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Appendix - Foreign Private Issuers A1

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Executive Summary

Welcome to this fifth edition of Proskauer's IPO Study. In it you will find our analysis of market practices and trends for U.S.-listed initial public offerings (IPOs). Our proprietary database and analyses now cover 462 IPOs that priced between 2013 and 2017.

The 2017 IPO Market

Increase in base deal size

Reversing a two-year trend, we saw an increase in the average and median base deal size. In 2017, the average base deal size was \$285 million and the median base deal size was \$141 million, compared to \$214 million and \$116 million in 2016, respectively. Driving these increases was a decrease in the percentage of smaller deals (between \$50 million and \$100 million in base deal size) relative to the overall IPO market in 2017 as compared to 2016. While there was a decrease in the number and percentage of mega deals (deals over \$1 billion base deal size), there was an increase in the number and percentage of deals within the \$250 million and \$1 billion range.

Geographic Trends

On a global level, 2017 was the most active year for IPOs by Chinese issuers since 2014. Eight percent of IPOs in our study were from China, which is the highest percentage in the last five years. Chinese issuers were most common in the Technology, Media and Telecommunications (TMT) and consumer/retail sectors. In addition, we saw a number of IPOs from Brazil in 2017. These are the first Brazilian IPOs in the last five years. Domestically, issuers headquartered in California, Massachusetts, Texas and New York comprised over half of the IPOs in our study. Issuers from California and Massachusetts were most common in the health care and TMT sectors, issuers from Texas were most common in the E&P and financial services sectors, and issuers from New York were most common in the TMT and financial services sectors.

Continued increase in market acceptance of less financial information

Over the last five years, we have observed greater market acceptance of less financial information from emerging growth companies (EGCs). In 2017, five years after the passage of the JOBS Act, 70% of EGCs included two rather than three years of audited financial statements (a 32% increase since

2013) and 56% of EGCs included only two years of selected financial statements (a 21% increase since 2013). Only 4% of EGCs included five years of selected financial statements in 2017, compared to 29% in 2013. In addition, pursuant to the FAST Act, which became effective in late 2015, EGCs are permitted to omit audited financial statements in initial submissions for prior year(s) that would not be required in the prospectus at pricing. We observed that 12% of EGCs included one year of audited financial statements in their initial draft registration statement, up from six percent in 2016. In August 2017, the SEC provided updated guidance on this relief and significantly clarified and expanded its meaning and scope. One change resulting from the updated guidance is that now non-EGCs may benefit from not having to include certain financial statements in draft registration statements. We expect that (due, in part, to the updated guidance) more issuers will begin to take greater advantage of this accommodation in 2018.

Shortened time to pricing ...

Outside of 2014, IPOs in 2017 had the fastest time from the first confidential submission or filing with the SEC to pricing; the average number of days to pricing was 135 and the median was 103. This is down significantly from 2016, during which period the average time that it took issuers from first submission/filing to pricing was 220 days. On average, IPO issuers that made a confidential submission publicly filed 105 days after their first confidential submission and priced 33 days after their first public filing.

... and decrease in SEC comments

We observed a decrease in the average and median number of SEC comments in the first comment letter. Since 2014, there has been a 41% decrease in the average number of first-round comments and 37% decrease in the median number of comments. While part of the decrease can be attributed to issuers receiving fewer boilerplate comments relating to general process requirements, these make up a relatively small number of the comments received by issuers. The average number of comment letters received by an issuer during the SEC review process was four. The average number of comments in the first, second and third comment letters were 23, eight and four, respectively.

SEC hot button comments driven by sector

Certain types of comments have become SEC staff hot buttons for different sectors. For example, from 2014 to 2017, 71% of health care issuers received a cheap stock comment, 72% of TMT issuers received a revenue recognition comment, 47% of industrials issuers received an operating segment comment, and, from 2014 to 2017, 72% and 68% of TMT and E&P issuers, respectively, received a comment requesting back-up support. In the health care sector, cheap stock comments are likely more common given the significant use of equity as a compensation tool and the continuous fundraising activity in which biotech/biopharmaceutical issuers are engaged. In the TMT sector, revenue recognition comments reflect the complex accounting issues raised by contractual arrangements typical for TMT issuers. Further, we suspect that industrials and consumer issuers are more likely to receive operating segment comments given the potential for these issuers to have multiple discrete business and geographic units.

Multiple class stock structures remain prevalent

There was a significant increase in IPOs by issuers with multiple class capital stock structures. Approximately 30% of issuers went public with multiple classes of common stock in 2017 as compared to 18% of issuers in 2016. Almost 68% of these issuers provided for unequal voting rights among classes. The TMT sector has been home to the greatest number of issuers going public with multiple classes of common stock, both in absolute numbers and as a percentage of an overall sector. Two TMT issuers in our study (Snap and Blue Apron) provided for non-voting shares of common stock in their capital stock structure.

Increase in going-concern issuers, but decrease in issuers with a material weakness

The percentage of issuers with a going-concern qualification increased from 7% in 2014 to 13% in 2017, compared to a high of 18% in 2015. Interestingly, in both 2016 and 2017, issuers with a going-concern qualification were more likely than issuers without the qualification to price in or above the range. After observing a significant increase in the percentage of issuers disclosing a material weakness in their internal control over financial reporting from 2014 to 2016, we found that the percentage of such issuers declined from 37% in 2016 to 34% in 2017. As in prior years, we did not observe any discernable negative impact on pricing related to the disclosure of a material weakness in internal controls.

Private placements in lead-up to IPO

We observed that 23% of issuers privately placed equity securities within the twelve months prior to the first submission/filing of their IPO registration statement in 2017. Of these issuers, more than half conducted a private placement within the six months prior to the first submission/filing. Approximately a third of the issuers privately placing securities were from the health care sector and all earlier-stage biotechnology or biopharmaceutical companies.

Year-over-year decrease in insider purchasing

From 2014 to 2017, we saw an increase in insider purchasing in IPOs from 24% in 2014 to 33% in 2017. Both the percentage of IPOs with insider purchasing and the average portion of the overall deal purchased by insiders peaked in 2016 at 42% and 34%, respectively. In 2017, however, there was a slight reversal in the trend with 33% of IPOs including one or more insiders purchasing and, on average, 22% of shares sold in these IPOs being purchased by insiders. Insider purchasing was most prevalent in the health care sector. Over the past four years, 67% of health care deals included insider purchasing, peaking at 81% of health care IPOs in 2017. This compares to 16% over the last four years and 17% in 2017, respectively, for non-health care issuers.

