuer. A minority of issuers that raised capital under Regulation A had a secondary trading market for their securities. Among Regulation A issuers that had a class quoted on the OTC market or listed on a stock exchange, stock returns after the offering were positively skewed, with means higher than the negative median performance. Typical performance, in absolute terms and in excess of the market index return, was below performance benchmarks on the basis of other groups of issuers. However, underperformance was not statistically significant. As a caveat, the analysis and our inference are limited by small sample size, data noise, and self-selection of issuers into the Regulation A market (i.e., the reasons for the choice of the financing method could be correlated to performance).

The Regulation A and Regulation D markets have a number of unique characteristics that attract different types of issuers, offerings, and investors. Regulation D accounted for significantly more capital raising than Regulation A, with the difference on the order of magnitude of 1000x in a typical year during the examined period. Although the use of Regulation D by private funds, which are ineligible to rely on Regulation A, plays a significant role, Regulation D use by non-fund issuers also significantly outpaced Regulation A use. Excluding funds, most of the issuers relying on both exempt offering methods are small unlisted companies, which considerably limits data availability. However, some of the operating

companies utilizing these offering methods for which data are available exhibit considerable growth potential.