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We hope you enjoy Proskauer's 2019 IPO Study. Please feel free to contact any of the Global Capital Markets attorneys listed here with any questions on this report.

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This publication includes the presentation of statistical information for illustrative purposes only and should not be relied on for any inference of correlative or causal relationships. Although we believe our study is an accurate representation of the IPO market that meets our study's criteria, there may be slight deviations from the actual market.

This publication is a service to our clients and friends of the firm. This publication is not intended to be comprehensive or to provide financial, investment, legal, tax or other professional advice or services. This publication is not a substitute for such professional advice or services, and it should not be acted on or relied upon or used as a basis for any investment or other decision or action that may affect you or your business. Before making any such decision you should consult a suitably qualified professional adviser. While reasonable effort has been made to ensure the accuracy of the information contained in this publication, this cannot be guaranteed and neither Proskauer Rose LLP nor any other related entity shall have any liability to any person or entity that relies on the information contained in this publication, including incidental or consequential damages arising from errors or omissions. Any such reliance is solely at the user's risk.

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Methodology

Population

Our proprietary database now includes 556 IPOs that priced from 2013 to 2018.

The criteria for our study include:

- Listing on a U.S. national securities exchange; and
- Minimum initial base deal of \$50mm in the first preliminary prospectus that included a price range filed with the SEC.

The total population that met our criteria in 2018 was 152 IPOs.

This study covers 94 IPOs (approximately 62% of the IPOs that met our criteria) that priced in 2018: 72 domestic issuers and 22 foreign private issuers (FPIs). Our population is reflective of the total population based on industry, size and geographic region.

Our trend analysis section covers 456 IPOs: 94 in 2018, 86 in 2017, 67 in 2016, 90 in 2015 and 119 in 2014.

Our study excludes blank check companies (BCCs), special purpose acquisition companies (SPACs), trusts, real estate investment trusts (REITs), business development companies (BDCs) and closed-end investment companies.

There are two appendices in our study for Sponsor-backed IPOs and FPIs that priced in 2018.

Sources and Analysis

Data compiled from publicly available: (i) registration statements on Form S-1, Form S-11 and Form F-1 and final prospectuses, (ii) SEC comment letters and (iii) as-filed underwriting agreements.

Market, sector, pricing, over-allotment, sponsor-backed and performance data are sourced from Dealogic.

Financial information (unless otherwise indicated) is based on the issuer's most recent audited fiscal year as disclosed in the final prospectus.

The term "average offer" in the "Aftermarket Performance" charts means the average percentage change from the IPO price to the closing price on one day, 30 days, 90 days or 180 days (excludes deals priced after August 1, 2018) after the initial trade date and includes market data available as of January 31, 2018 (our cut-off date).

Analysis of first round SEC comment letters and time to pricing excludes three issuers that either received SEC comments on a prior IPO registration statement or were previously reporting issuers.

Analysis of corporate governance items excludes Master Limited Partnerships (MLPs) and FPIs, given their unique corporate governance structures and available exemptions under stock exchange rules.

Non-Generally Accepted Accounting Principles (Non-GAAP) financial measures include Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA), adjusted EBITDA, adjusted net income and free cash-flow.

2018 Market Overview

Sector Analysis

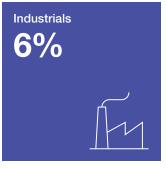
Health Care IPOs made up the largest percentage of deals in the overall IPO market.

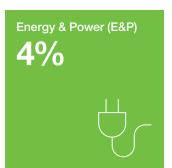




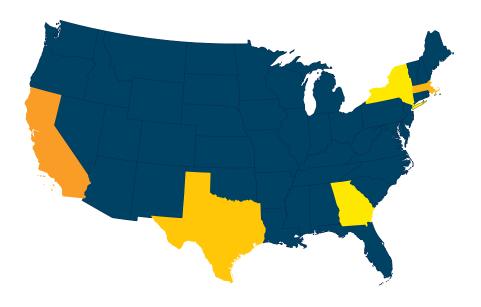








U.S. Geographic Analysis



California and Massachusetts were the top U.S. states for IPO issuer headquarters.

State of Headquarters

- Oalifornia 33%
- Massachusetts 21%
- Texas 7%
- Georgia 4%
- New York 3%
- Other 32%

83%

of California-based issuers were headquartered in the Bay Area.

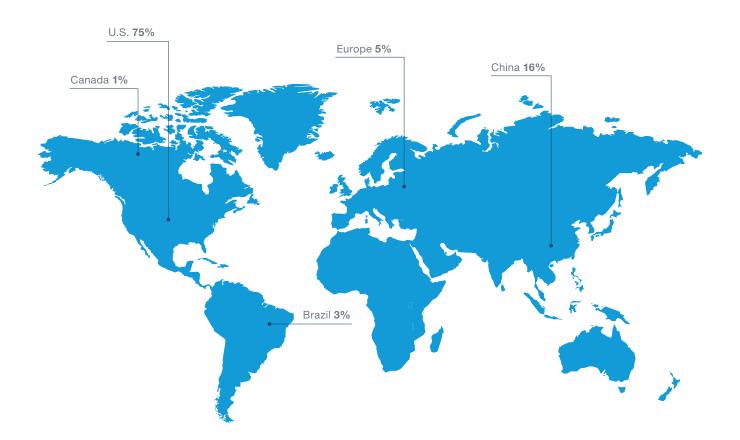
State of Incorporation

- Delaware 88%
- Nevada 3%
- Washington 3%
- Other 6%

Delaware was the top U.S. state for IPO issuer states of incorporation.

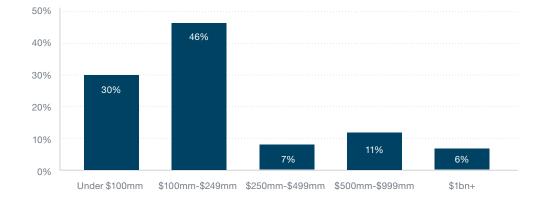
Global Geographic Analysis

2018 saw a significant increase in IPOs from China as a percentage of the overall market, up to 16% from 8% in 2017. This was the highest percentage of Chinese issuers that we have seen in the last five years.

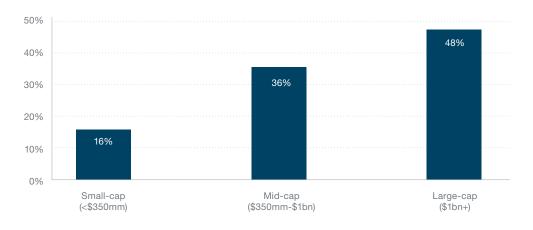


Deal Size & Market Capitalization at Pricing

Almost half of IPOs had a deal size of between \$100mm and \$249mm.



Deal Size*



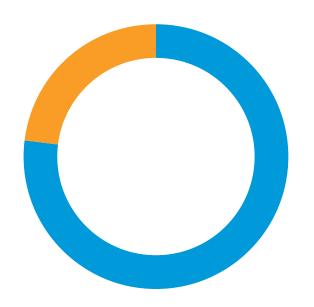
Market Cap at Pricing

^{*}Deal size consists of priced amount in base offering and excludes any exercise of over-allotment option.

Exercise of Over-Allotment Option

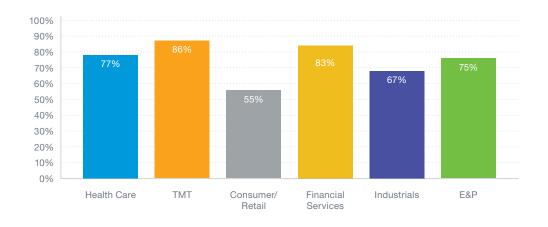
The over-allotment option was exercised in approximately

77%

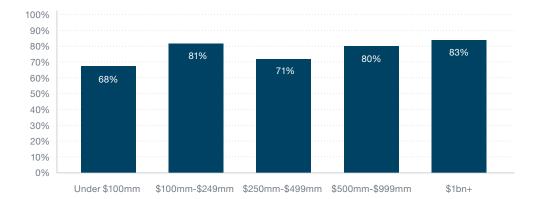


Exercise of Over-Allotment Option

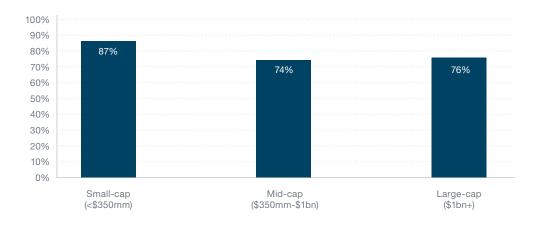
- Option exercised in full or part 77%
- Option not exercised 23%



Exercise of Over-Allotment Option by Sector



Exercise of Over-Allotment Option by Deal Size*



Exercise of Over-Allotment Option by Market Cap at Pricing

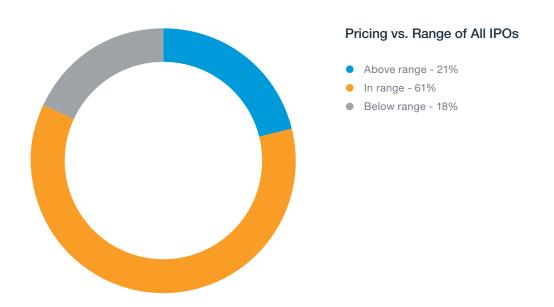
^{*}Deal size consists of priced amount in base offering and excludes any exercise of over-allotment option.

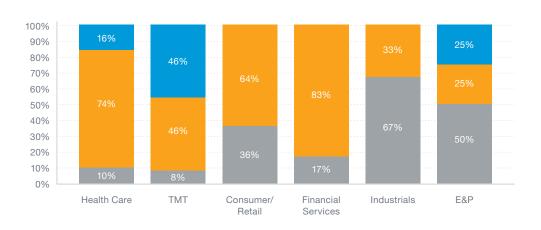
Pricing vs. Range

Approximately

61%

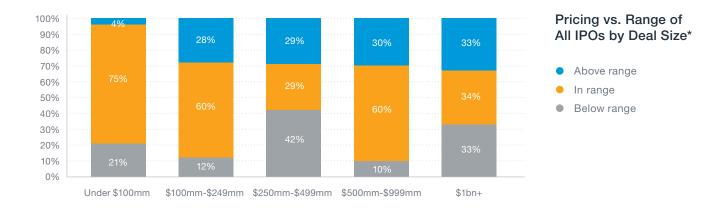
of IPOs priced in range.

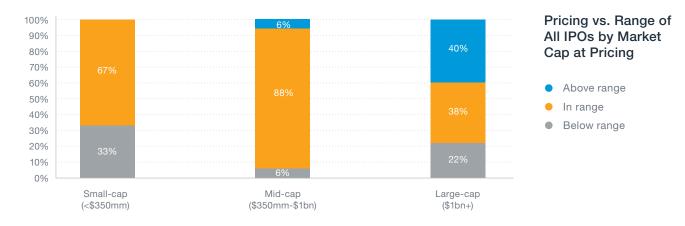




Pricing vs. Range of All IPOs by Sector

- Above range
- In range
- Below range





 $^{^{*}}$ Deal size consists of priced amount in base offering and exludes any exercise of over-allotment option.

Confidential Submission

The SEC permits issuers to utilize a confidential submission process in connection with its review of IPO registration statements. This confidential review process has been expanded by the JOBS Act, the FAST Act and SEC guidance.

The only issuer in our study that did not confidentially submit was AXA Equitable Holdings, Inc.

Confidential Submission

- Issuers confidentially submitting 99%
- Issuers not confidentially submitting 1%

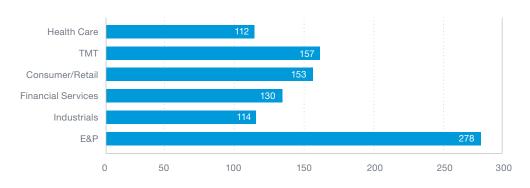
Time to IPO

The average number of days from an initial submission/filing of an IPO registration statement to pricing was

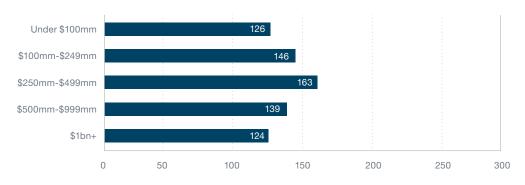
139

days.

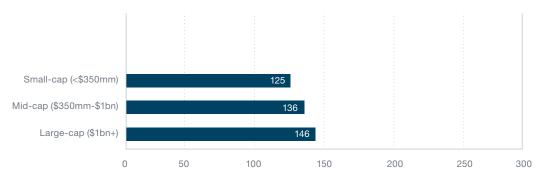
Average Number of Days from First Submission/Filing to Pricing*



By Sector



By Deal Size**



By Market Cap at Pricing

^{*}Excludes three prior SEC-reviewed issuers.

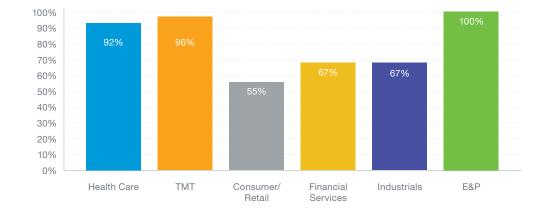
^{**}Deal size consists of priced amount in base offering and excludes any exercise of over-allotment option.

Emerging Growth Companies (EGCs)

EGCs are a class of issuers established under the JOBS Act that are afforded greater flexibility in pursuing their IPOs. Generally, EGCs are issuers with less than \$1.07 billion of annual gross revenue during their most recently completed fiscal year.

Approximately 86% of IPO issuers

were EGCs.

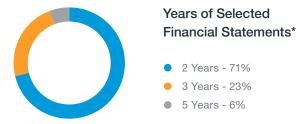


EGCs by Sector

Financial Information & EGCs

Most EGCs took advantage of the scaled financial disclosure requirements afforded to them under the JOBS Act.







Years of Audited Financial Statements in Initial Draft Registration Statement**

- 1 Year 15%
- 2 Years 77%
- 3 Years 8%

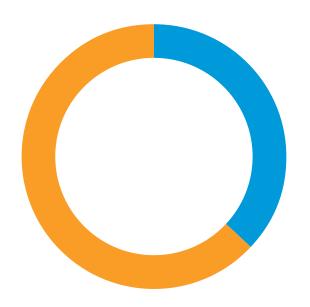
^{*}Non-EGCs are excluded as well as two EGCs that provided financial statements since inception, which period was shorter than two years, and one EGC that only showed seven months of unaudited financial statements as the issuer was previously in bankruptcy. The JOBS Act provides scaled financial disclosure requirements for EGCs, requiring only two years of audited financial statements and two years of selected financial data. Non-EGCs are required to include three years of audited financial statements and five years of selected financial data.

^{**}Pursuant to the FAST Act, issuers are permitted to omit audited and interim financial statements in initial submissions for prior periods that would not otherwise be required in the prospectus at pricing.

EBITDA and/or Adjusted EBITDA

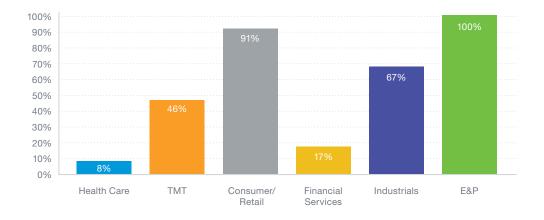
In addition to financial measures calculated in accordance with generally accepted accounting principles, many issuers disclose non-GAAP measures, including EBITDA and Adjusted EBITDA.

37% of issuers disclosed EBITDA and/or Adjusted EBITDA.



Disclosure of EBITDA and/or Adjusted EBITDA

- EBITDA and/or Adjusted EBITDA disclosed 37%
- Neither EBITDA nor Adjusted EBITDA disclosed 63%



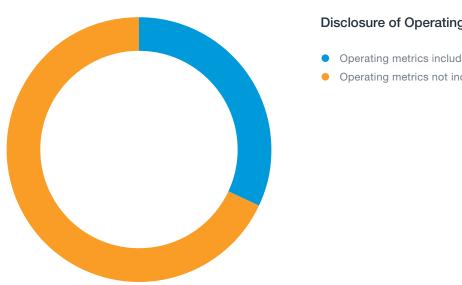
Disclosure of EBITDA and/or Adjusted EBITDA by Sector

Operating Metrics

Operating metrics are non-financial performance measures and vary by sector.

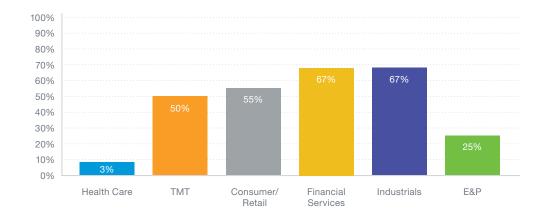
Operating metrics include measures such as backlog, paying users and

Operating metrics were disclosed in the summary financials in



Disclosure of Operating Metrics

- Operating metrics included 32%
- Operating metrics not included 68%



Disclosure of **Operating Metrics** by Sector

Based on review of summary financial information.

Flash Results

"Flash results" refer to estimated, unaudited financial results for a recently completed fiscal period that are disclosed before complete financial statements are available. They are typically presented as ranges and often cover only select financial line items or operating metrics. They are not required under accounting rules but are often presented for disclosure reasons, particularly the closer the offering date is to the date the financial statements become stale.

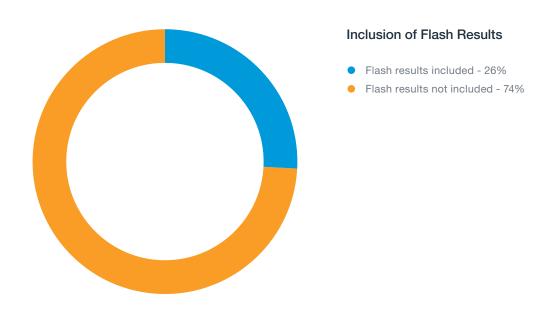
46 IPOs priced within 45 days after the end of the fourth fiscal quarter of 2017 or the first, second or third fiscal quarter of 2018. 23 of these 46 issuers (50%) included flash results.

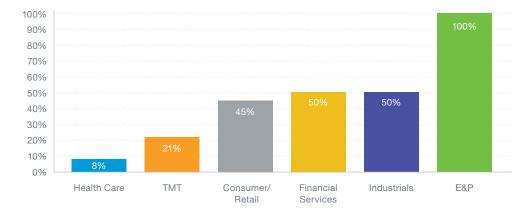
26%

of issuers included flash results.

50%

of issuers pricing within 45 days of a quarter end included flash results.





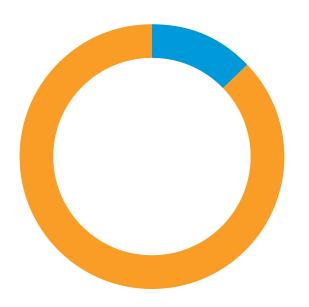
Inclusion of Flash Results by Sector

For IPOs, audited annual financial statements for the most recently completed fiscal year need to be included no later than 45 days after the end of the fiscal year and unaudited interim financial statements for the most recently completed fiscal quarter (other than the fourth quarter) need to be included no later than 134 days after the date of the most recent balance sheet included in the registration statement. For example, first quarter unaudited financial statements go stale at the end of the 134th day after the first quarter and an issuer would need to file second quarter unaudited financial statements with its registration statement on the 135th day.