Decrease in sponsor-backed deals

From 2014 to 2016, sponsor-backed IPOs represented around 45% of the total IPO market. In 2017, there was a decline in the percentage of sponsor-backed IPOs to a little more than a third of the IPO market. We noted that sponsor-backed IPOs continue to represent the majority of issuers in the industrials and consumer/retail sectors. Sponsor-backed IPOs also continue to represent the majority of non-EGC issuers. In 2017 we observed a continuing trend in the decreasing number and percentage of sponsor-backed IPOs in which a management or termination fee was paid to the sponsor. In 2017, six percent of sponsor-backed IPOs included this feature compared to 14% in 2016 and 32% in 2014.

Consistent percentage of secondary IPOs in market with increase in secondary IPOs with sales by management

In 2017, approximately 26% of IPOs included a secondary component. This percentage has been relatively consistent since 2014 and in line with the four-year average of 24%. IPOs with secondary

Executive Summary

components were most prevalent in the financial services and consumer/retail sectors and far less prevalent in the health care sector. In addition, in each year since 2014, sponsor-backed IPOs were twice as likely to include a secondary component as compared to non-sponsor backed IPOs. We also noted that there was a significant decrease in the percentage of IPOs with a secondary component that included sales by an issuer's management team from 36% in 2014 to 25% in 2016. In 2017, however, that percentage bounced back to 36% of IPOs. We found that in 2017, IPOs with a secondary component (including those IPOs that included sales by management) were more likely to price either in or above the range than IPOs without a secondary component.

2018 IPO Market ...

The U.S. IPO market is off to a strong start in 2018, with volumes and proceeds up year-over-year. During the first quarter of 2018, three IPOs priced with base deals over \$1 billion which is greater than all of 2017 in the aggregate. In spite of continued volatility in the capital markets, potentially rising interest rates and global geopolitical uncertainties and tensions, the U.S. IPO market is more active than in years past. We've also seen a number of global offerings listing in the United States, including 29% of offerings and 49% of base deal value from non-U.S. companies. TMT and health care continue their strong showings, but like 2017, other sectors are also well represented in the overall market.

One of the most anticipated IPOs of the year so far was the non-IPO of Spotify in April 2018. Instead of following the traditional IPO process, Spotify opted for a direct listing on the New York Stock Exchange. No shares were sold by Spotify and no underwriters were utilized to facilitate the resale of shares by existing shareholders. In addition, Spotify's direct listing was without many of the typical features of

an IPO, including an overallotment option and lock-up agreements for existing shareholders, and did not even have an IPO price at which shares were expected to begin trading. On Spotify's first day of trading, it took a few hours to set a price at which the shares would begin trading (following the establishment of a reference price of \$132.00 per share the night before) and the stock opened at \$165.90 per share before trading back down to \$149.01 per share. Market participants are still considering what to make of Spotify's direct listing; there are continuing questions about the limited liquidity in Spotify's shares, what will happen if a significant block of shares hits the public markets and whether the direct listing approach is appropriate for other private companies seeking to enter the public markets.

We hope you enjoy the 2018 IPO Study and welcome your feedback. Please feel free to contact any of our lawyers listed inside the front cover.

2017 Overview

Methodology

Population

- » Our proprietary database now includes 462 IPOs that priced from 2013 to 2017.
- » The criteria for our study include:
 - Listing on a U.S. exchange; and
 - Minimum initial base deal of \$50 million in the first preliminary prospectus that included a price range filed with the SEC.
- » The total population that met our criteria in 2017 was 127 IPOs.
- » This study covers 86 IPOs (approximately 70% of the IPOs that met our criteria) that priced in 2017: 68 domestic issuers and 18 foreign private issuers (FPIs). Our population is reflective of the total population based on industry, size and geographic region.
- » Our trend analysis section covers 362 IPOs: 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) and business development companies (BDCs).
- » There is an appendix in our study for FPI IPOs that priced in 2017.

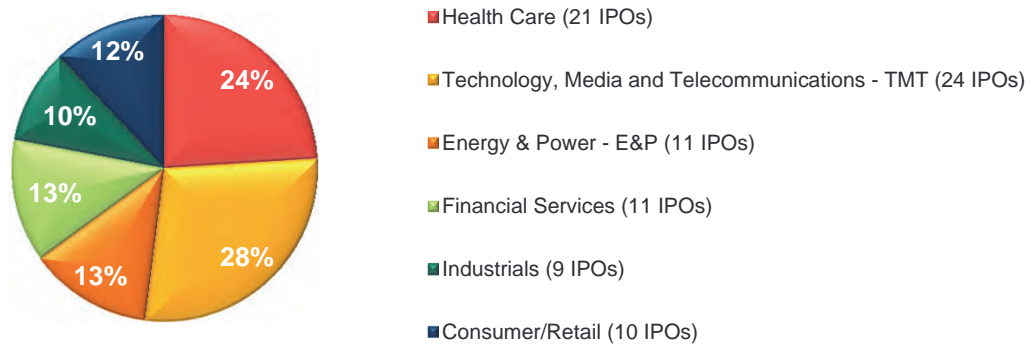
Sources and Analysis

- » 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.
- » Financial information is based on the issuer's most recent audited fiscal year as disclosed in the final prospectus.
- » Market, sector, financial sponsor (including buy-in date) and performance information is sourced from Dealogic.
- » The term "average offer" means the average percentage change from the IPO price to the closing price on 1 day, 30 days, 90 days or 180 days (excludes deals priced after October 1, 2017) after the initial trade date and includes market data available as of March 30, 2018 (our cut-off date).
- » References to "shares locked up" are presented as a percentage of shares owned prior to the IPO.
- » Analysis of first round SEC comment letters and time to pricing excludes four issuers that received SEC comments on a prior IPO registration statement.
- » Analysis of corporate governance items excludes MLPs and FPIs, given their unique corporate governance structures and available exemptions under stock exchange rules.
- » All data was compiled, reviewed and analyzed by Proskauer capital markets attorneys and corporate finance analysts.

Sector & Geographic Analysis

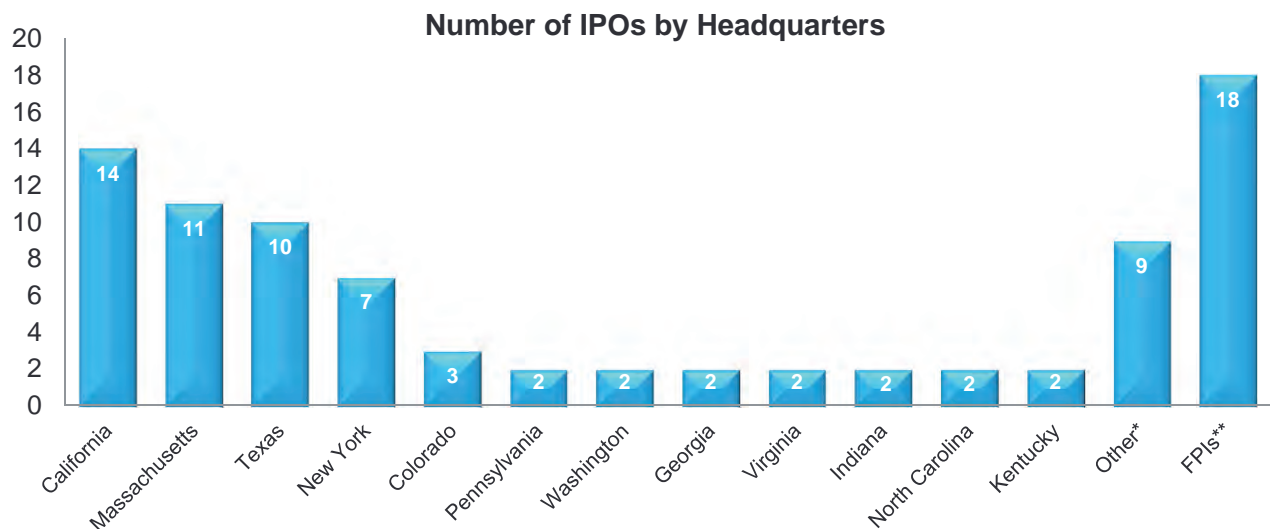
Sectors Represented

- » The number of IPOs included per sector in our study is proportionate to the total number of IPOs per sector for all IPOs in 2017 that met our criteria.



Geographic Distribution

- » We analyzed the geographic distribution of IPOs by surveying the location of issuers' headquarters.
- » Our study included issuers with headquarters in 21 states and nine foreign countries.
- » 47 of 68 (69%) IPOs with headquarters in the United States were incorporated in Delaware.
 - U.S. issuers were incorporated in seven different states.



*Other includes MD, KS, FL, MI, AL, AZ, WI, IL and DE.

**FPIs include issuers with headquarters in China (seven), Brazil (three), Canada (two) and one each from Argentina, Germany, Ireland, Singapore, Switzerland and the United Kingdom.

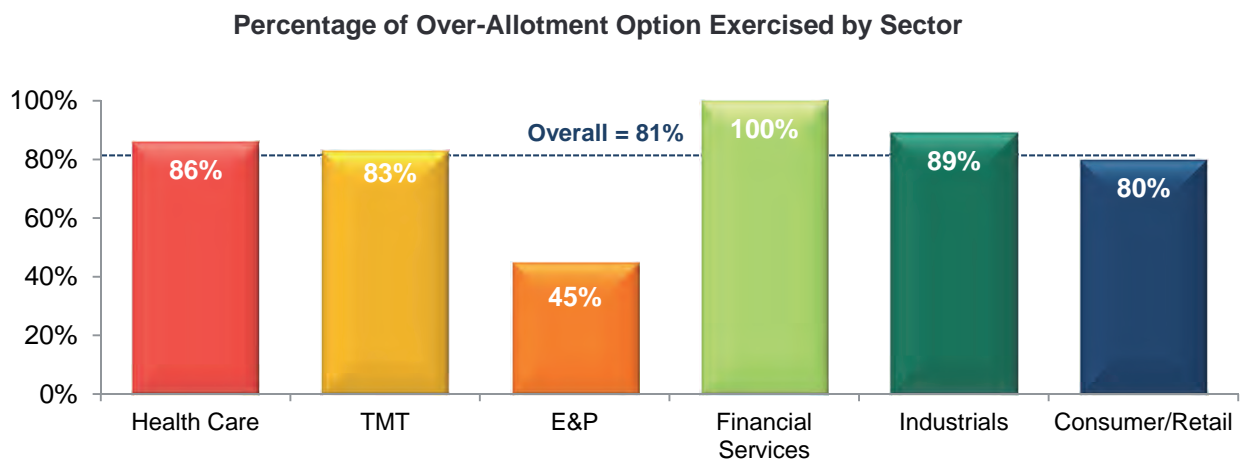
Market Analysis

Deal Execution and Over-Allotment Option

- » Out of 86 IPOs in our study, 15 (18%) priced in Q1, 27 (31%) priced in Q2, 13 (15%) priced in Q3 and 31 (36%) priced in Q4.



- » The over-allotment option was partially or fully exercised in 70 of 86 (81%) of IPOs in our study.