Pro Forma Financial Statements

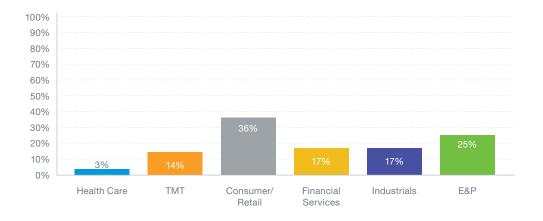
The SEC rules require issuers to include standalone pro forma financial statements in connection with certain material acquisitions, dispositions or other significant transactions where disclosure would be material to investors.

13% of issuers included pro forma financial statements.



Inclusion of Pro Forma Financial Statements

- Pro forma financial statements included 13%
- Pro forma financial statements not included 87%



Inclusion of Pro Forma Financial Statements by Sector

Accounting/Internal Controls

Almost half of issuers that went public disclosed a material weakness in internal control over financial reporting.



Issuers with a Going Concern Qualification

- Issuers with a going concern 22%
- Issuers without a going concern 78%



Issuers with a Material Weakness

- Issuers with a material weakness 46%
- Issuers without a material weakness 54%



Issuers with Restated Financial Statements

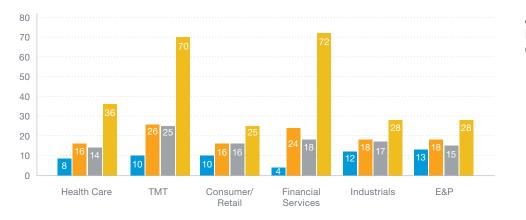
- Issuers with restated financials 7%
- Issuers without restated financials 93%



SEC Comments: Total First Round Comments

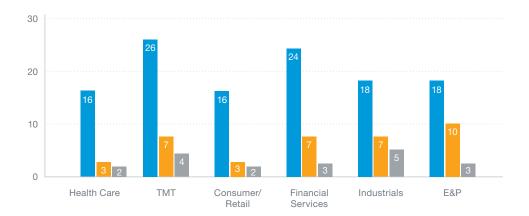
Average number of total first round comments decreased from 23 in 2017 to

20 in 2018.



Average Number of First Round SEC Comments by Sector

- Low
- Average
- Median
- High



Average Number of SEC Comments by Round

- First round comments
- Second round comments
- Third round comments

Excludes three prior SEC-reviewed issuers.

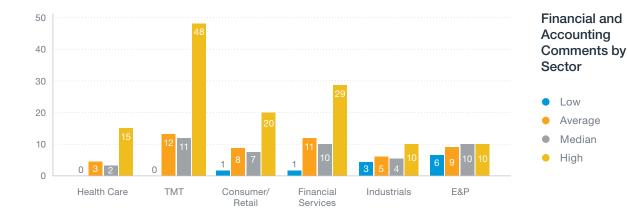
SEC Comments: Financial & Accounting Comments

Financial and accounting comments include those on the summary financial and selected financial data, capitalization, management's discussion & analysis (MD&A), historical financial statements (F-pages) and pro forma financial statements.

The average number of financial and accounting comments decreased from 10 in 2017 to

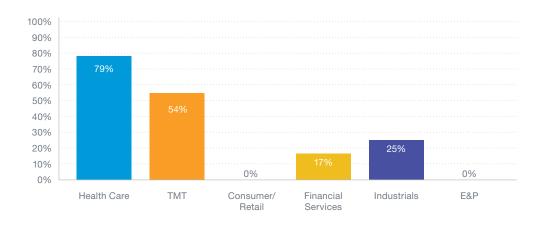
seven

in 2018.



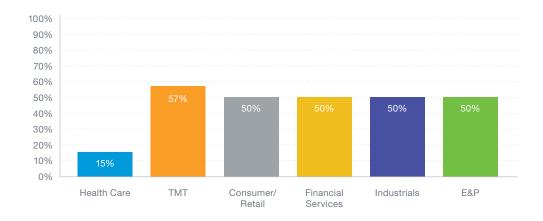
Excludes three prior SEC-reviewed issuers.

SEC Comments: A Closer Examination



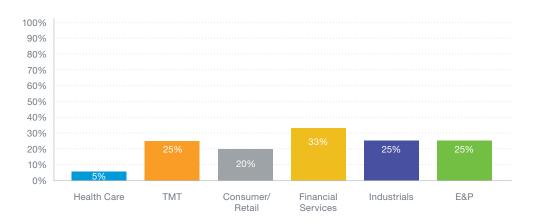
Cheap Stock Comments by Sector*

Overall: 53%



Revenue Recognition Comments by Sector

Overall: 37%

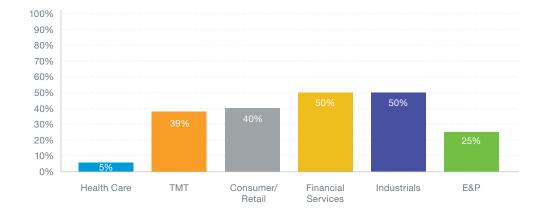


Segment Reporting Comments by Sector

Overall: 16%

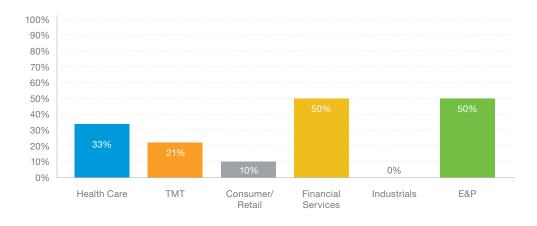
Excludes three prior SEC-reviewed issuers.

^{*}Cheap stock comments relate to the difference in valuation represented by (1) pre-IPO equity grants, typically in the form of options to purchase stock issued to officers or directors, and (2) the expected IPO price.



Non-GAAP Financial Measures Comments by Sector

Overall: 25%



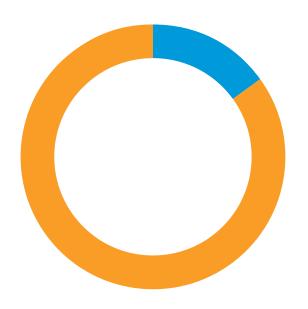
Executive
Compensation/
Employment
Arrangements
Comments by
Sector

Overall: 27%

Excludes three prior SEC-reviewed issuers.

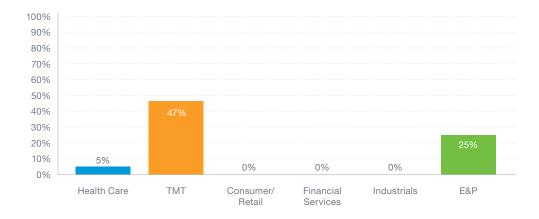
Capital Structure

Issuers with multiple classes of common stock continued to be found predominantly in the TMT sector.



Issuers with Multiple Classes of Common Stock

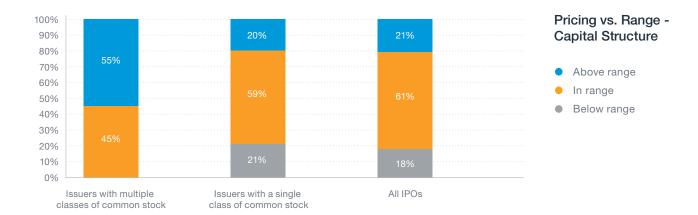
- Issuers with multiple classes of common stock 15%
- Issuers with a single class of common stock 85%

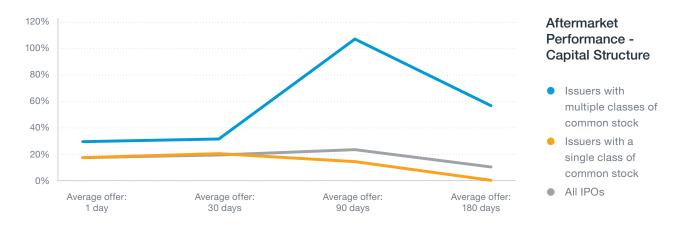


Issuers with Multiple Classes of Common Stock by Sector

Overall: 15%

Excludes FPIs (subject to home jurisdiction governance rules).





Excludes FPIs (subject to home jurisdiction governance rules).

Board Structure: Director Independence



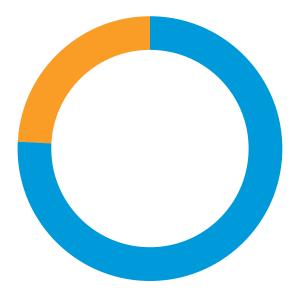
Size of Board at Pricing

Average number of directors at pricing - 8



Size of Board at Pricing

• Average number of independent directors at pricing - 5



Board Independence at Pricing

- Majority independent directors at pricing 76%
- Less than a majority of independent directors at pricing 24%

Excludes FPIs (subject to home jurisdiction governance rules).

Board Structure: Classified Board

Approximately

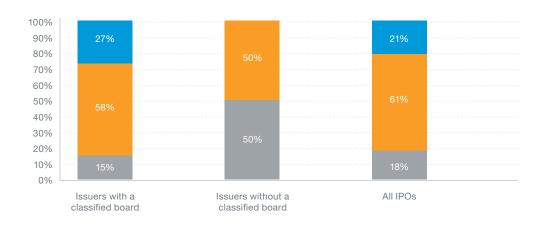
92%

of issuers went public with a classified board.



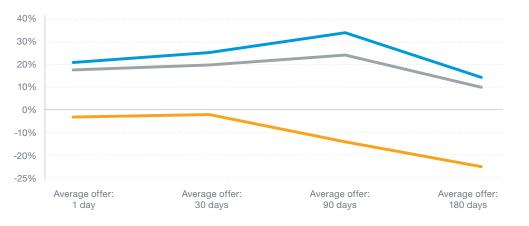
Issuers with a Classified Board at Pricing

- Issuers with a classified board 92%
- Issuers without a classified board 8%



Pricing vs. Range - Classified Board

- Above range
- In range
- Below range



Aftermarket Performance -Classified Board

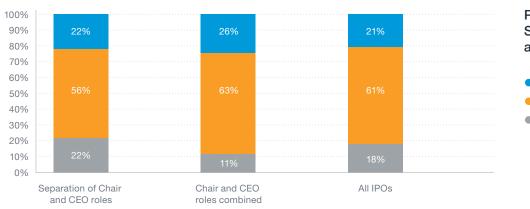
- Issuers with a classified board
- Issuers without a classified board
- All IPOs

Excludes FPIs (subject to home jurisdiction governance rules).

Board Structure: Separation of Chair & CEO Roles

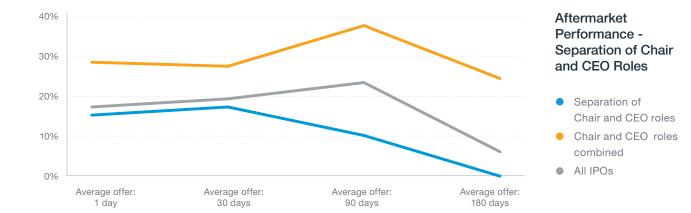
Separation of Chair and CEO Roles

- Separation of Chair and CEO roles 72%
- Chair and CEO roles combined 28%



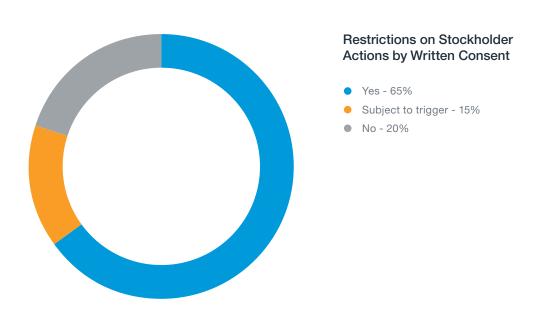
Pricing vs. Range -Separation of Chair and CEO Roles

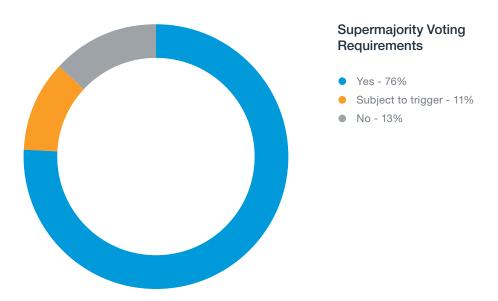
- Above range
- In range
- Below range



Excludes three issuers that did not have a Chair at the time of IPO and FPIs (subject to home jurisdiction governance rules).

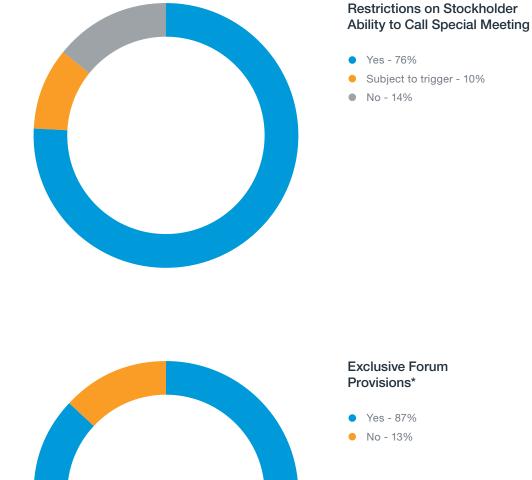
Anti-Takeover Measures and Exclusive Forum Provisions





Excludes FPIs (subject to home jurisdiction governance rules).

Certain anti-takeover measures are implemented to spring into effect upon a trigger event, such as a significant stockholder's ownership position falling below a certain threshold.



Certain anti-takeover measures were implemented to spring into effect upon a trigger event, such as a significant stockholder's ownership position falling below a certain threshold. *Exclusive forum provisions limit the courts in which certain types of stockholder litigation can be brought.

Excludes FPIs (subject to home jurisdiction governance rules).

Equity Incentive Plan

Most issuers establish a new equity incentive plan upon going public and reserve a specified number of shares to issue as compensation to officers, directors and employees.

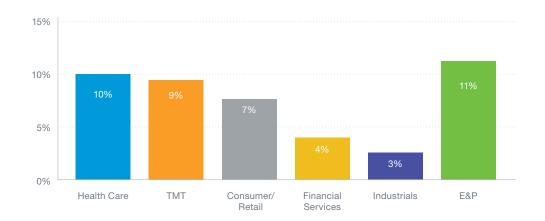
The average percentage of shares reserved under equity incentive plans was

8.5%

Approximately

40%

of issuers also established employee stock purchase programs.



Average Percentage of Shares Reserved Under Equity Incentive Plans by Sector

Secondary Component

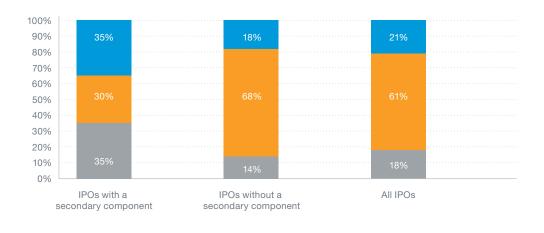
IPOs with a secondary component provide for sales of shares by existing stockholders of the company.

18% of IPOs had one or more selling stockholders.



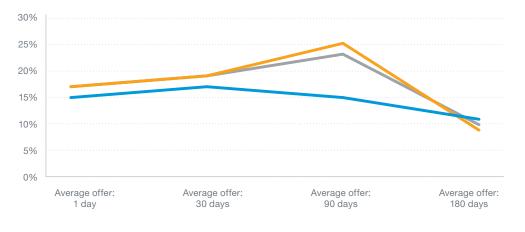
IPOs with a Secondary Component

- IPOs with a secondary component 18%
- IPOs without a secondary component 82%



Pricing vs. Range -Secondary Component

- Above range
- In range
- Below range



Aftermarket Performance Secondary Component

- IPOs with a secondary component
- IPOs without a secondary component
- All IPOs

Deals with one or more selling stockholders selling in the over-allotment option are not included.

Management Sales

Directors and/or officers participated as selling stockholders in the base offering of

47%

of IPOs with a secondary component.



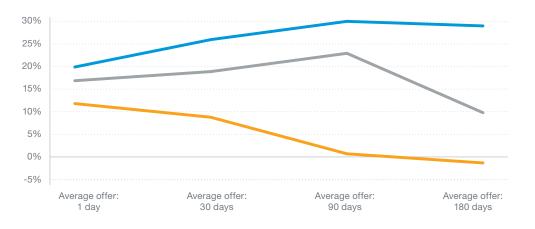
Management Selling in Secondary Component of IPO

- Secondary IPOs with management selling 47%
- Secondary IPOs without management selling 53%



Pricing vs. Range - Management Sales

- Above range
- In range
- Below range

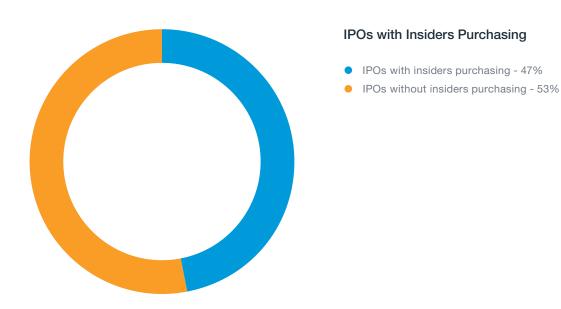


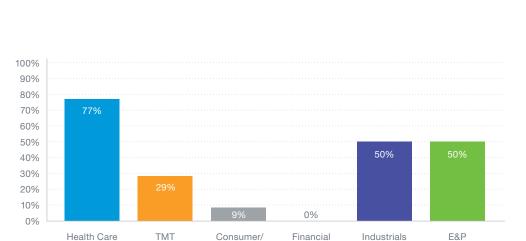
Aftermarket Performance -Management Sales

- Secondary IPOs with management selling
- Secondary IPOs without management selling
- All IPOs

Insiders Purchasing

Almost half of issuers disclosed directors, officers or existing stockholders purchasing in their IPO.



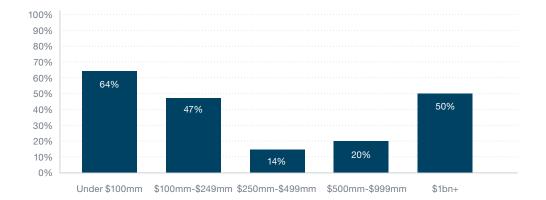


Retail

Services

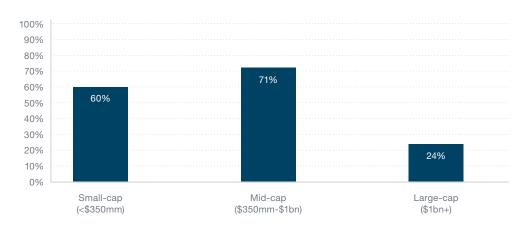
Insiders Purchasing in IPO by Sector

Does not include purchases through a Directed Share Program (DSP).