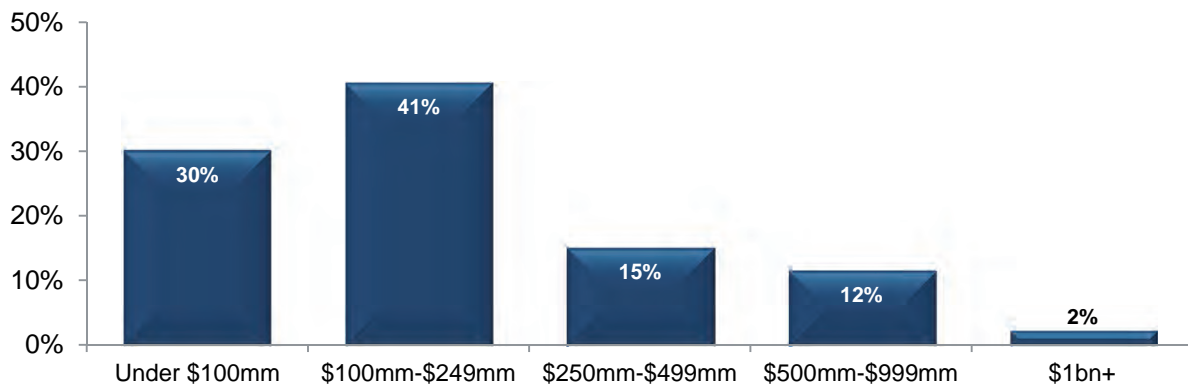


Market Analysis

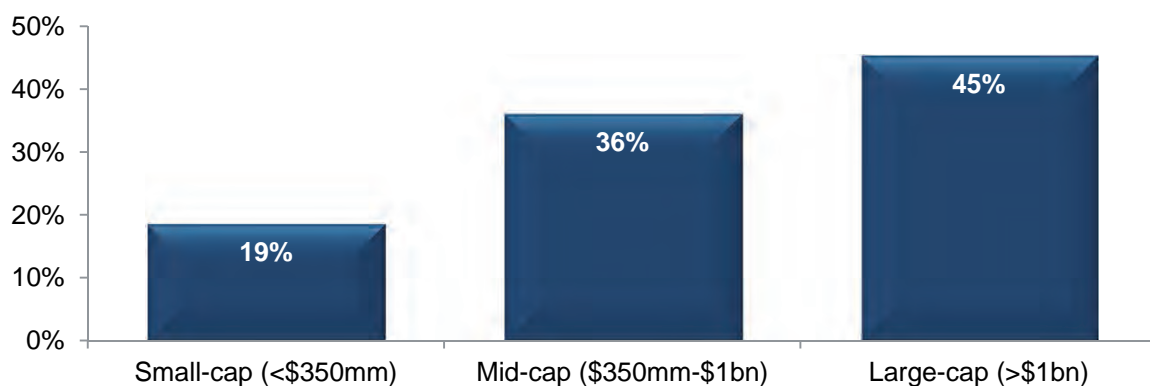
Deal Value*

- » The average deal value was \$285.1 million in 2017, compared to \$214.4 million in 2016 and \$237.6 million in 2015.
- » The median deal value was \$141.4 million in 2017, compared to \$116.3 million in 2016 and \$123.0 million in 2015.
- » There were two IPOs in our study with deal value over \$1 billion in 2017, compared to three in 2016 and two in 2015.
- » The largest deal in 2017 was Snap Inc., with deal value of \$3.4 billion. The second largest was Allice USA Inc., with deal value of \$1.9 billion.

Percentage of IPOs by Deal Value



Percentage of IPOs by Market Cap at Pricing

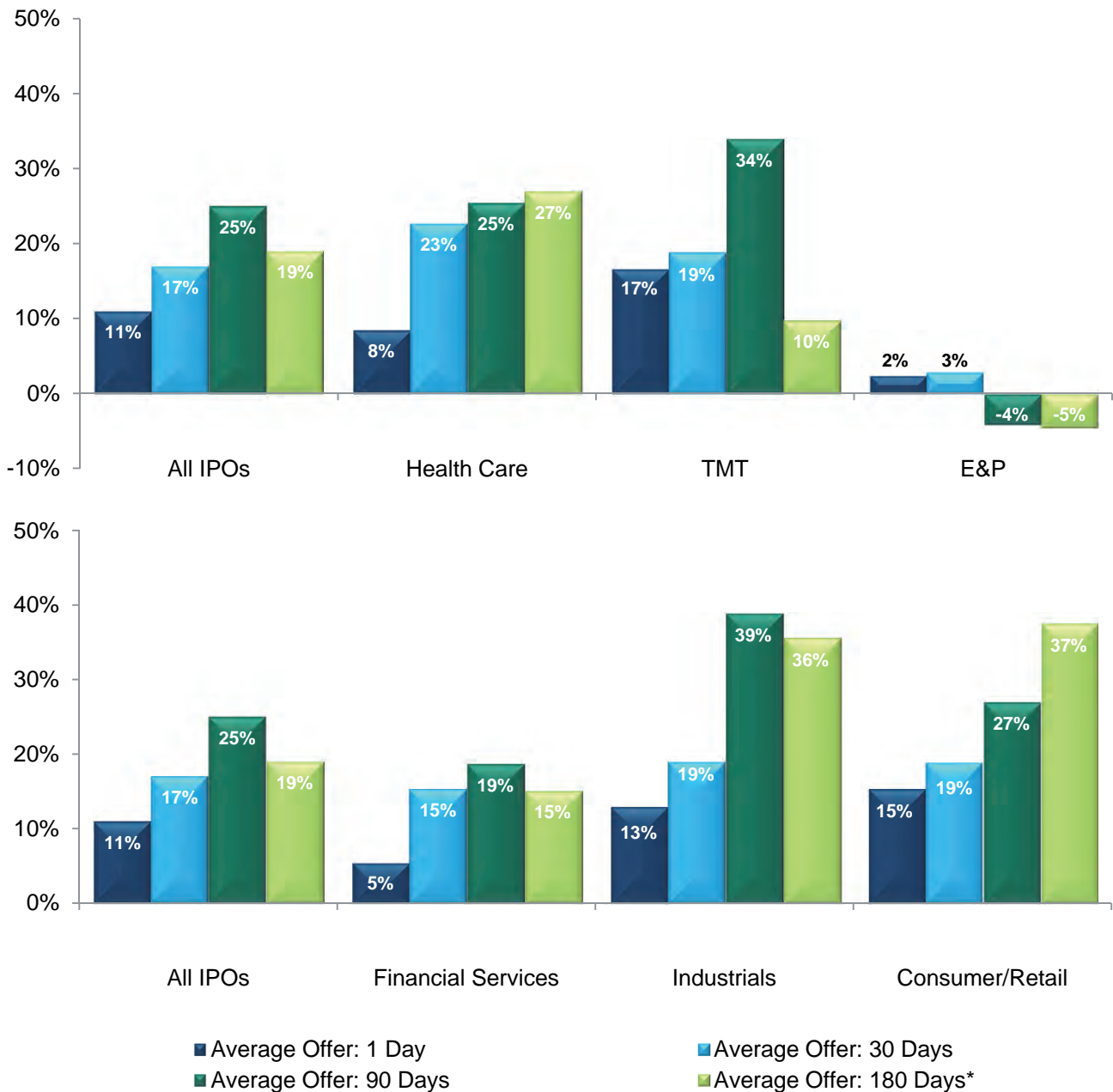


*Deal value consists of priced amount in base offering and excludes any exercise of the over-allotment option.

Market Analysis

Aftermarket Performance

» Overall, the IPOs performed strongly in the aftermarket, with the exception of E&P IPOs, with an average 1-day offer of 11%, an average 30-day offer of 17%, an average 90-day offer of 25% and an average 180-day offer of 19%. E&P IPOs underperformed the overall average at every measurement point.



*Only includes deals priced before October 1, 2017.