Insiders Purchasing in IPO by Deal Size*

Overall: 47%



Insiders Purchasing in IPO by Market Cap at Pricing

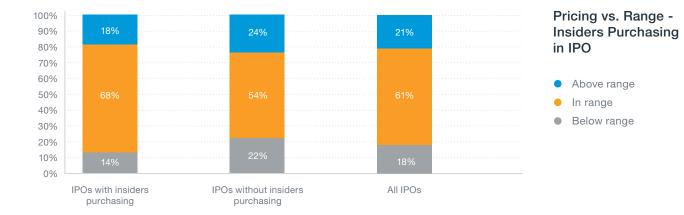
Overall: 47%

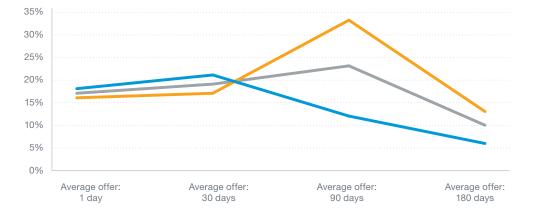
Excludes purchases through a DSP.

*Deal size consists of priced amount in base offering and excludes an exercise of the over-allotment option.

Insiders Purchasing

IPOs with insiders purchasing were more likely to price in or above range.





Aftermarket Performance -Insiders Purchasing in IPO

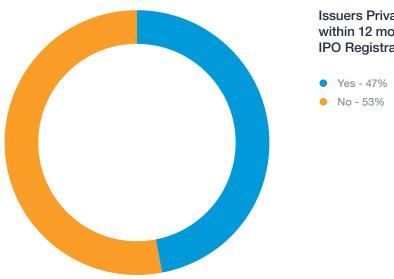
- IPOs with insiders purchasing
- IPOs without insiders purchasing
- All IPOs

Does not include purchases through a DSP.

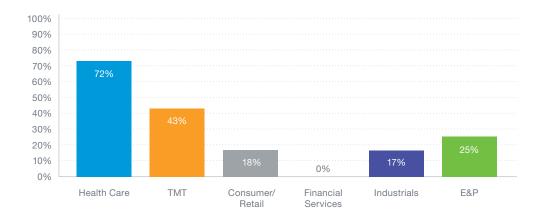
Pre-IPO Private Placements

47%

of issuers issued equity securities within 12 months prior to submitting/ filing IPO registration statements.



Issuers Privately Placing Equity Securities within 12 months prior to Submitting/Filing IPO Registration Statement



Pre-IPO Private Placements by Sector

Based on review of information disclosed in Part II, Item 15 of Form S-1 registration statements and Part II, Item 7 of Form F-1 registration statements.

Directed Share Programs (DSPs)

Directed Share Programs (DSPs) allow insiders, employees and other individuals that have relationships with the issuer to purchase stock in the IPO. At the request of the issuer, the underwriters reserve a certain amount of the shares in the IPO for purchase by DSP participants.

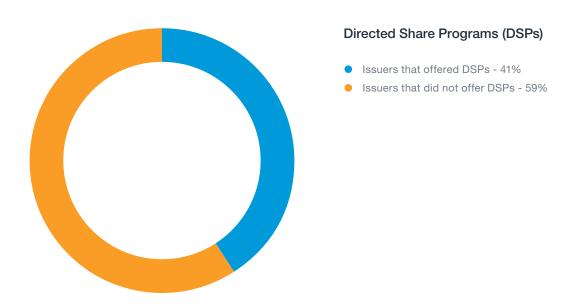
41%

of issuers established DSPs.

The average size for DSPs was

5%

of the base deal size.



100% 90% 80% 70% 60% 50% 40% 30% 20% 10% 17% 0% Health Care TMT Industrials E&P Consumer/ Financial Retail Services

DSPs by Sector

Lock-ups

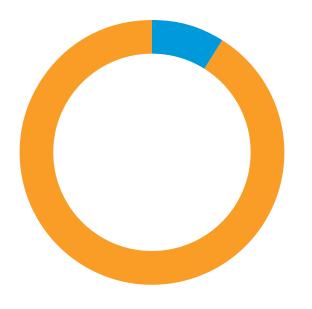
Typically, lock-up release rights are negotiated between the bookrunners and the issuer. The parties that control release rights may, prior to the expiration of the lock-up period, permit the issuer and/or certain stockholders to sell shares in an organized follow-on offering or freely into the open market.

Lock-up release rights were held solely by the lead left bookrunner in

9% of IPOs.

71%

of issuers had a lock-up carve-out for issuances in connection with acquisitions or joint ventures.

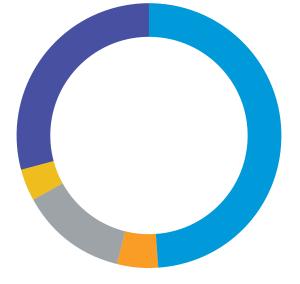


Lock-up Release

- Lead left bookrunner only 9%
- Multiple bookrunners 91%

Carve-outs for Issuances in Connection with Acquisitions or Joint Ventures*

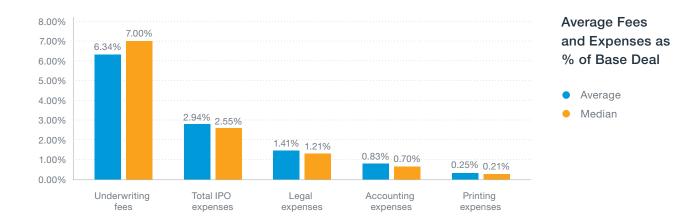
- 5% carve-out 49%
- 7% carve-out 5%
- 10% carve-out 13%
- Uncapped carve-out 4%
- Carve-out not included 29%



^{*}Carve-out from issuer lock-up for equity issuances in connection with acquisitions, joint-ventures and strategic transactions.

IPO Fees & Expenses

Underwriting fees ranged from \$2.8mm to \$67.5mm. The median value for the underwriting fee as a percentage of the base deal size was 7%.



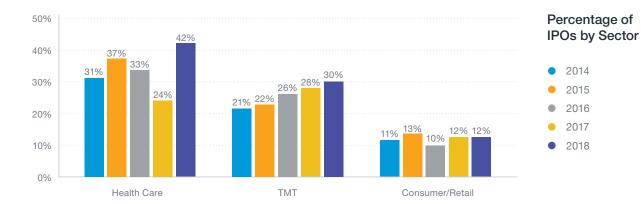
Fee Category	Low	Average	Median	High
Underwriting Fees*	\$2,800,000	\$15,255,898	\$10,132,500	\$67,500,000
Total IPO Expenses	\$1,055,000	\$5,624,453	\$4,052,528	\$88,100,000
Legal Expenses	\$375,000	\$2,241,141	\$1,850,000	\$15,000,000
Accounting Expenses	\$80,000	\$1,855,186	\$1,027,400	\$50,000,000
Printing Expenses	\$35,000	\$377,912	\$325,000	\$2,000,000

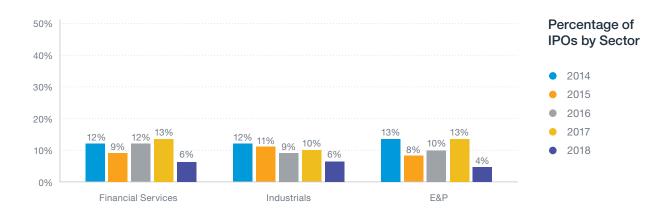
*Underwriting fees are the percentage of the IPO base deal that is paid as compensation to the underwriters in the form of a discount or commission.

IPO Fees and Expenses

Trend Analysis

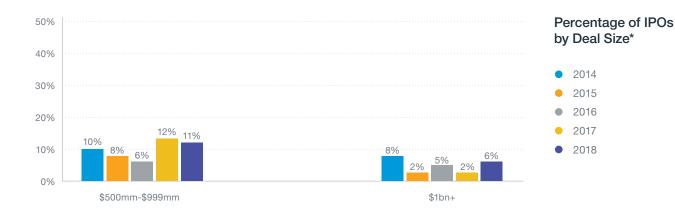
Sector Analysis

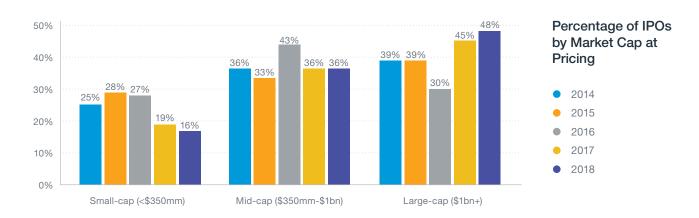




Deal Size and Market Capitalization at Pricing

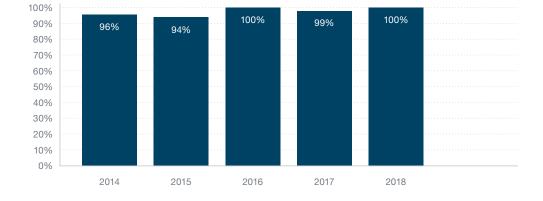




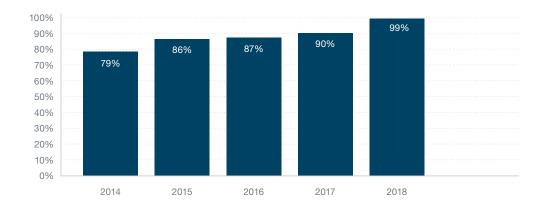


 $^{^*}$ Deal size consists of priced amount in base offering and excludes any exercise of over-allotment option.

Confidential Submission



EGCs Electing to Confidentially Submit



Issuers Electing to Confidentially Submit*

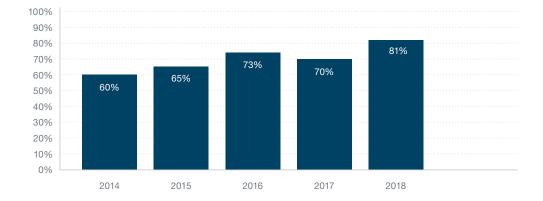
^{*}Includes both EGCs and Non-EGCs.

Time to IPO

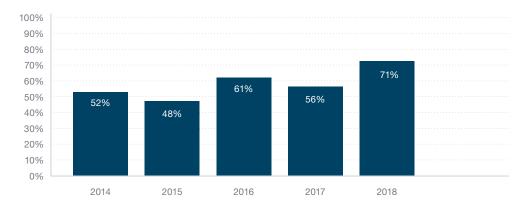


Excludes prior SEC-reviewed issuers and an additional two issuers in 2014, one issuer in 2015, two issuers in 2016 and nine issuers in 2017 with time from first submission/filing to pricing greater than 18 months.

Financial Information & EGCs



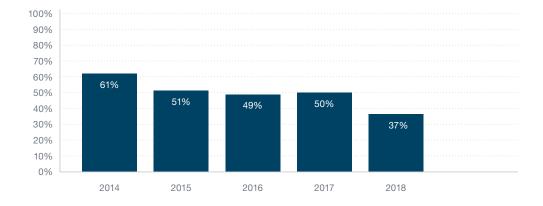
EGCs that Included Two Years of Audited Financial Statements



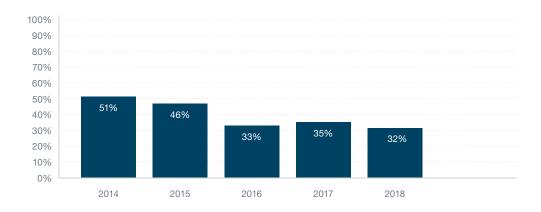
EGCs that Included Two Years of Selected Financial Statements

Excludes two EGCs in 2015, three EGCs in 2016, one EGC in 2017 and two EGCs in 2018 that provided financial statements since inception, which period, in each case, was less than two years, and one that only showed seven months of unaudited financial statements as the issuer was previously in bankruptcy.

EBITDA, Adjusted EBITDA and Operating Metrics



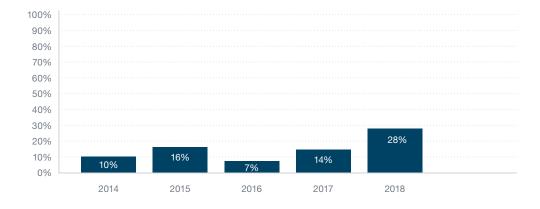
Disclosure of EBITDA and/or Adjusted EBITDA



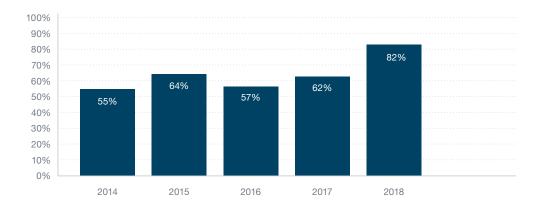
Disclosure of Operating Metrics*

^{*}Based on review of summary financial information.

Pre-Revenue Issuers and Issuers with a Net Loss

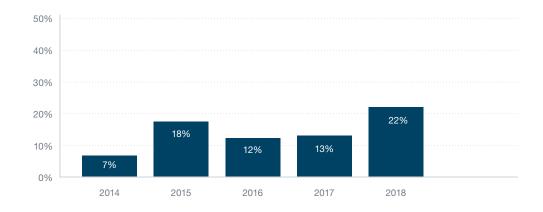


Percentage of Pre-Revenue Issuers

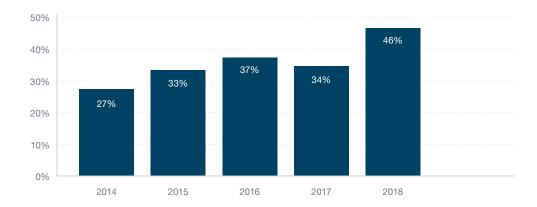


Percentage of Issuers Disclosing a Net Loss

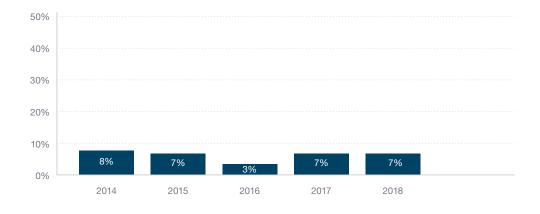
Accounting/Internal Controls



Issuers with a Going Concern Qualification



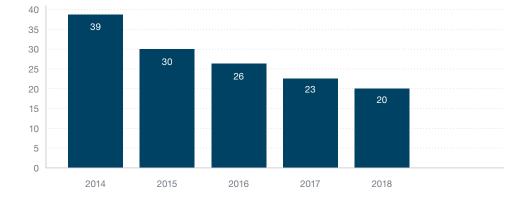
Issuers with a Material Weakness



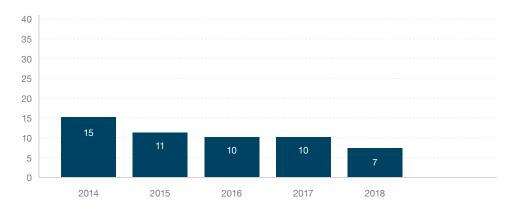
Issuers with Restated Financials

SEC Comments

There continues to be a year-over-year decrease in the average number of first round comments received by issuers from the SEC.



Average Number of First Round SEC Comments

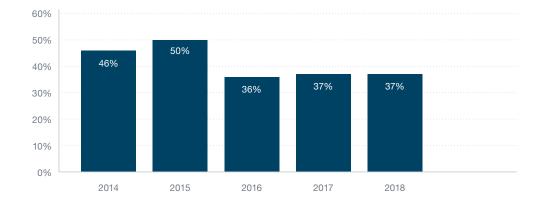


Average Number of Financial and Accounting Comments*

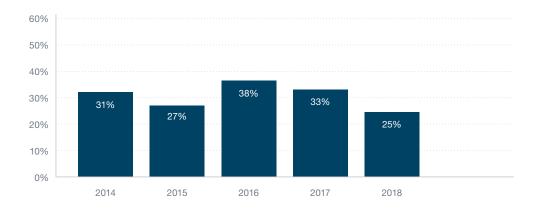
Excludes prior SEC-reviewed issuers.

^{*}Financial and accounting-related comments include those on the summary financial and selected financial data, capitalization, management's discussion & analysis (MD&A), historical financial statements (F-pages) and pro forma financial statements.

SEC Comments



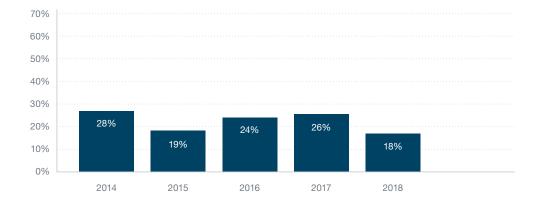
Percentage of IPOs with Revenue Recognition Comments



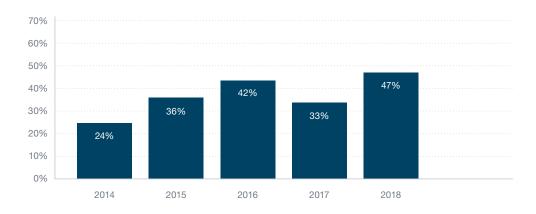
Percentage of IPOs with Non-GAAP Financial Comments

Excludes prior SEC-reviewed issuers.

Secondary Component and Insiders Purchasing



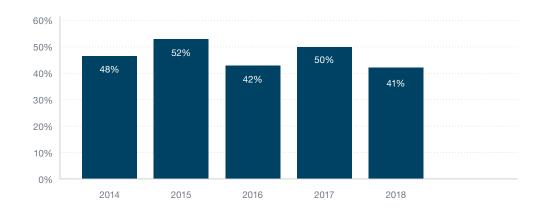
Percentage of IPOs with a Secondary Component



Percentage of IPOs with Insiders Purchasing*

^{*}Does not include purchases through a DSF

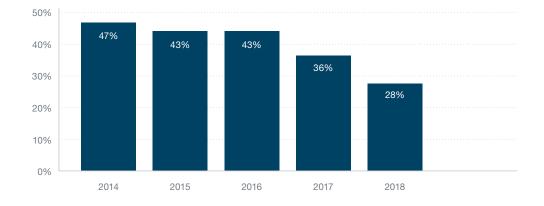
Directed Share Programs (DSPs)



Percentage of IPOs with a DSP

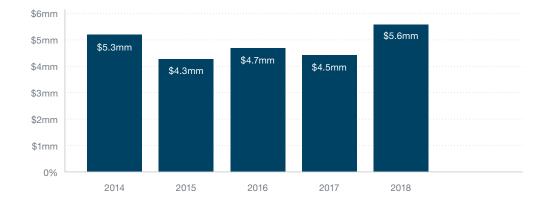
Sponsor-backed IPOs

There continues to be a decrease in the percentage of IPOs that were backed by sponsors.

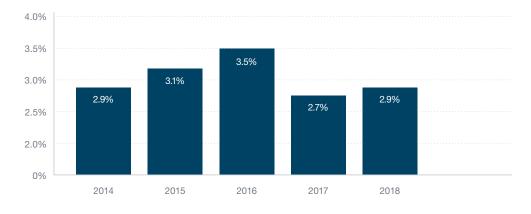


Percentage of IPOs that are Sponsor-backed

IPO Fees and Expenses



Average IPO Fees and Expenses*



IPO Fees and Expenses as a Percentage of Base Deal Size

^{*}Excludes underwriting fees.

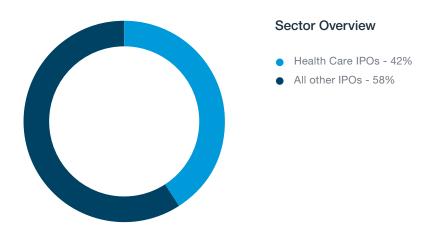
Health Care

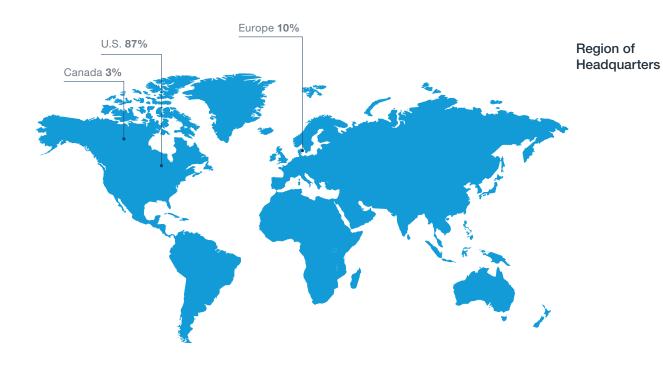
Health Care Market Overview

Health Care IPOs 42% of overall market

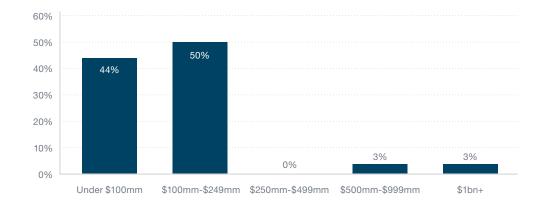


97% of Health Care issuers in our study were biotech or biopharmaceutical companies.

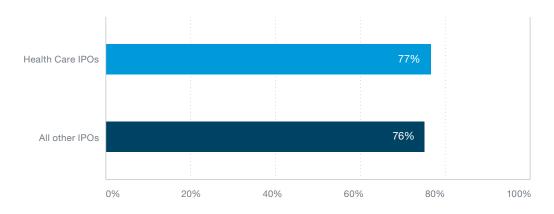




Moderna, Inc., which priced in December 2018, was the largest biotech firm to go public with a deal size of approximately \$604mm.



Deal Size*



Over-Allotment
Option Exercised

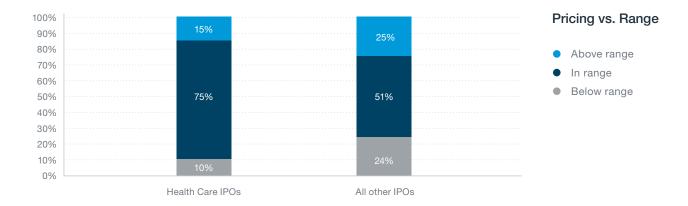


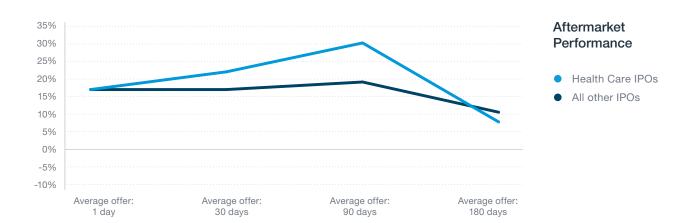
Market Cap at Pricing

- Small-cap (<\$350mm) 26%
- Mid-cap (\$350mm-\$1bn) 59%
- Large-cap (\$1bn+) 15%

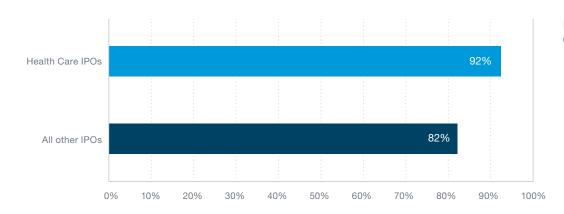
 $^{^{*}}$ Deal size consists of priced amount in base offering and excludes any exercise of over-allotment option

Market Performance





Emerging Growth Companies (EGCs)



Emerging Growth Companies (EGCs)



Years of Audited Financial Statements*

- 2 Years 97%
- 3 Years 3%

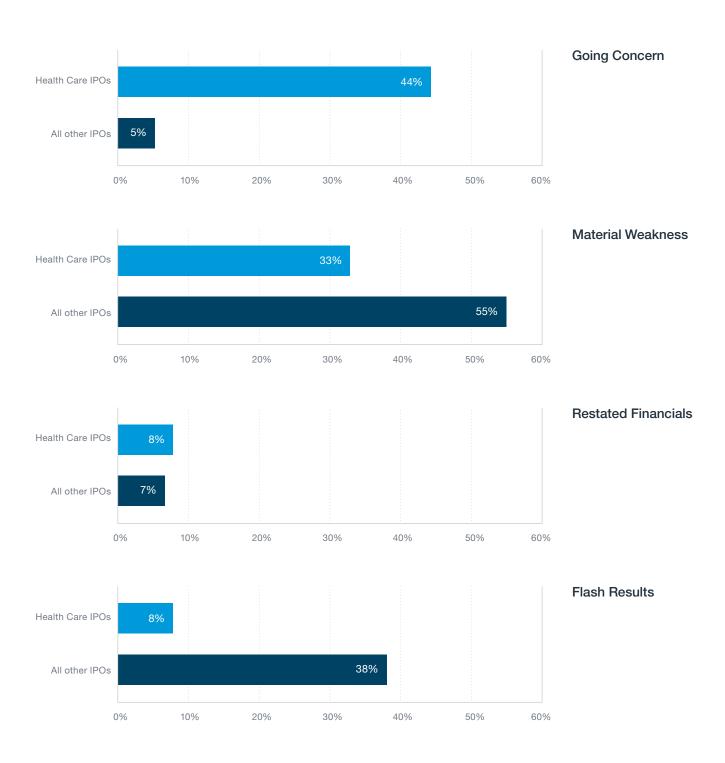


Years of Selected Financial Statements*

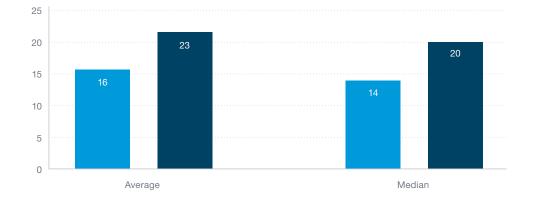
- 2 Years 97%
- 3 Years 3%

^{*}Excludes one EGC that provided financial statements since inception, which period was shorter than two years. The JOBS Act provides financial disclosure requirements for EGCs, requiring only two years of audited financial statements and two years of selected financial data. Non-EGCs are required to include three years of audited financial statements and five years of selected financial data.

Accounting/Internal Controls and Flash Results

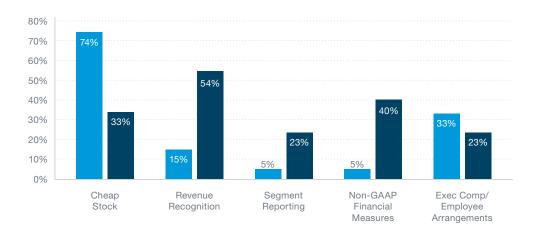


SEC Comments



Average Number of First Round SEC Comments

- Health Care IPOs
- All other IPOs

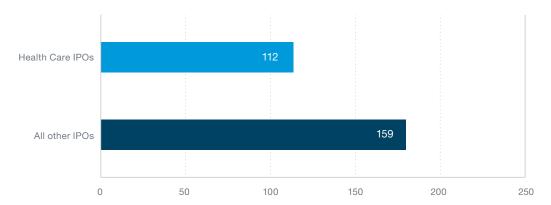


SEC Comment Subject Matter

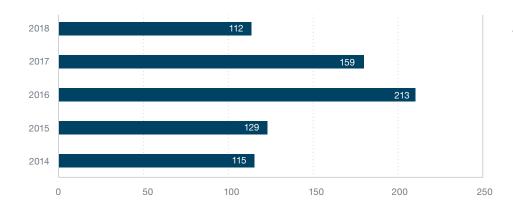
- Health Care IPOs
- All other IPOs

Excludes prior SEC-reviewed issuers.

Timing



Average Number of Days from First Submission/Filing to Pricing

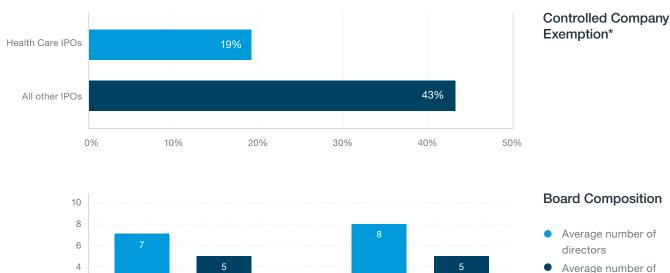


Heath Care Five-year Trend - Average Number of Days from First Submission/ Filing to Pricing

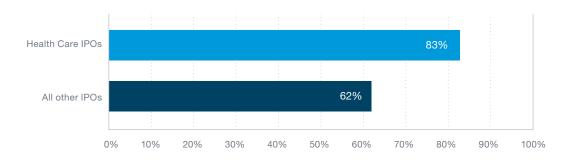
Excludes prior SEC-reviewed issuers.

Corporate Governance

Health Care IPOs

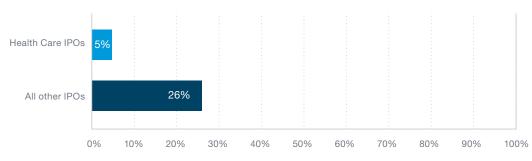


All other IPOs



- Average number of directors
- Average number of independent directors

Separation of Chair and CEO Roles**



Multiple Classes of Common Stock

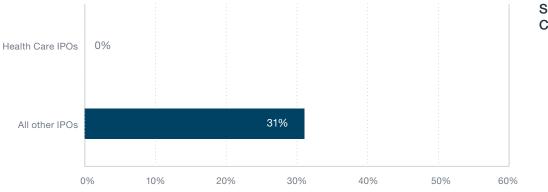
2

Excludes FPIs (subject to home jurisdiction governance rules).

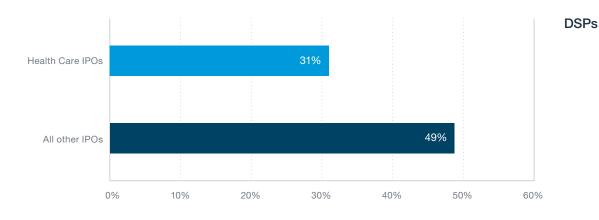
^{*}A controlled company is a company in which more than 50% of the voting power for election of directors is held by an individual, a group or another company. The listing standards of the NYSE and NASDAQ exempt controlled companies from certain corporate governance requirements.

^{**}Excludes three issuers that did not have a Chair at the time of IPO.

Secondary Component and Directed Share Programs (DSPs)

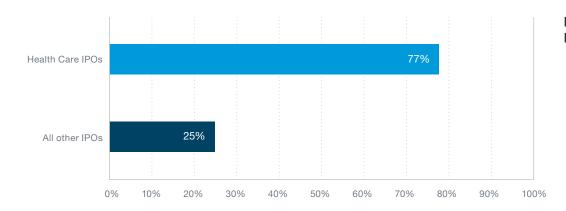


Secondary Component

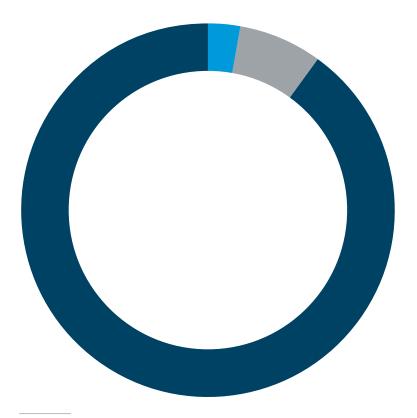


Deal Structure: Insiders Purchasing in IPO

770/0
of Health Care
IPOs had insiders
purchasing.



IPOs with Insiders Purchasing



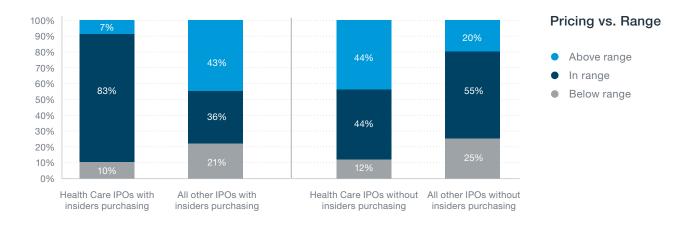
Percentage of IPO Purchased by Health Care Insiders*

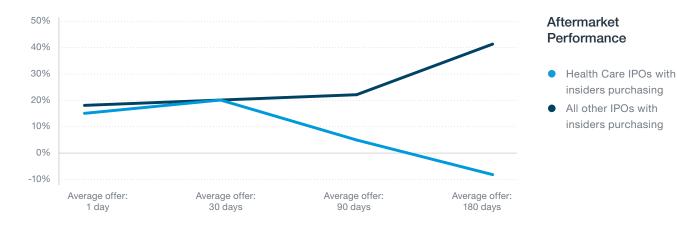
- 5.0%-9.9% purchased 3%
- 10.0%-19.9% purchased 7%
- 20.0% or more purchased 90%

Excludes purchases through a DSP.

^{*}Population consists of IPOs with insiders purchasing.

Deal Structure: Insiders Purchasing in IPO





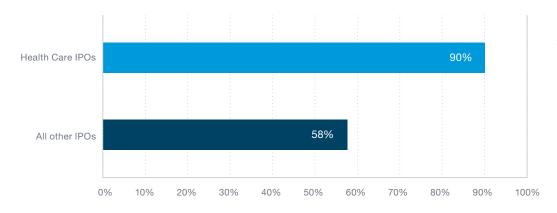
Excludes purchases through a DSP.

Lock-ups and Carve-outs



Lock-up Release

- Lead left bookrunner only 8%
- Multiple bookrunners 92%



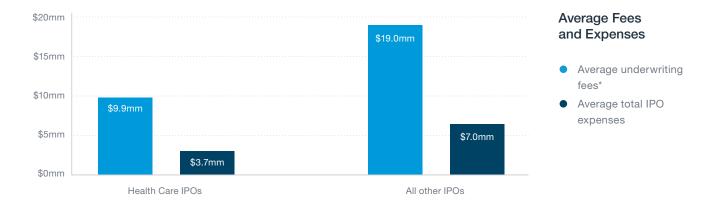
Carve-out for Acquisitions/
Joint Ventures



Company Lock-up/ Carve-out by Cap

- 5% carve-out 82%
- 7% carve-out 9%
- 10% carve-out 9%

Fees and Expenses

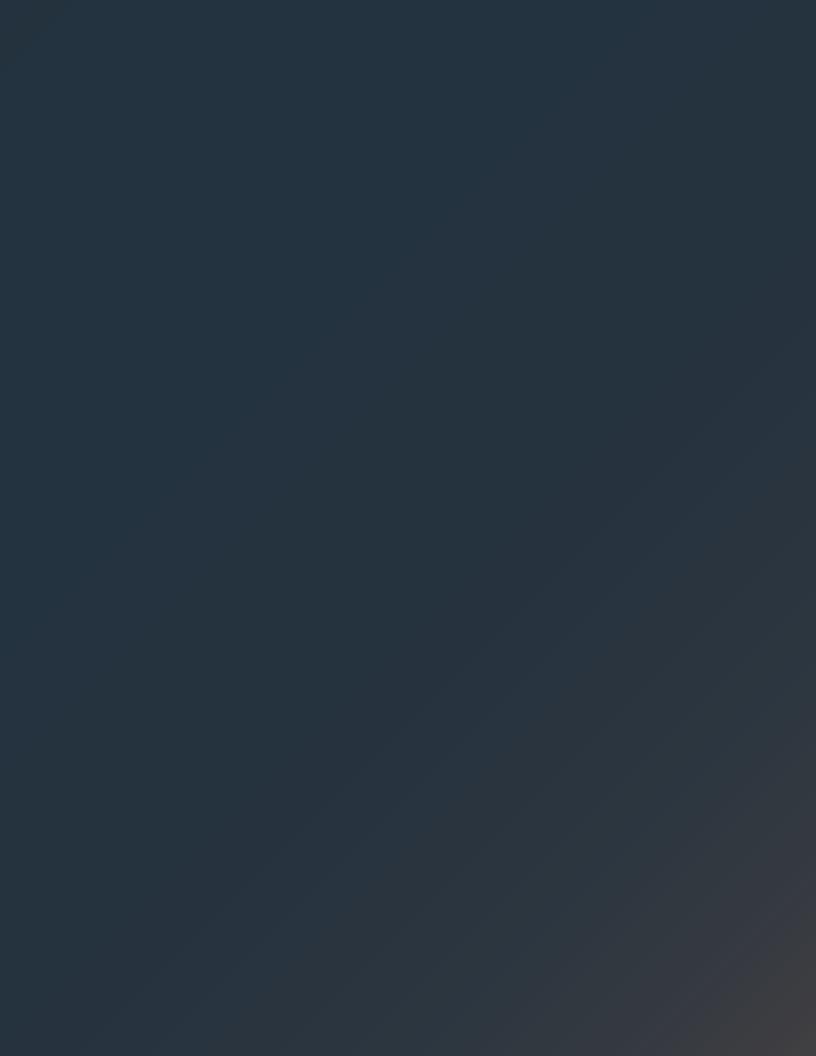


^{*}Underwriting fees are the percentage of the IPO base deal that is paid as compensation to the underwriters in the form of a discount or commission.