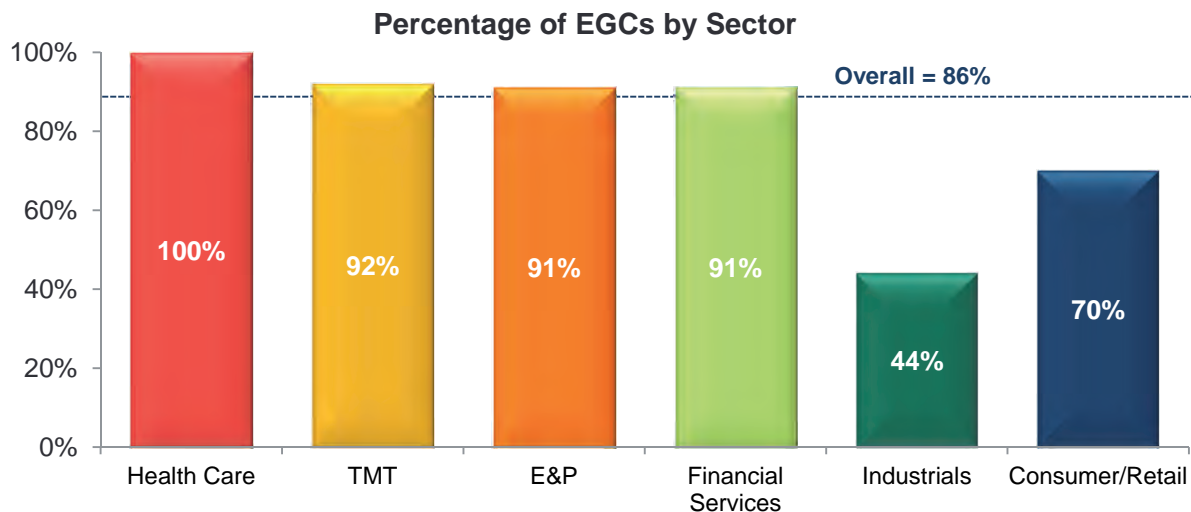
JOBES and FAST Acts: Overview

Emerging Growth Companies (EGCs)

- » The Jumpstart Our Business Startups (JOBS) Act became effective April 5, 2012.
 - The law created a new class of issuers called Emerging Growth Companies (EGCs) and provides flexibility for EGCs pursuing IPOs.
- » EGCs are issuers with less than \$1.07 billion of annual gross revenue during their most recent completed fiscal year.*
- » An issuer that is an EGC at IPO will remain an EGC until the earliest of:
 - The last day of the fiscal year five years after its IPO;
 - The last day of the fiscal year in which it has gross revenues of \$1.07 billion or more;*
 - The date it has issued more than \$1 billion in non-convertible debt during a three-year period; and
 - The date it becomes a "large accelerated filer" (generally an issuer with a public float of at least \$700 million that has been publicly reporting for at least one year).
- » In December 2015, Congress passed the Fixing America's Surface Transportation (FAST) Act, which modified the JOBS Act in certain respects:
 - Public filing of the registration statement required only 15 days before road show launch (down from 21 days under the JOBS Act).
 - Certain EGC benefits (e.g., two years of financial statements) locked in upon initial confidential submission through IPO.
- » In July 2017, the Division of Corporate Finance announced that it would allow non-EGCs to submit IPO registration statements confidentially, an accommodation previously offered only to EGCs under the JOBS Act.

Sector Analysis

- » 74 of 86 (86%) IPO issuers were EGCs.



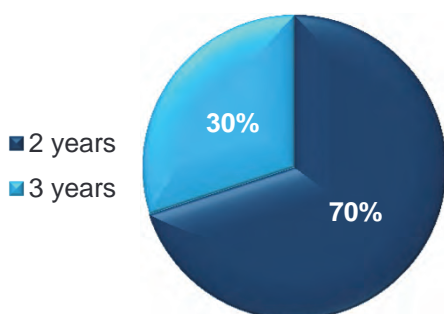
*On March 31, 2017, the SEC adopted amendments to increase the \$1 billion annual gross revenue threshold to \$1.07 billion. The amendments became effective on July 10, 2017. The increase was due to a statutorily required inflation adjustment.

Financial Statements & EGCs/Confidential Submission

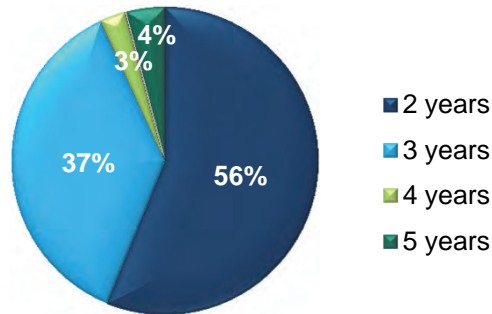
Years of Financial Statements*

- » 51 of 73 (70%) EGCs included two years of audited financial statements.
- » 41 of 73 (56%) EGCs included two years of selected financial data.
- » Three of 73 (4%) EGCs included five years of selected financial data.

Years of Audited Financial Statements

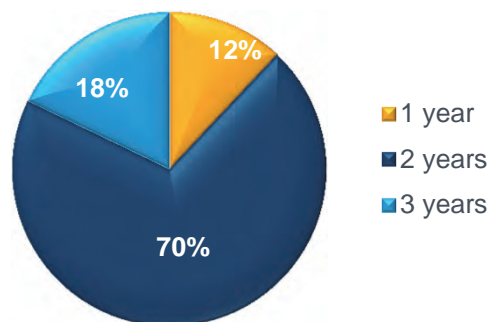


Years of Selected Financial Data



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

- » 9 of 74 (12%) EGCs included one year of audited financial statements in the initial Draft Registration Statement.



Confidential Submission

- » 73 of 74 (99%) EGCs elected to submit confidentially under the JOBS Act.
- » Additionally, two of three (67%) FPIs that were not EGCs submitted confidentially.
- » Two Non-EGCs and non-FPIs were eligible to confidentially submit and both took advantage of this option. Non-EGCs were able to confidentially submit beginning on July 10, 2017.

*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. Non-EGCs are excluded as well as one EGC that provided financial statements since its inception, which period was shorter than two years.

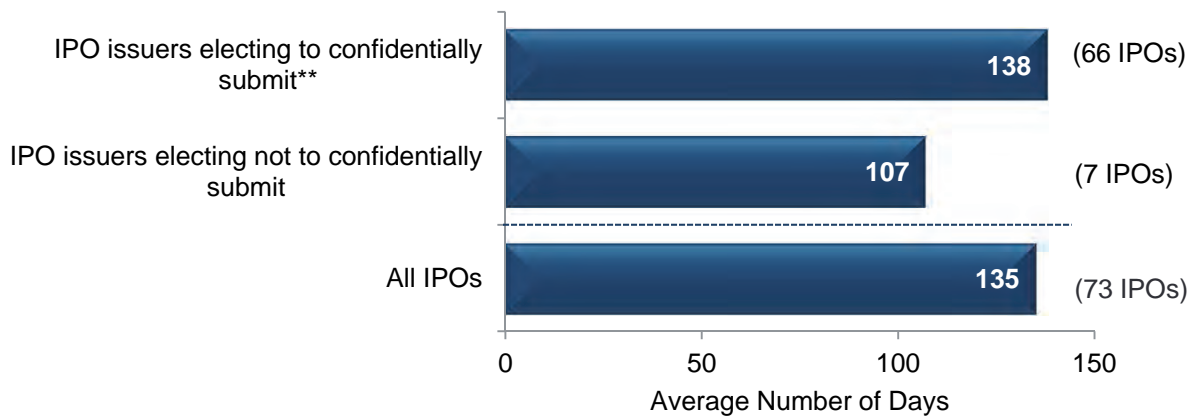
**Pursuant to the FAST Act, issuers are permitted to omit audited financial statements in initial submissions for prior year(s) that would not be required in the prospectus at pricing.