Average Fees and Expenses

- Average legal fees
- Average accounting fees
- Average printing fees



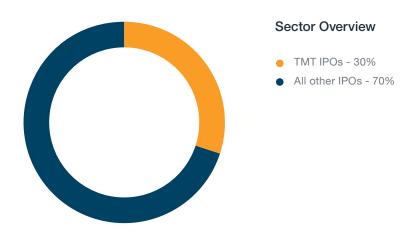
Technology, Media & Telecommunications

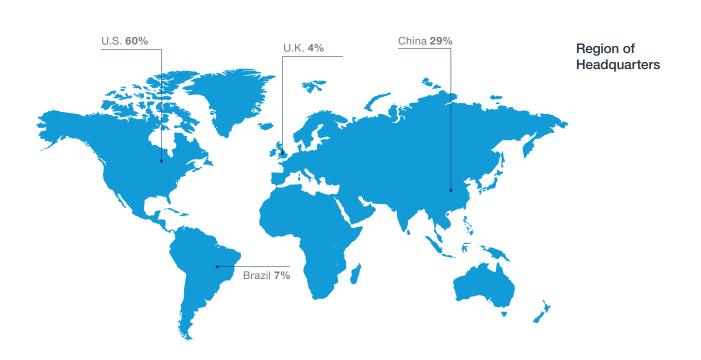
TMT Market Overview

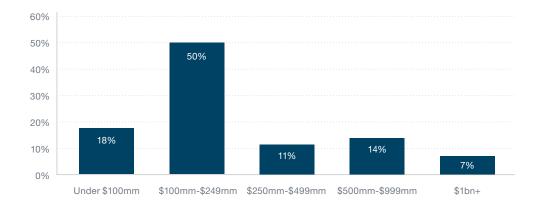
Technology, Media & Telecommunications IPOs

30% of overall market

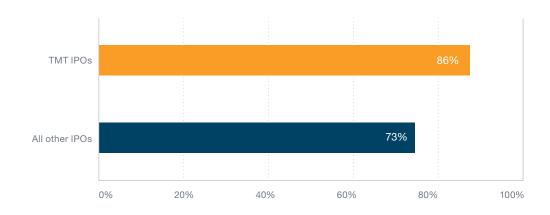








Deal Size*



Over-Allotment Option Exercised

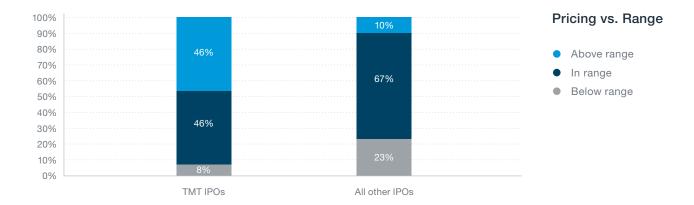


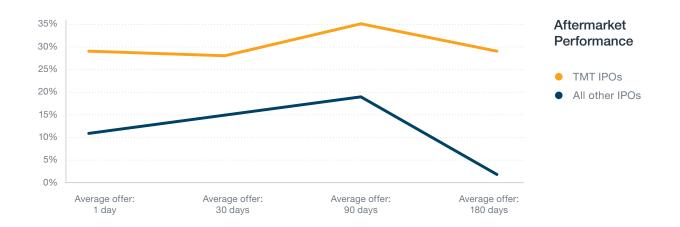
Market Cap at Pricing

- Small-cap (<\$350mm) 7%
- Mid-cap (\$350mm-\$1bn) 11%
- Large-cap (\$1bn+) 82%

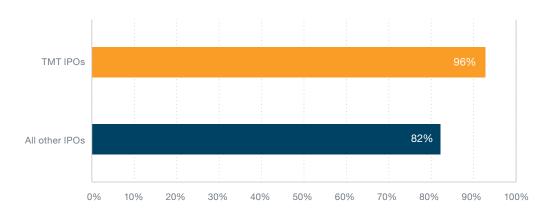
^{*}Deal size consists of priced amount in base offering and excludes any exercise of over-allotment option.

Market Performance





Emerging Growth Companies (EGCs)



Emerging Growth Companies (EGCs)



Years of Audited Financial Statements*

- 2 Years 65%
- 3 Years 35%



Years of Selected Financial Statements*

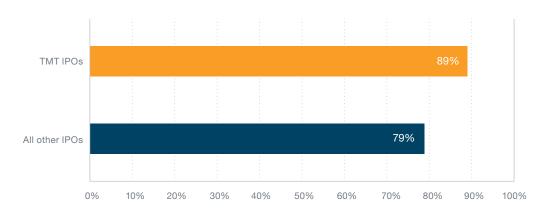
- 2 Years 62%
- 3 Years 38%

^{*}Excludes one EGC that provided financial statements since inception, which period was shorter than two years. The JOBS Act provides financial disclosure requirements for EGCs, requiring only two years of audited financial statements and two years of selected financial data. Non-EGCs are required to include three years of audited financial statements and five years of selected financial data.

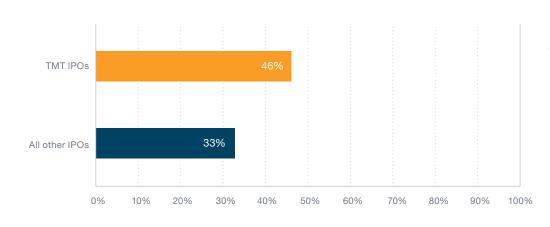
Accounting/Internal Controls and Flash Results



Financial Information: Net Loss and EBITDA and/or Adjusted EBITDA

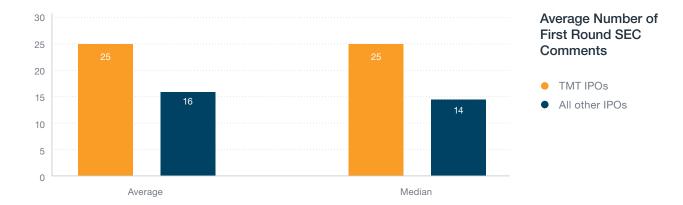


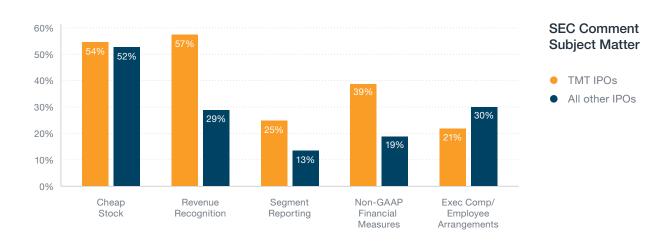
Net Loss



EBITDA and/or Adjusted EBITDA

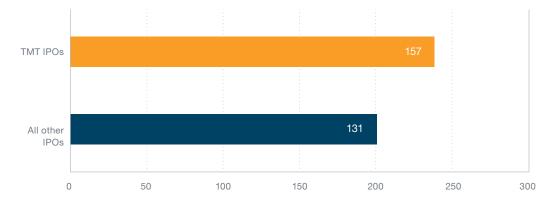
SEC Comments



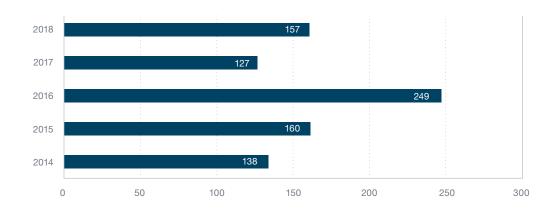


Excludes prior SEC-reviewed issuers.

Timing



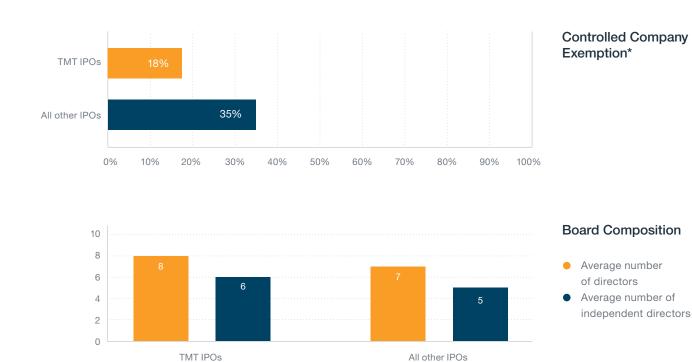
Average Number of Days From First Submission/Filing to Pricing

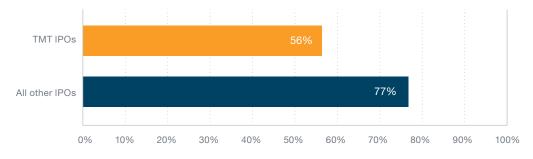


TMT Five-year Trend -Average Number of Days from First Submission/Filing to Pricing

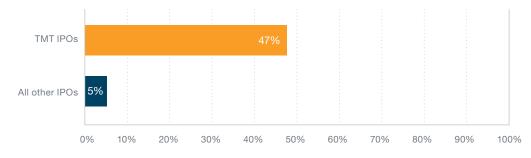
Excludes prior SEC-reviewed issuers.

Corporate Governance









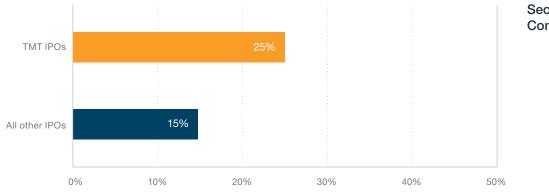
Multiple Classes of Common Stock

Excludes FPIs (subject to home jurisdiction governance rules).

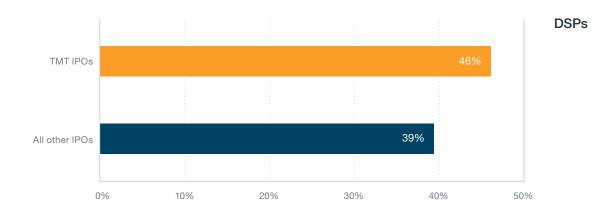
^{*}A controlled company is a company in which more than 50% of the voting power for election of directors is held by an individual, a group or another company. The listing standards of the NYSE and NASDAQ exempt controlled companies from certain corporate governance requirements.

^{**}Excludes three issuers that did not have a Chair at the time of IPO.

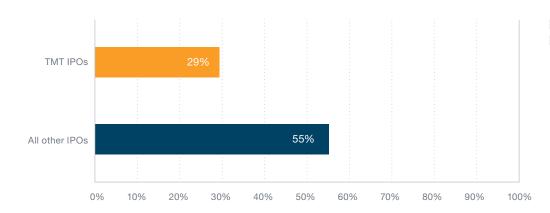
Secondary Component and Directed Share Programs (DSPs)



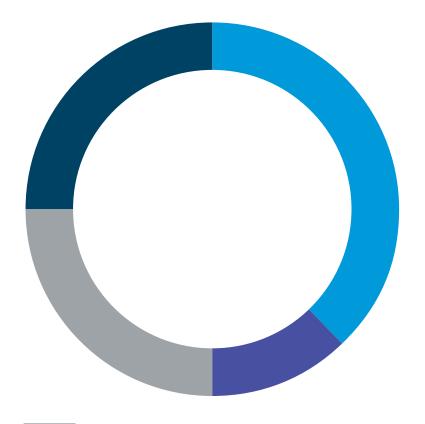
Secondary Component



Insiders Purchasing in IPO



IPOs with Insiders Purchasing



Percentage of IPO Purchased by TMT Insiders

- Less than 5.0% purchased 38%
- 5.0%-9.9% purchased 12%
- 10.0%-19.9% purchased 25%
- 20.0% or more purchased 25%

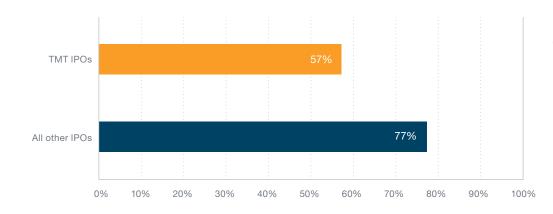
Excludes purchases through a DSP.

Lock-ups and Carve-outs



Lock-up Release

- Lead left bookrunner only 14%
- Multiple bookrunners 86%



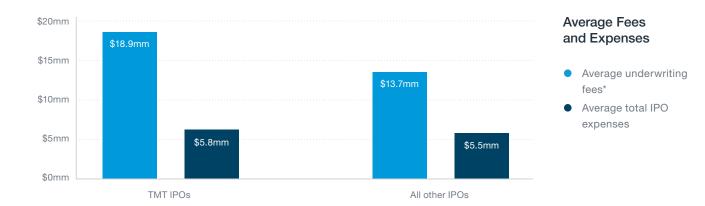
Carve-out for Acquisitions/ Joint Ventures



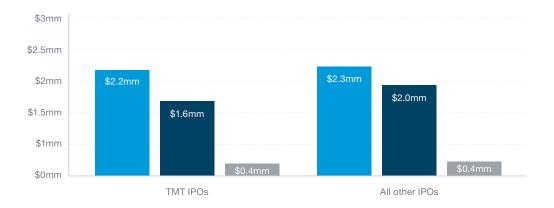
Company Lock-up/ Carve-out by Cap

- 5% carve-out 57%
- 7% carve-out 6%
- 10% carve-out 31%
- Uncapped 6%

Fees and Expenses

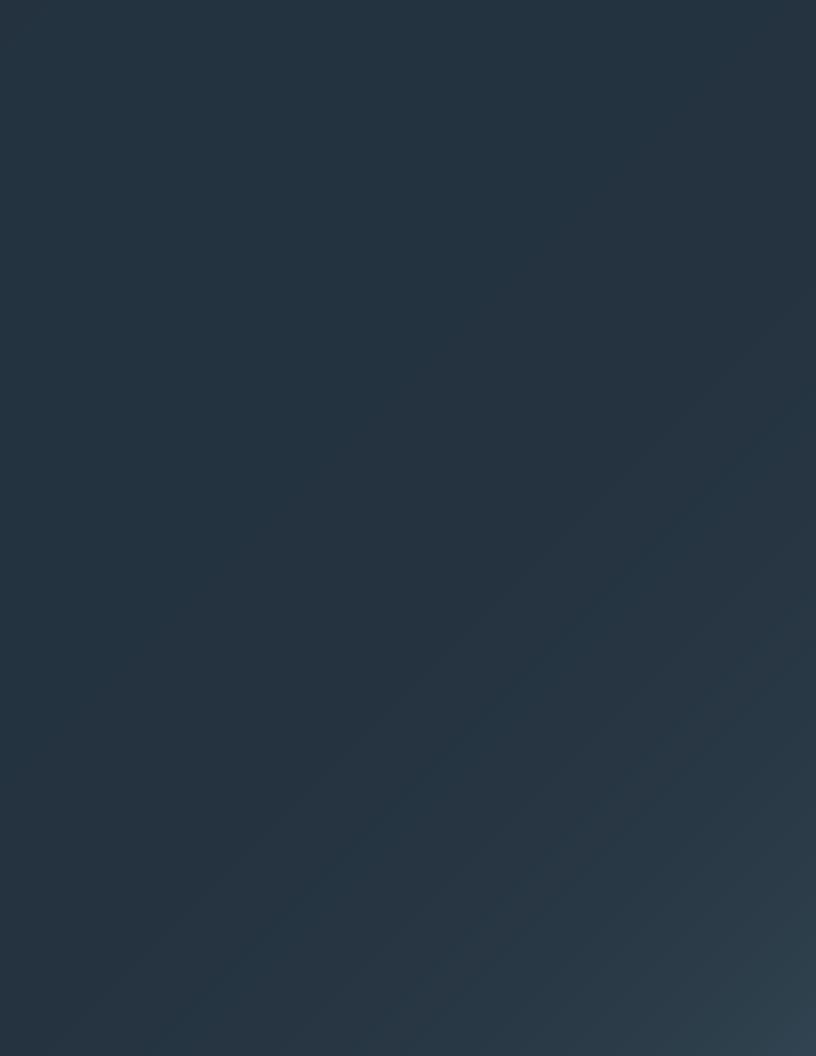


^{*}Underwriting fees are the percentage of the IPO base deal that is paid as compensation to the underwriters in the form of a discount or commission.



Average Fees and Expenses

- Average legal fees
- Average accounting fees
- Average printing fees



Consumer/ Retail

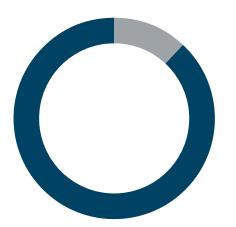
Consumer/Retail Market Overview

Consumer/Retail IPOs

12%

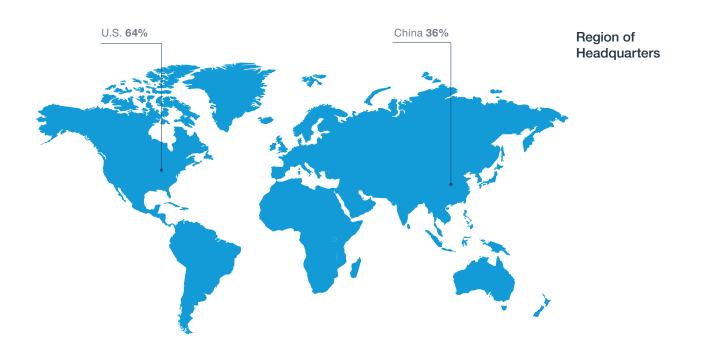
of overall market

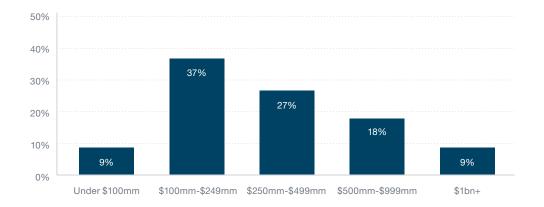




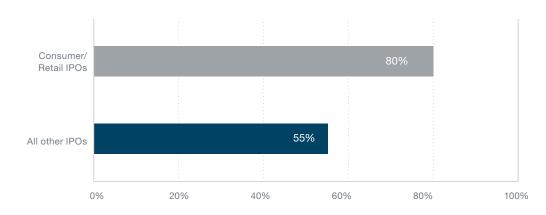
Sector Overview

- Consumer/Retail IPOs 12%
- All other IPOs 88%





Deal Size*



Over-Allotment Option Exercised

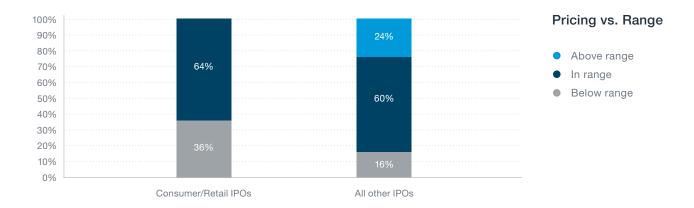


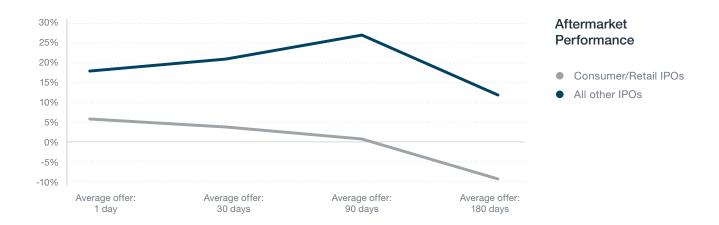
Market Cap at Pricing

- Mid-cap (\$350mm-\$1bn) 27%
- Large-cap (\$1bn+) 73%

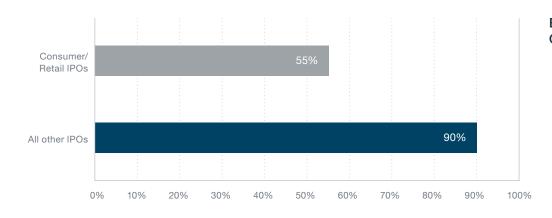
^{*}Deal size consists of priced amount in base offering and excludes any exercise of over-allotment option.

Market Performance



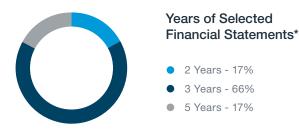


Emerging Growth Companies (EGCs)



Emerging Growth Companies (EGCs)



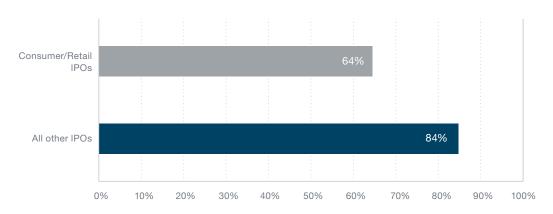


^{*}Excludes one EGC that provided financial statements since inception, which period was shorter than two years. The JOBS Act provides financial disclosure requirements for EGCs, requiring only two years of audited financial statements and two years of selected financial data. Non-EGCs are required to include three years of audited financial statements and five years of selected financial data.

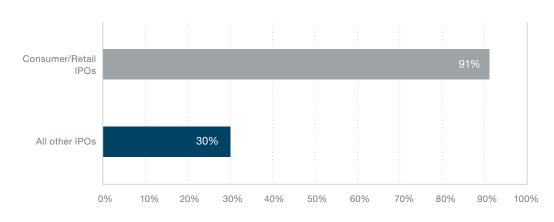
Accounting/Internal Controls and Flash Results



Financial Information: Net Loss and EBITDA and/or Adjusted EBITDA

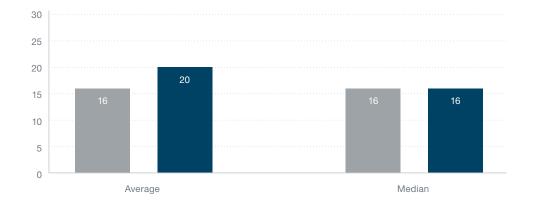


Net Loss



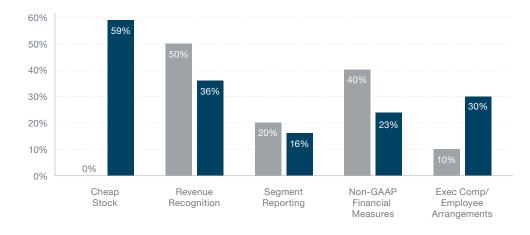
EBITDA and/or Adjusted EBITDA

SEC Comments



Average Number of First Round SEC Comments

- Consumer/Retail IPOs
- All other IPOs

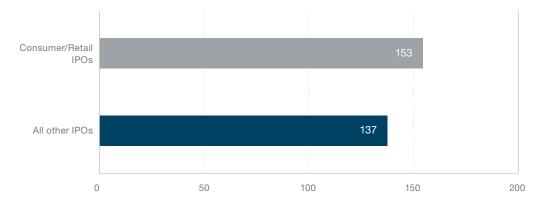


SEC Comment Subject Matter

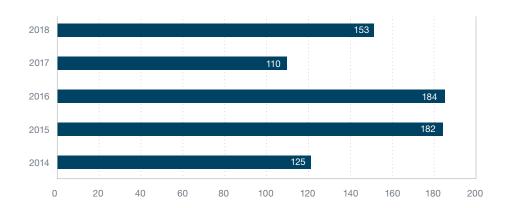
- Consumer/Retail IPOs
- All other IPOs

Excludes prior SEC-reviewed issuers.

Timing



Average Number of Days From First Submission/Filing to Pricing



Consumer/Retail Five-year Trend -Average Number of Days from First Submission/Filing to Pricing

Excludes prior SEC-reviewed issuers.

Corporate Governance

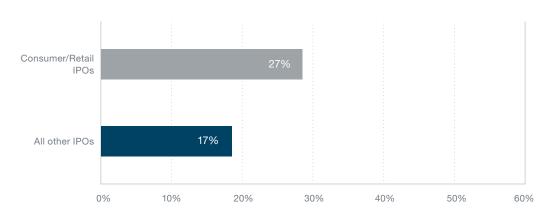


Excludes FPIs (subject to home jurisdiction governance rules).

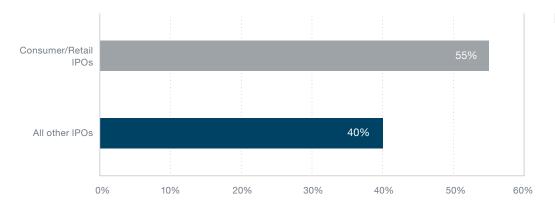
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Secondary Component and Directed Share Programs (DSPs)



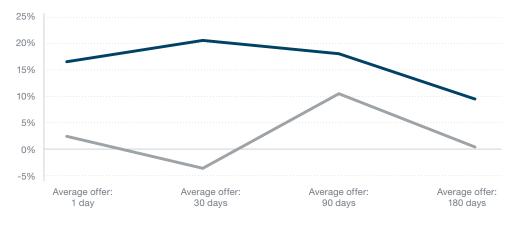
Secondary Component



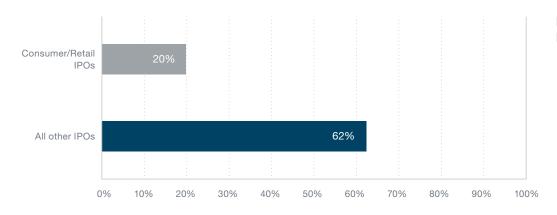
DSPs

Aftermarket Performance

- Consumer/Retail IPOs with DSP
- All other IPOs with DSP



Deal Structure: Insiders Purchasing in IPO



IPOs with Insiders Purchasing

Percentage of IPO Purchased by Consumer/Retail Insiders

• 10.0%-19.9% purchased - 100%

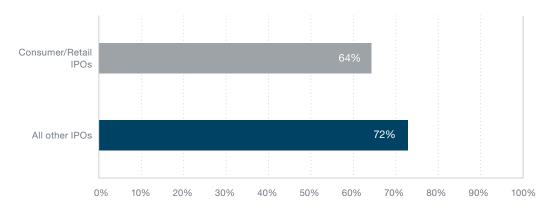
Excludes purchases through a DSP.

Lock-ups and Carve-outs



Lock-up Release

- Lead left bookrunner only 0%
- Multiple bookrunners 100%



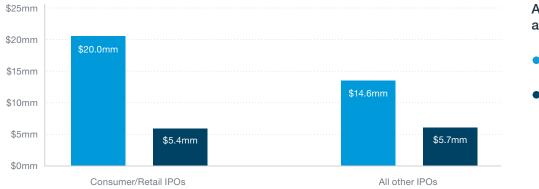
Carve-out for Acquisitions/
Joint Ventures



Company Lock-up/ Carve-out by Cap

- 5% carve-out 58%
- 7% carve-out 14%
- 10% carve-out 14%
- Uncapped 14%

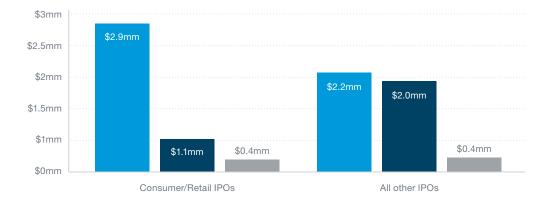
Fees and Expenses



*Underwriting fees are the percentage of the IPO base deal that is paid as compensation to the underwriters in the form of a discount or commission.

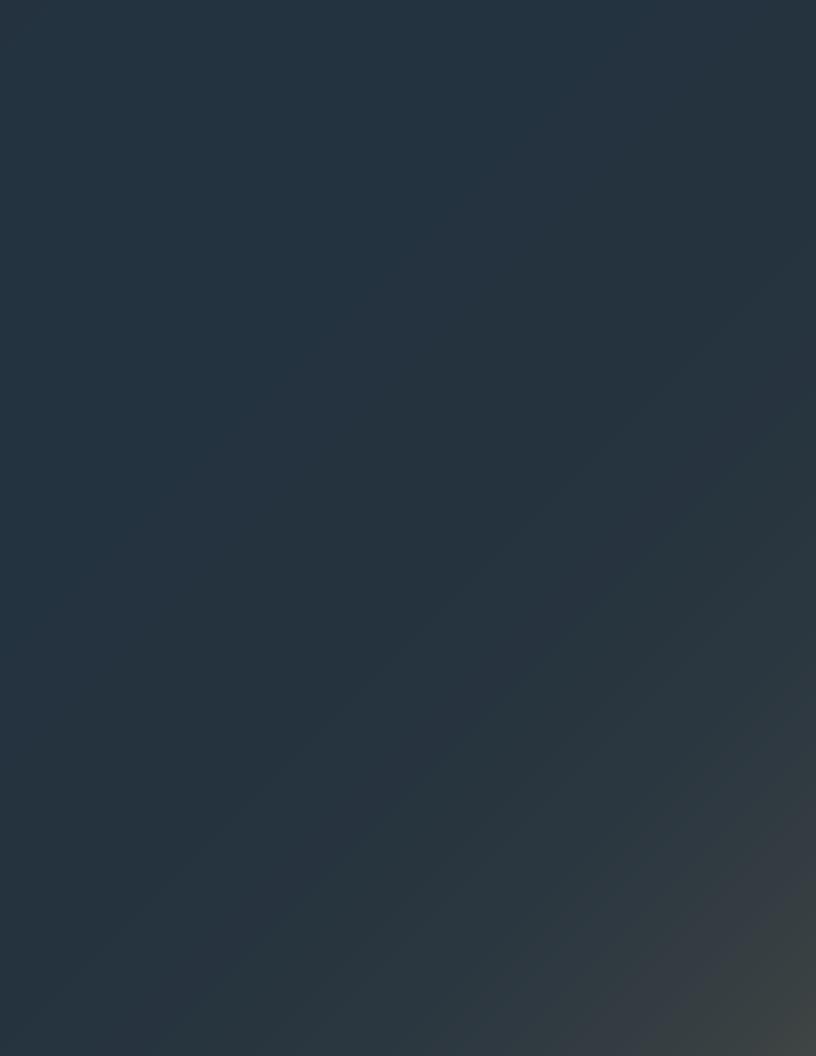
Average Fees and Expenses

- Average underwriting fees*
- Average total IPO expenses



Average Fees and Expenses

- Average legal fees
- Average accounting fees
- Average printing fees



Financial Services

Financial Services

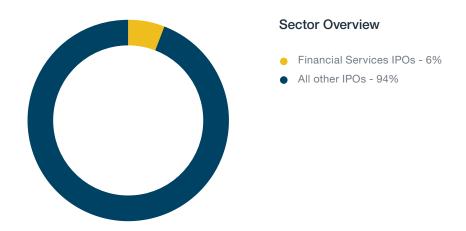
Market Overview

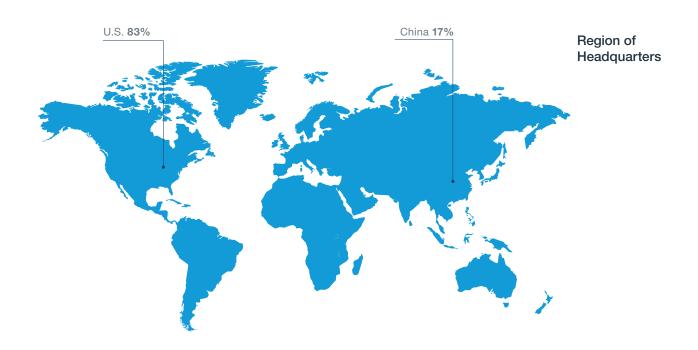


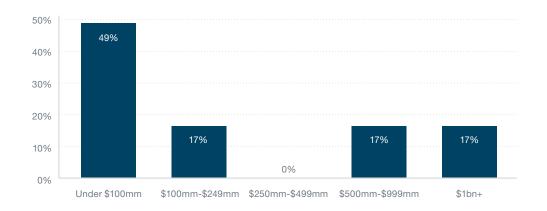
of overall market



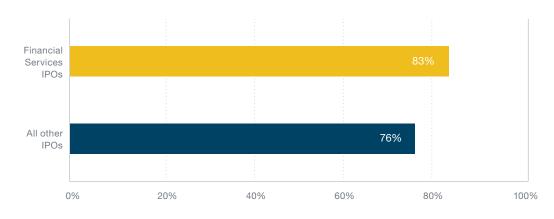
of the financial services issuers in our study were commercial savings banks.











Over-Allotment Option Exercised

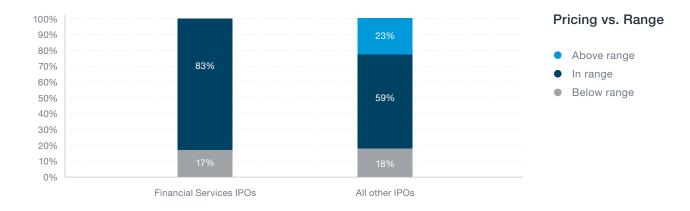


Market Cap at Pricing

- Small-cap (<\$350mm) 33%
- Mid-cap (\$350mm-\$1bn) 34%
- Large-cap (\$1bn+) 33%

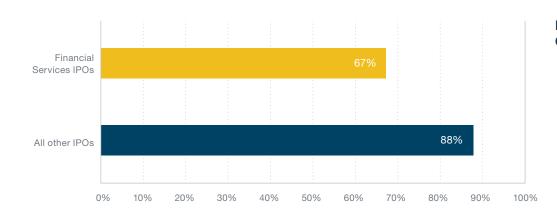
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Market Performance





Emerging Growth Companies (EGCs)



Emerging Growth Companies (EGCs)



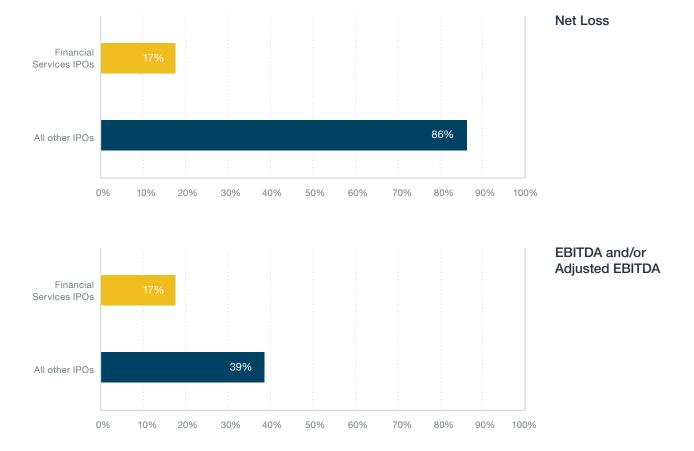


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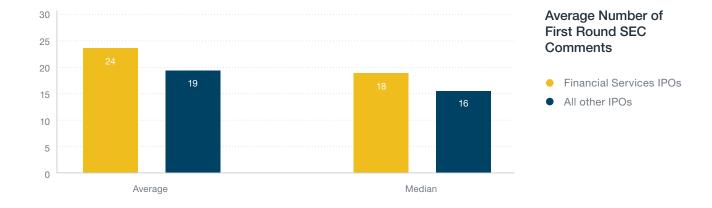
Accounting/Internal Controls and Flash Results

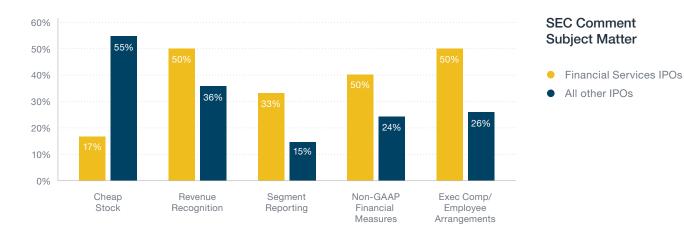


Financial Information: Net Loss and EBITDA and/or Adjusted EBITDA



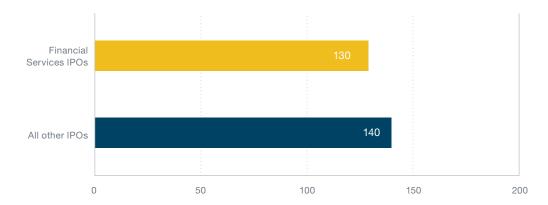
SEC Comments



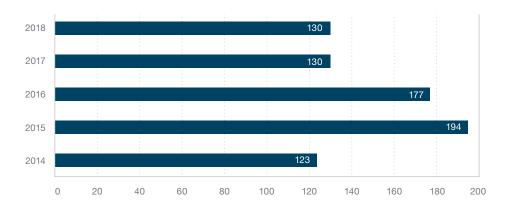


Excludes prior SEC-reviewed issuers.

Timing



Average Number of Days From First Submission/Filing to Pricing



Financial Services Five-year Trend -Average Number of Days from First Submission/Filing to Pricing

Excludes prior SEC-reviewed issuers.

Corporate Governance

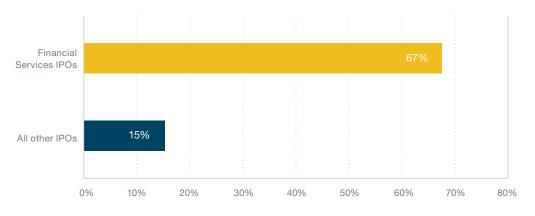


Excludes FPIs (subject to home jurisdiction governance rules).