Time to IPO

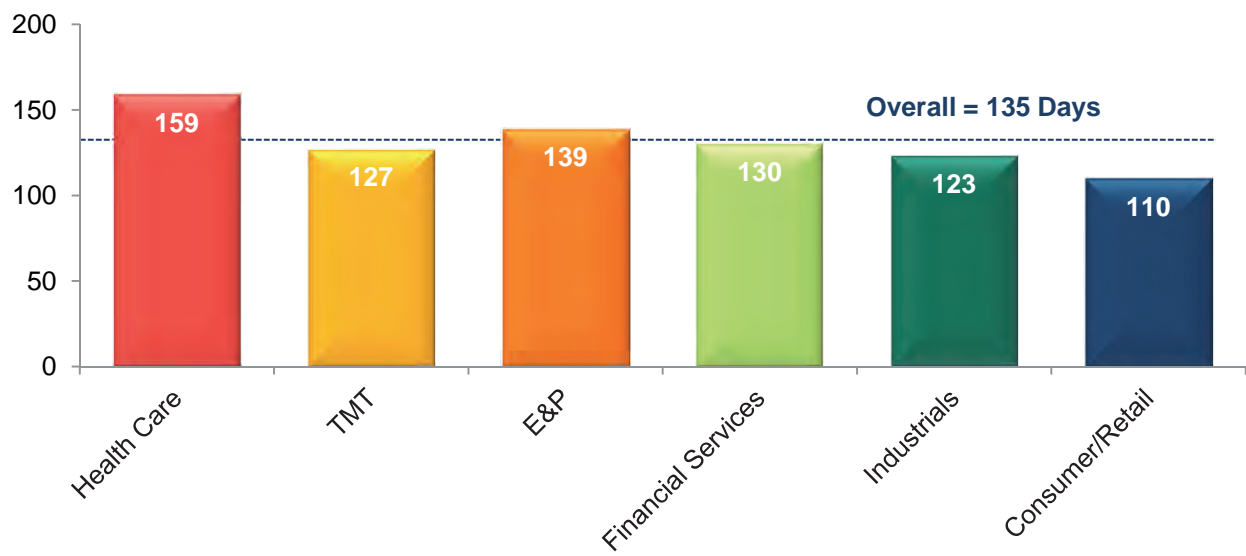
Time to IPO*

- » On average, IPO issuers that made a confidential submission publicly filed 105 days after their first confidential submission and priced 33 days after their first public filing.

Average Number of Days From First Submission/Filing to Pricing



Average Number of Days From First Submission/Filing to Pricing



*Excludes four prior SEC-reviewed issuers and nine IPOs with confidential submission/initial filing to pricing greater than 18 months.

**Includes two non-EGCs that confidentially submitted.

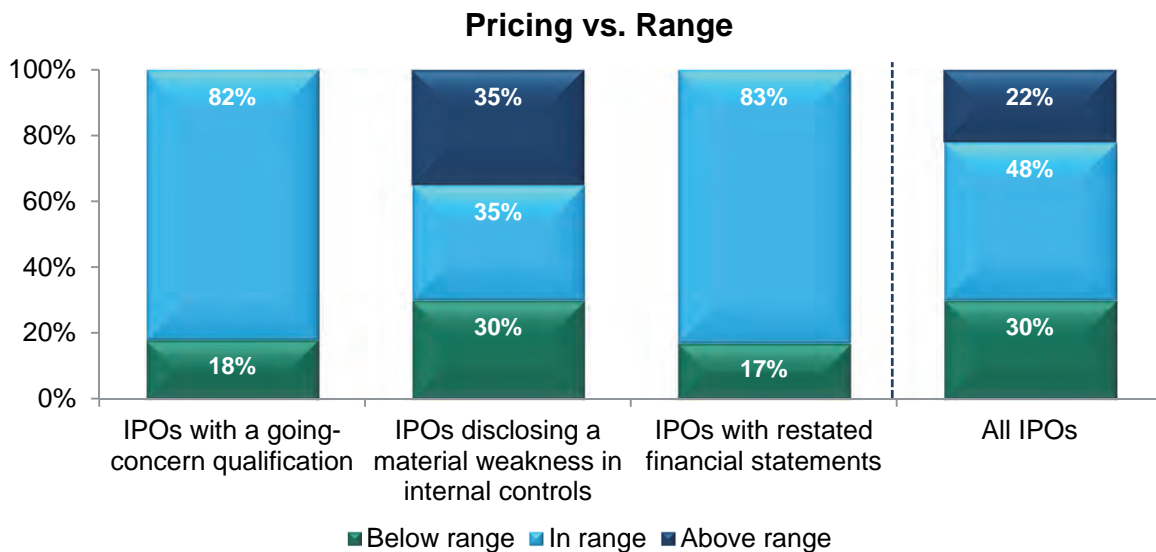
Accounting/Internal Controls

Overview

- » Deloitte, Ernst & Young, KPMG and PricewaterhouseCoopers collectively audited 79% of the IPOs reviewed for this study.
- » Other auditors included Crowe Horwath, Grant Thornton and BDO.

Analysis

- » Of the 86 IPOs:
 - 11 (13%) had a going-concern qualification.
 - Nine of these 11 (82%) were health care issuers, one was a TMT issuer (9%) and one was an industrials issuer (9%).
 - Five of these 11 (45%) were pre-revenue issuers. All five were health care issuers.
 - 29 (34%) disclosed a material weakness in their internal control over financial reporting.
 - Six (7%) had restated financial statements.