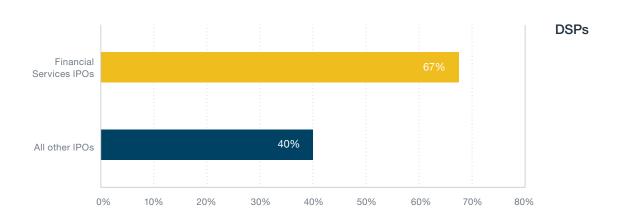
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Secondary Component and Directed Share Programs (DSPs)



Secondary Component

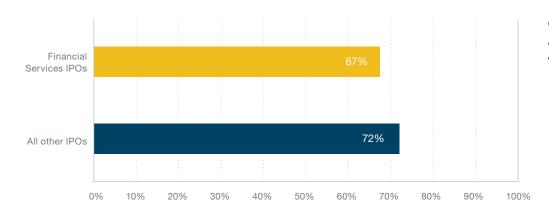


Lock-ups and Carve-outs



Lock-up Release

- Lead left bookrunner only 17%
- Multiple bookrunners 83%



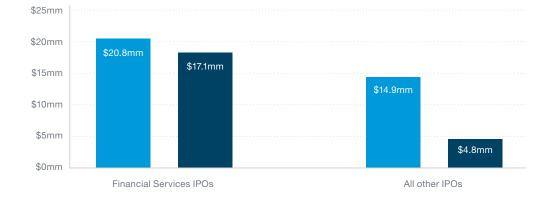
Carve-out for Acquisitions/
Joint Ventures



Company Lock-up/ Carve-out by Cap

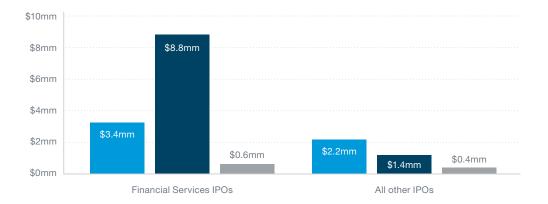
- 5% carve-out 25%
- 10% carve-out 25%
- Uncapped 50%

Fees and Expenses



Average Fees and Expenses

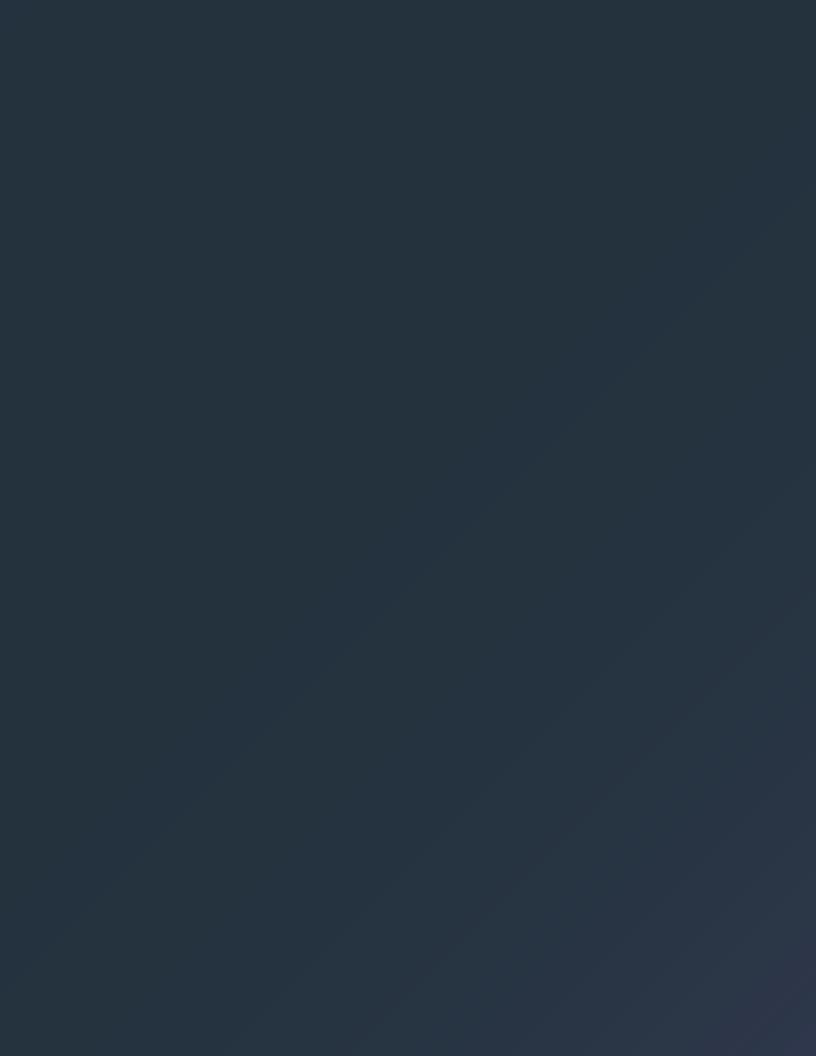
- Average underwriting fees*
- Average total IPO expenses



Average Fees and Expenses

- Average legal fees
- Average accounting fees
- Average printing fees

[&]quot;Underwriting fees are the percentage of the IPO base deal that is paid as compensation to the underwriters in the form of a discount or commission.



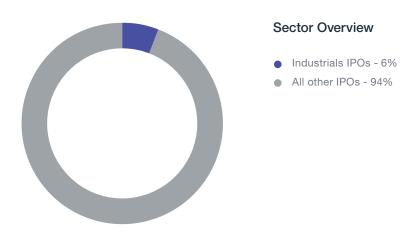
Industrials

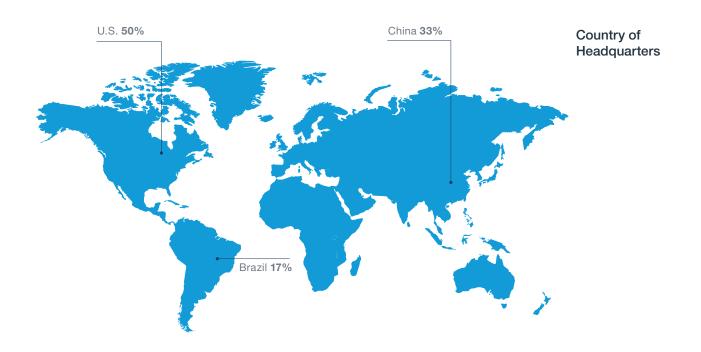
Industrials Market Overview

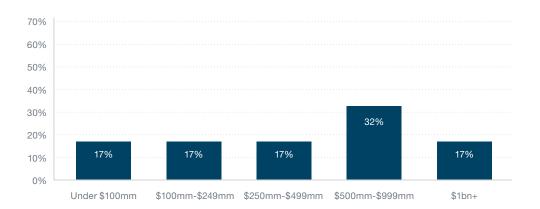
Industrials IPOs

6%
of overall market

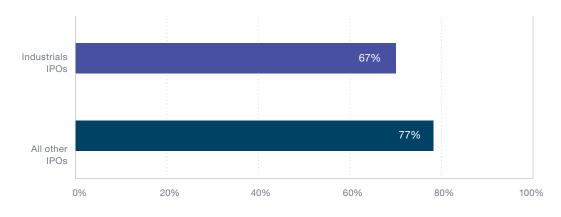








Deal Size*



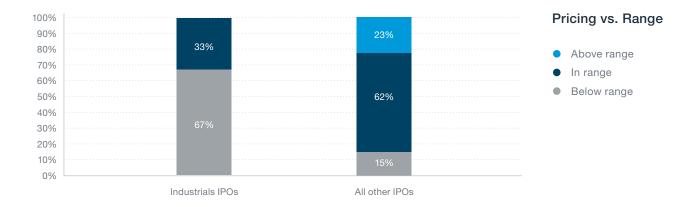
Over-Allotment Option Exercised

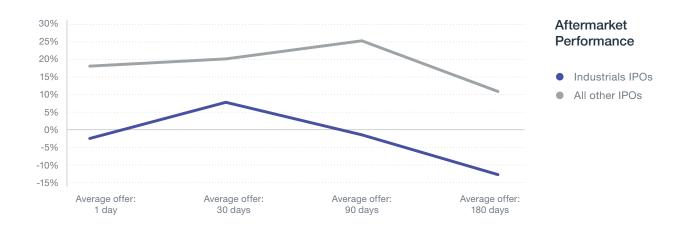
Market Cap at Pricing

- Mid-cap (\$350mm-\$1bn) 33%
- Large-cap (\$1bn+) 67%

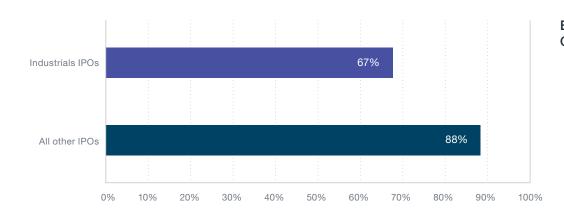
^{*}Deal size consists of priced amount in base offering and excludes any exercise of over-allotment option.

Market Performance

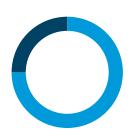




Emerging Growth Companies (EGCs)



Emerging Growth Companies (EGCs)



Years of Audited Financial Statements*

- 2 Years 75%
- 3 Years 25%



Years of Selected Financial Statements

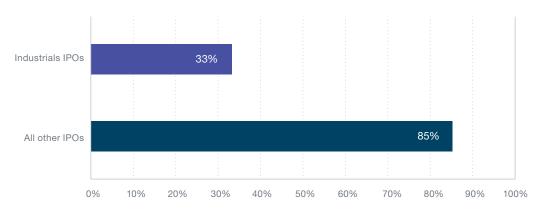
- 2 Years 50%
- 3 Years 25%
- 5 Years 25%

*Non-EGCs are excluded

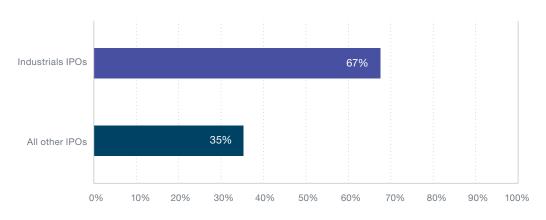
Accounting/Internal Controls and Flash Results



Financial Information: Net Loss and EBITDA and/or Adjusted EBITDA

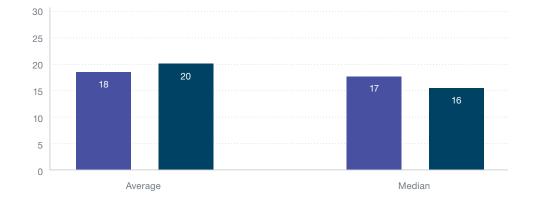


Net Loss



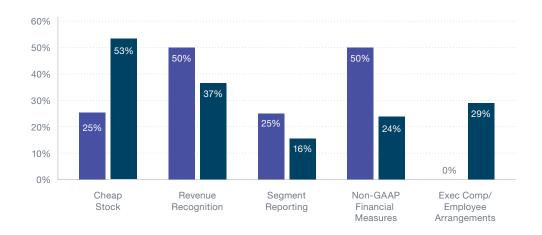
EBITDA and/or Adjusted EBITDA

SEC Comments



Average Number of First Round SEC Comments

- Industrials IPOs
- All other IPOs

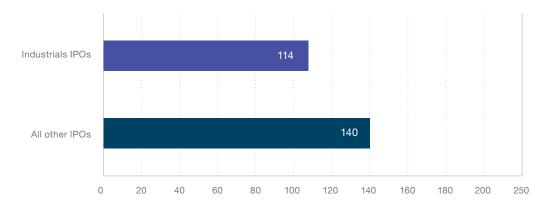


SEC Comment Subject Matter

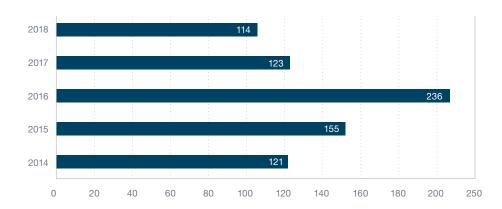
- Industrials IPOs
- All other IPOs

Excludes prior SEC-reviewed issuers.

Timing



Average Number of Days From First Submission/Filing to Pricing

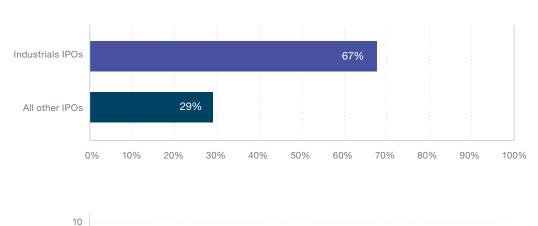


Industrials
Five-year Trend Average Number
of Days from First
Submission/Filing
to Pricing

Excludes prior SEC-reviewed issuers.

Corporate Governance

Industrials IPOs

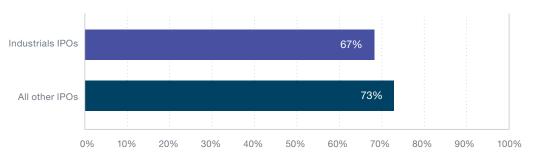




Controlled Company

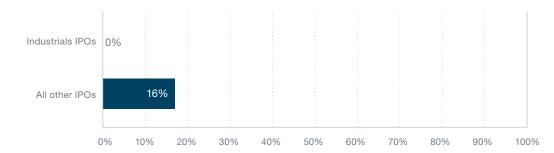
Exemption*

- Average number of directors
- Average number of independent directors



All other IPOs

Separation of Chair and CEO Roles**



Multiple Classes of Common Stock

8

6

4

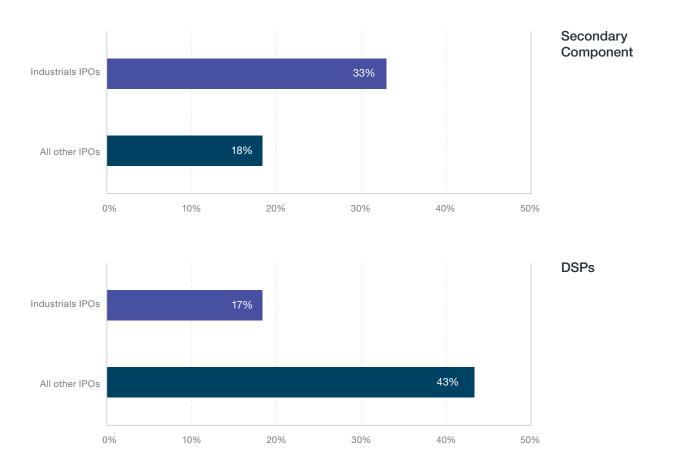
2

Excludes FPIs (subject to home jurisdiction governance rules).

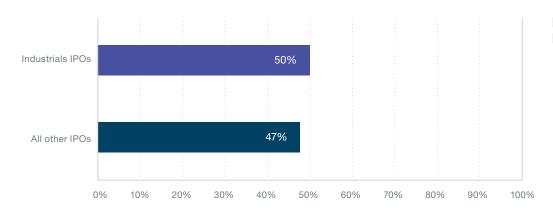
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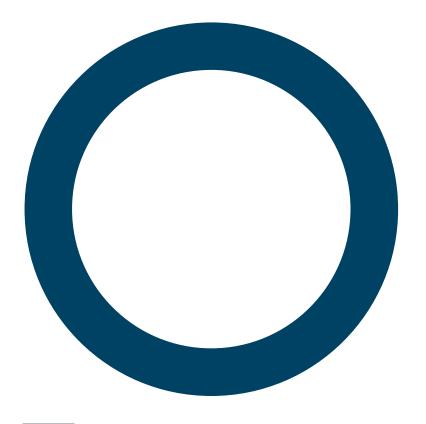
Secondary Component and Directed Share Programs (DSPs)



Deal Structure: Insiders Purchasing in IPO



IPOs with Insiders Purchasing



Percentage of IPO Purchased by Industrials Insiders

• Less than 5% purchased - 100%

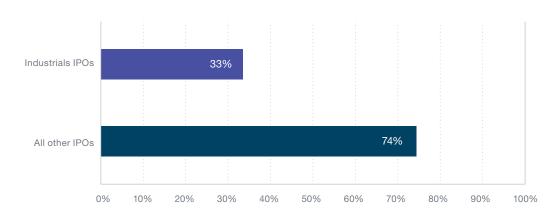
Excludes purchases through a DSP.

Lock-ups and Carve-outs



Lock-up Release

- Lead left bookrunner only 0%
- Multiple bookrunners 100%



Carve-out for Acquisitions/
Joint Ventures



Company Lock-up/ Carve-out by Cap

• 5% carve-out - 100%

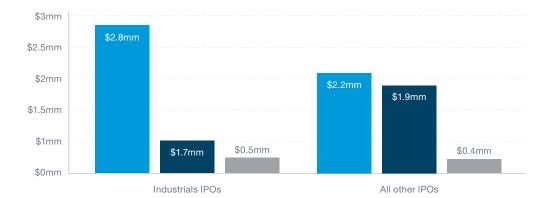
Fees and Expenses



*Underwriting fees are the percentage of the IPO base deal that is paid as compensation to the underwriters in the form of a discount or commission.

Average Fees and Expenses

- Average underwriting fees*
- Average total IPO expenses



Average Fees and Expenses

- Average legal fees
- Average accounting fees
- Average printing fees

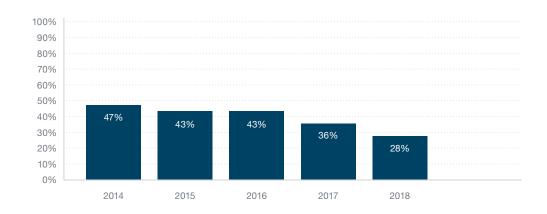
Appendix A -Sponsor-Backed IPOs

Sponsor-Backed Overview: Sector Analysis

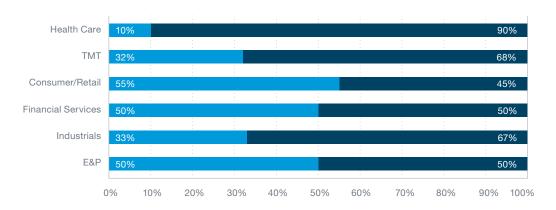


Sponsor-Backed vs Non-Sponsor-Backed IPOs

- Sponsor-Backed IPOs 28%
- Non-Sponsor-Backed IPOs 72%



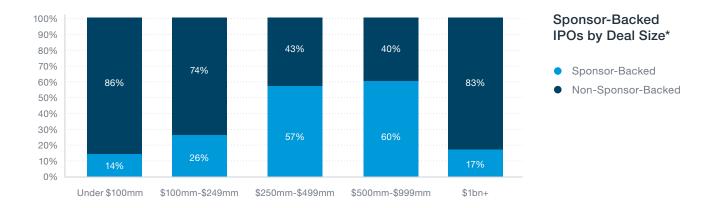
Sponsor-Backed IPOs Five-year Trend

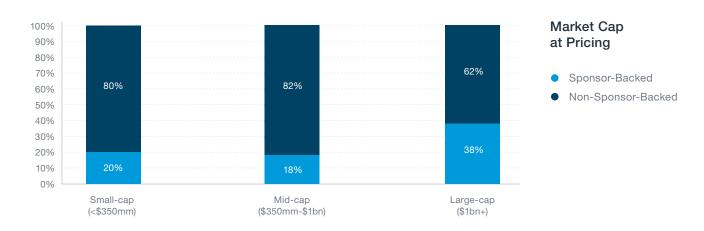


Sponsor-Backed IPOs by Sector

- Sponsor-Backed
- Non-Sponsor-Backed

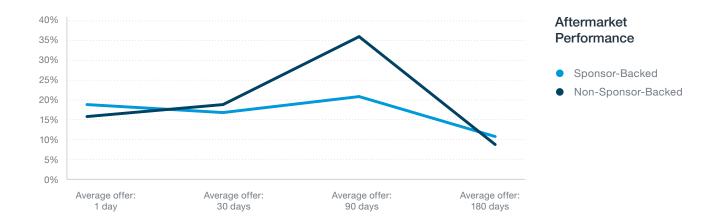
Sponsor-Backed Overview: Deal Size & Market Capitalization

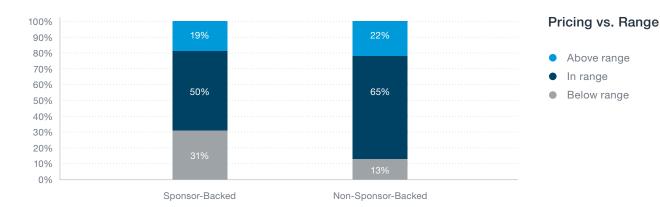


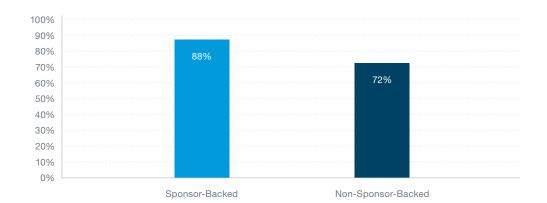


 $^{^*}$ Deal size consists of priced amount in base offering and excludes any exercise of over-allotment option.