Flash Results

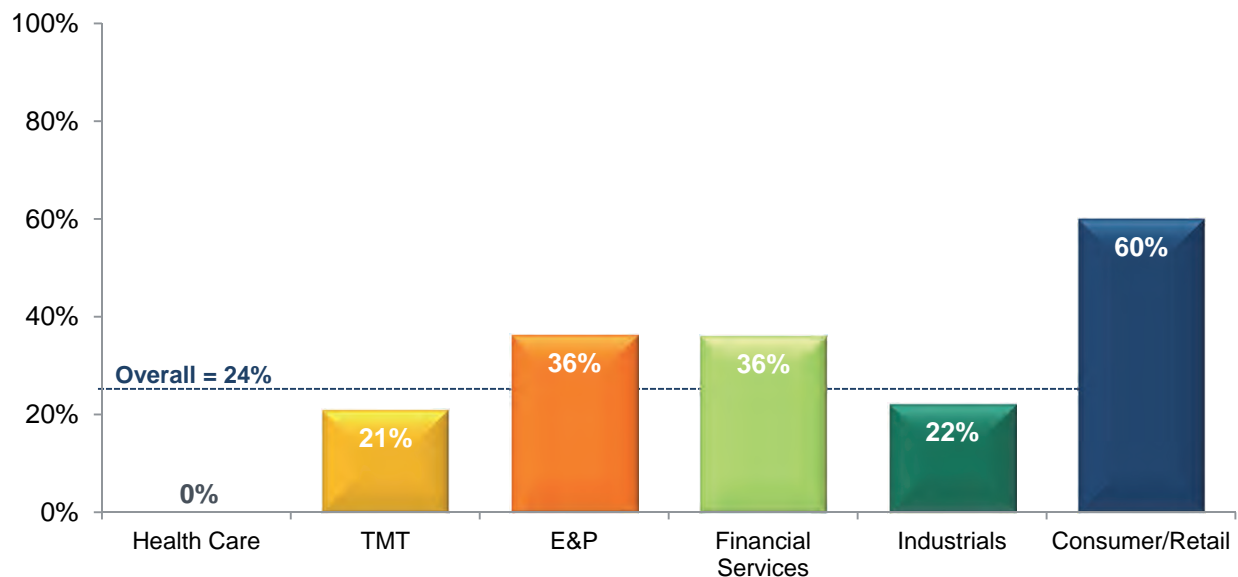
Flash Results

- » “Flash results” refer to estimated financial results for a recently completed fiscal period before complete financial statements are available. They are typically presented as ranges and often only cover 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 financial staleness date.*
- » Overall, 21 of 86 (24%) IPOs showed flash results.
- » 56 IPOs priced within 45 days after the end of the fourth fiscal quarter of 2016 or the first, second or third fiscal quarter of 2017.
 - 19 of these 56 (34%) showed flash results.
 - 34 of these 56 (61%) priced within 30 days of quarter end, and eight of these 34 (24%) showed flash results.
 - 22 of these 56 (39%) priced within 31-45 days of quarter end, and 11 of these 22 (50%) showed flash results.

Sector Analysis

- » Flash results were most commonly presented in the consumer/retail sector. Flash results in health care may be less meaningful due to the high percentage of pre-revenue issuers.

Percentage of Issuers Presenting Flash Results by Sector



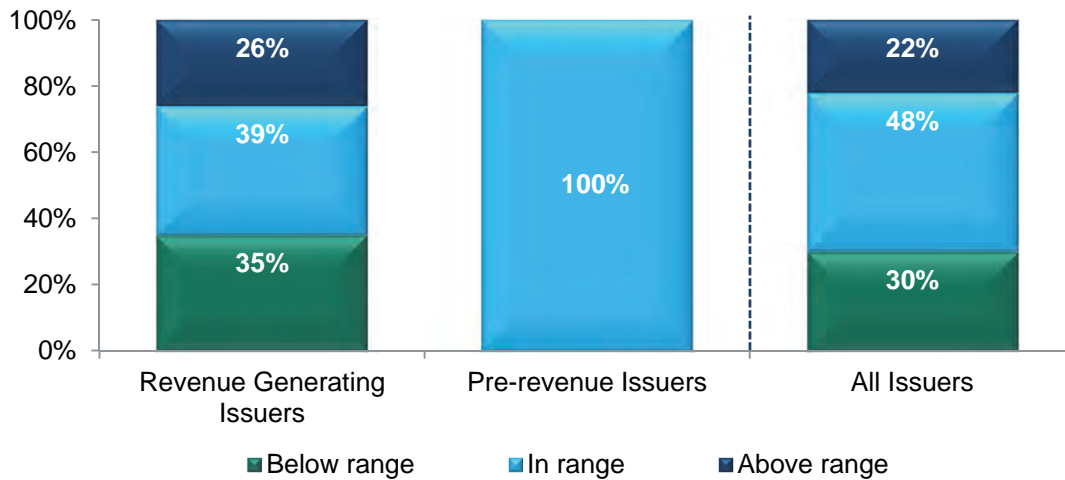
*For IPOs, audited annual financial statements for the most recently completed fiscal year need to be included no later than 45 days after the end of the fiscal year and unaudited interim financial statements for the most recently completed fiscal quarter (other than the fourth quarter) need to be included 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.

Revenue

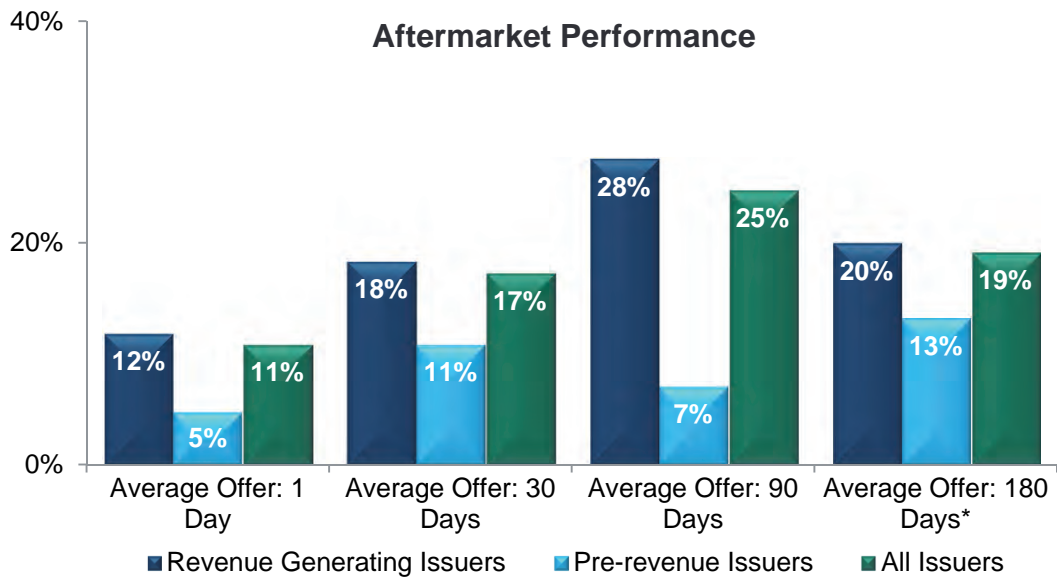
Revenue

- » 12 of 86 (14%) IPOs were by pre-revenue issuers.
 - All were biotech/biopharm issuers in the health care sector.
 - All pre-revenue issuers priced in the range, but underperformed in the aftermarket compared to revenue generating issuers.