Deal Execution

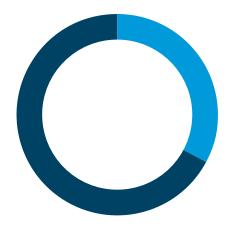






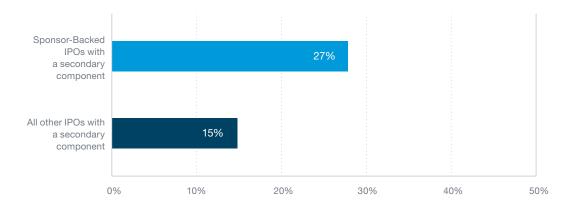
Exercise of Over-Allotment Option

Secondary Sales



Sponsor-Backed IPOs with a Secondary Component

- Sponsor-Backed IPOs without a secondary component 27%
- Sponsor-Backed IPOs with a secondary component without management selling - 73%

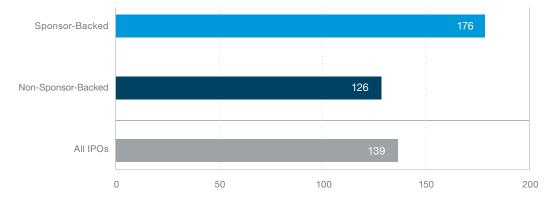


Secondary Component to IPOs

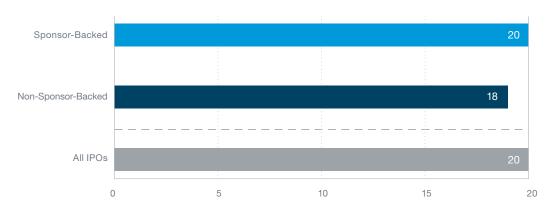
Sponsor-Backed IPOs with a Secondary Component and Management Selling

- Sponsor-Backed IPOs without a secondary component 43%
- Sponsor-Backed IPOs with a secondary component without management selling - 57%

Time to IPO and SEC Comments



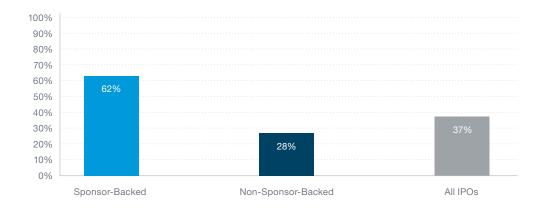
Average Number of Days From First Submission/Filing to Pricing*



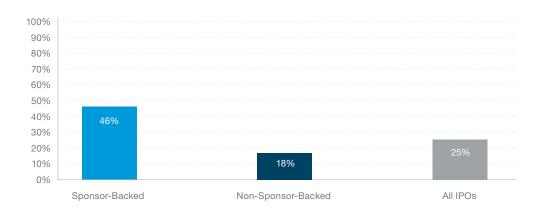
Average Number of First Round SEC Comments*

^{*}Excludes prior SEC-reviewed issuers.

Non-GAAP Financial Measures



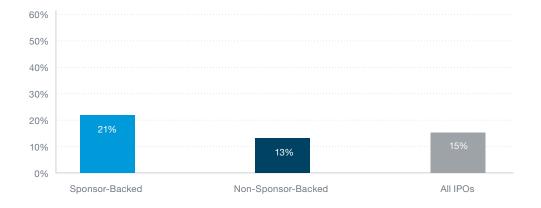
EBITDA and/or Adjusted EBITDA Disclosure



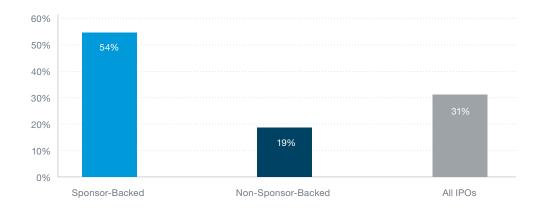
SEC Comments: Non-GAAP Financial Measures Comments

Excludes prior SEC-reviewed issuers.

Corporate Governance



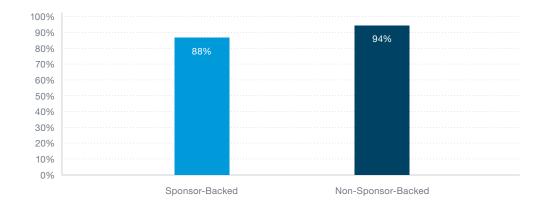
IPOs with Multiple Classes of Common Stock



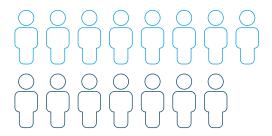
Issuers Eligible to Elect Controlled Company Exemption

Excludes FPIs (subject to home jurisdiction governance rules).

Board Structure

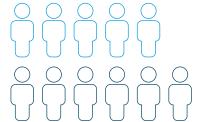


IPOs with Classifed Boards



Average Number of Directors

- Sponsor-Backed 8
- Non-Sponsor-Backed 7

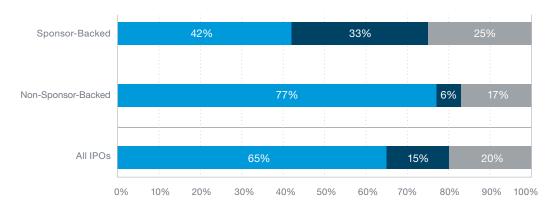


Average Number of Independent Directors

- Sponsor-Backed 5
- Non-Sponsor-Backed 6

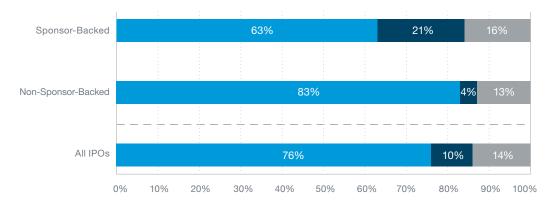
Excludes FPIs (subject to home jurisdiction governance rules).

Anti-Takeover



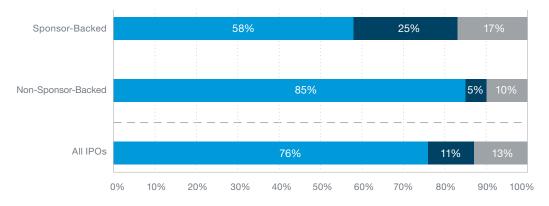
Restrictions on Stockholder Action by Written Consent

- Yes
- Subject to trigger
- No



Restriction on Stockholder Ability to Call Special Meetings

- Yes
- Subject to trigger
- No

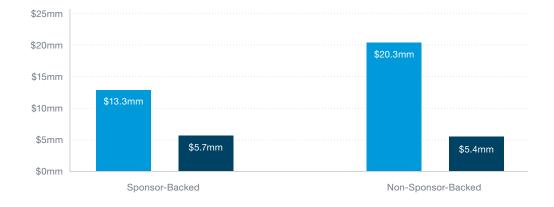


Supermajority Voting Requirements

- Yes
- Subject to trigger
- No

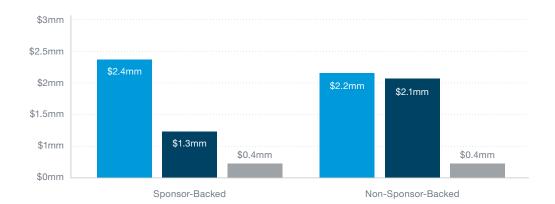
Excludes FPIs (subject to home jurisdiction governance rules).

Fees and Expenses



Average Fees and Expenses

- Average underwriting fees*
- Average total IPO expenses



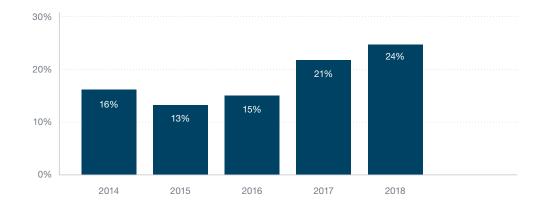
Average Fees and Expenses

- Average legal fees
- Average accounting fees
- Average printing fees

[&]quot;Underwriting fees are the percentage of the IPO base deal that is paid as compensation to the underwriter in the form of a discount or commission.

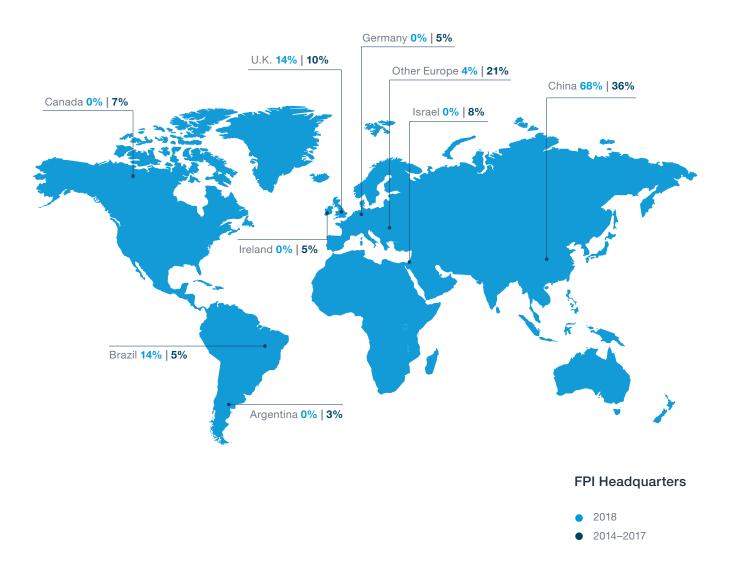
Appendix B -Foreign Private Issuers

Market Overview: Foreign Private Issuers



Foreign Private Issuers IPOs

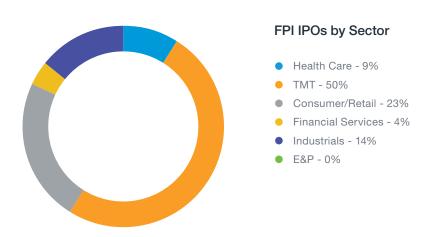
FPI Headquarters

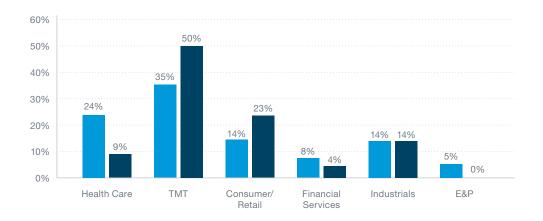


Sector Analysis

There was a greater percentage of TMT and Consumer/Retail IPOs among FPIs as compared to the overall market.

There was a lower percentage of Health Care IPOs among FPIs as compared to the overall market.

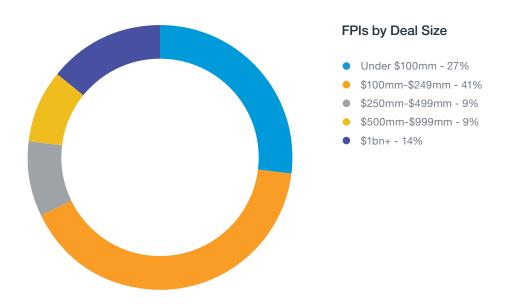


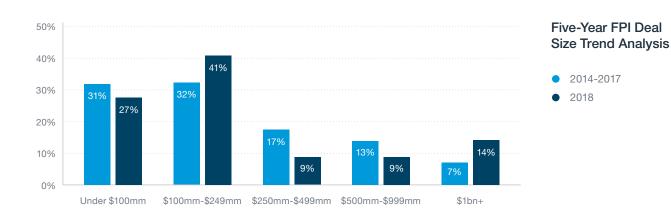


Five-Year FPI Sector Trend Analysis

- 0 2014-2017
- 2018

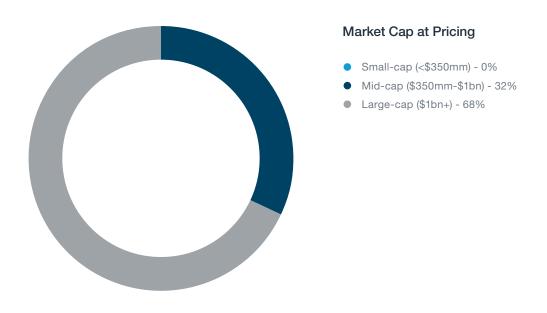
Deal Size

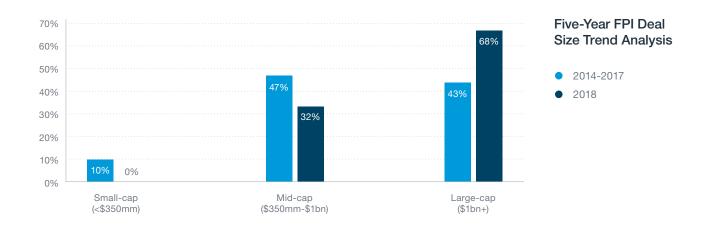




Deal size consists of priced amount in base offering and excludes any exercise of over-allotment option.

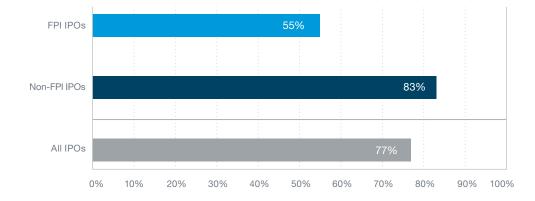
Market Capitalization at Pricing





Deal Execution

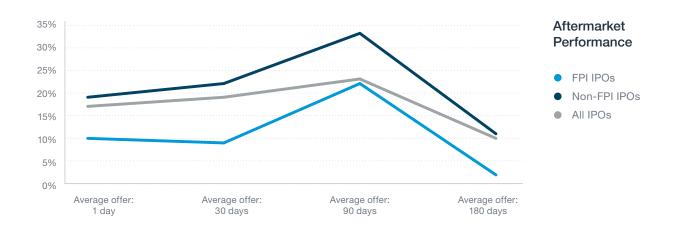
The over-allotment option was exercised in a lower percentage of FPI IPOs than in the overall market.



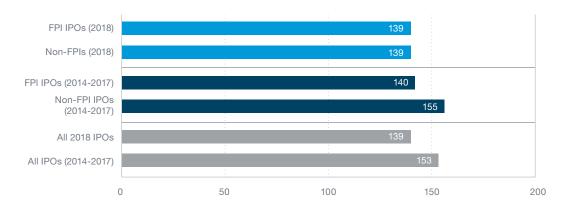
Exercise of Over-Allotment Option

Pricing and Aftermarket Performance





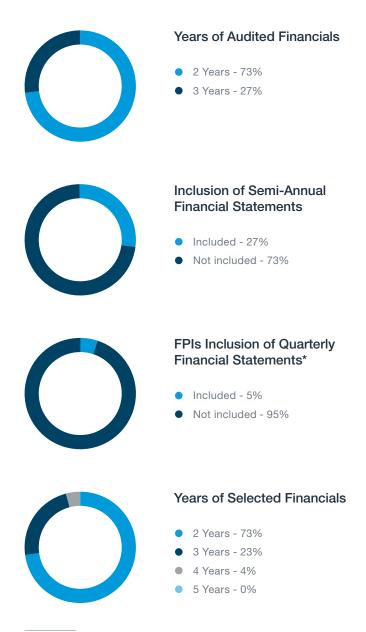
Time to IPO



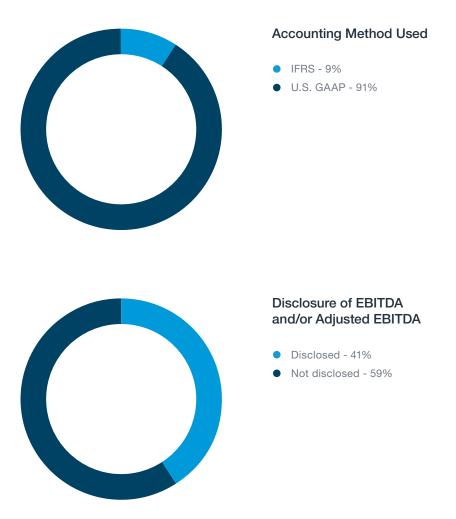
Average Submission/Filing to Pricing Time*

Excludes prior SEC-reviewed issuers and an additional two issuers in 2014, one in 2015, two in 2016, and nine in 2017 with time from first submission/filing to pricing of greater than 18 months.

Financial Information: Financial Statements



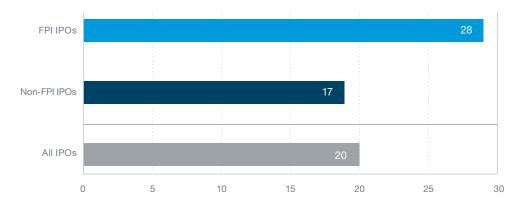
^{*}FPIs are not required to include quarterly financial statements.



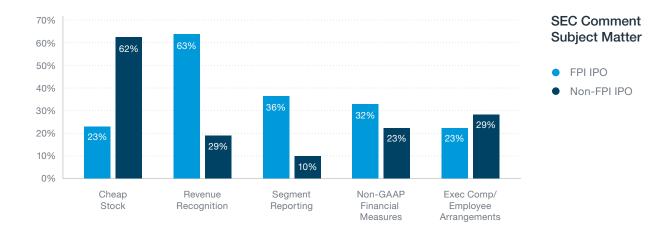
FPIs are permitted to include financial statements prepared in accordance with IFRS.

SEC Comments

FPIs received, on average, more comments from the SEC than non-FPIs.

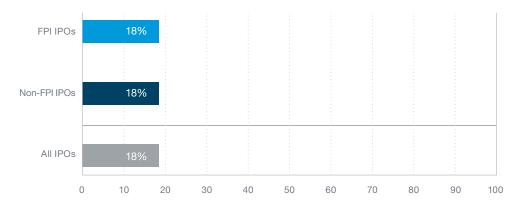


Average Number of First Round SEC Comments

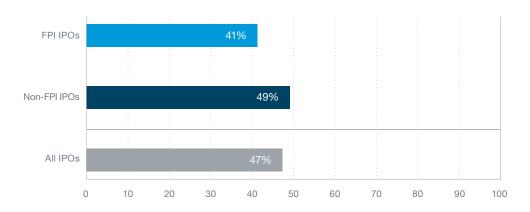


Excludes three prior SEC-reviewed issuers.

Secondary Component and Insiders Purchasing



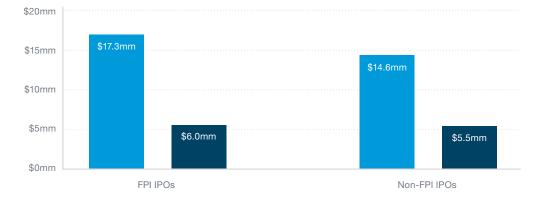
IPOs with a Secondary Component



IPOs with Insiders Purchasing*

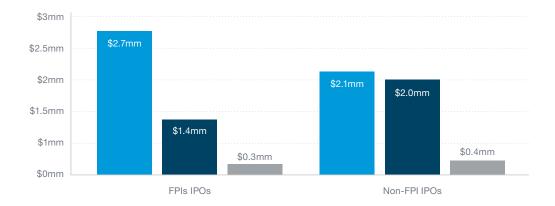
^{*}Does not include purchases through a DSP.

Fees and Expenses



Average Fees and Expenses

- Average underwriting fees*
- Average total IPO expenses



Average Fees and Expenses

- Average legal fees
- Average accounting fees
- Average printing fees

[&]quot;Underwriting fees are the percentage of the IPO base deal that is paid as compensation to the underwriters in the form of a discount or commission.