Pricing vs. Range



Aftermarket Performance



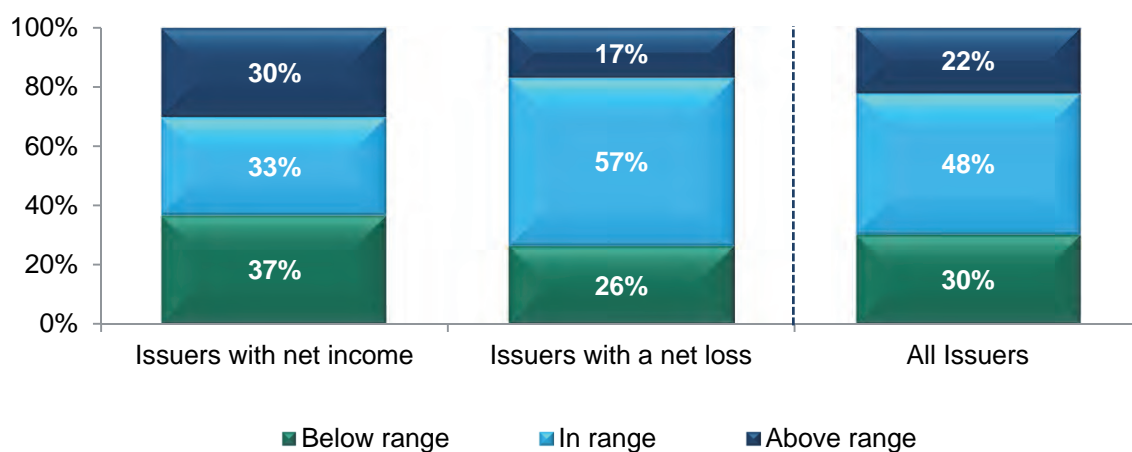
*Only includes deals priced before October 1, 2017.

Net Income/Loss

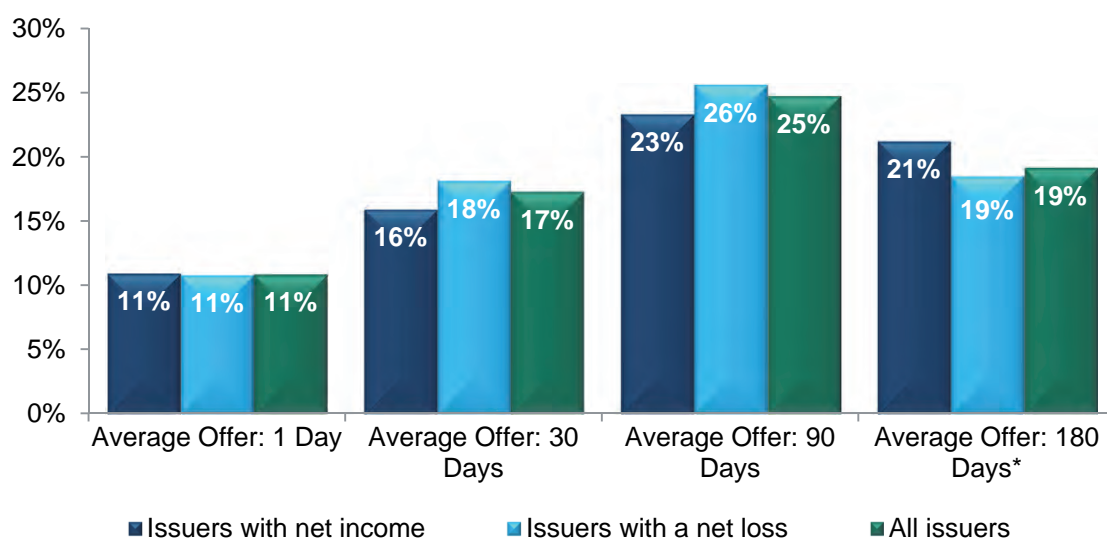
Net Income/Loss

- » 53 of 86 (62%) issuers disclosed a net loss in their most recent audited fiscal year.
 - 19 of these 53 (36%) were biotech/biopharm issuers in the health care sector and another 17 of these 53 (32%) were in the TMT sector.

Pricing vs. Range



Aftermarket Performance



*Only includes deals priced before October 1, 2017.

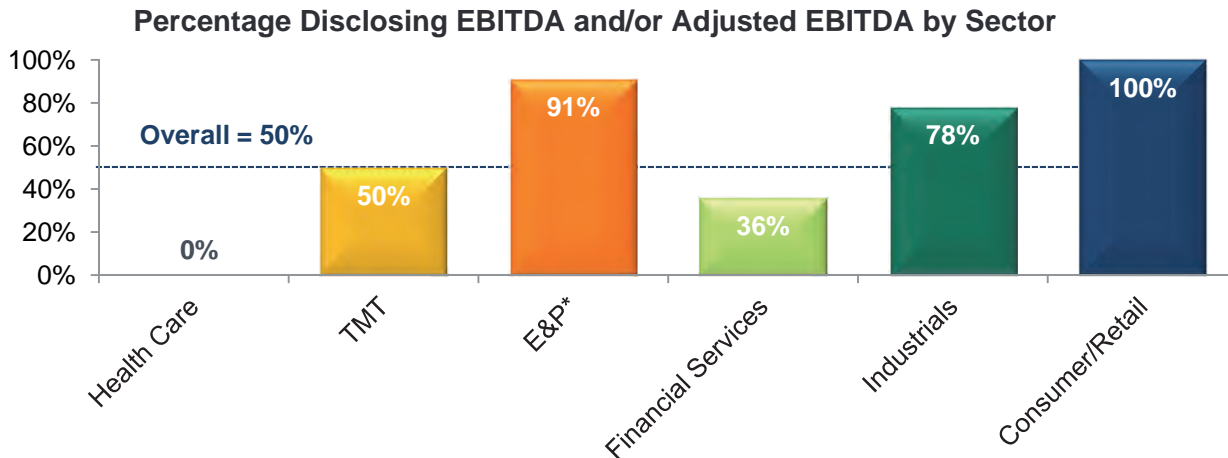
EBITDA/Adjusted EBITDA & Operating Metrics

EBITDA/Adjusted EBITDA

- » In addition to financial measures calculated in accordance with Generally Accepted Accounting Principles (GAAP), many issuers disclose non-GAAP financial measures, such as EBITDA and Adjusted EBITDA.
 - 43 of 86 (50%) issuers disclosed EBITDA and/or Adjusted EBITDA.
 - 39 of these 43 (91%) issuers reported positive EBITDA and/or Adjusted EBITDA.
 - 15 of these 39 (38%) issuers also reported a GAAP net loss.

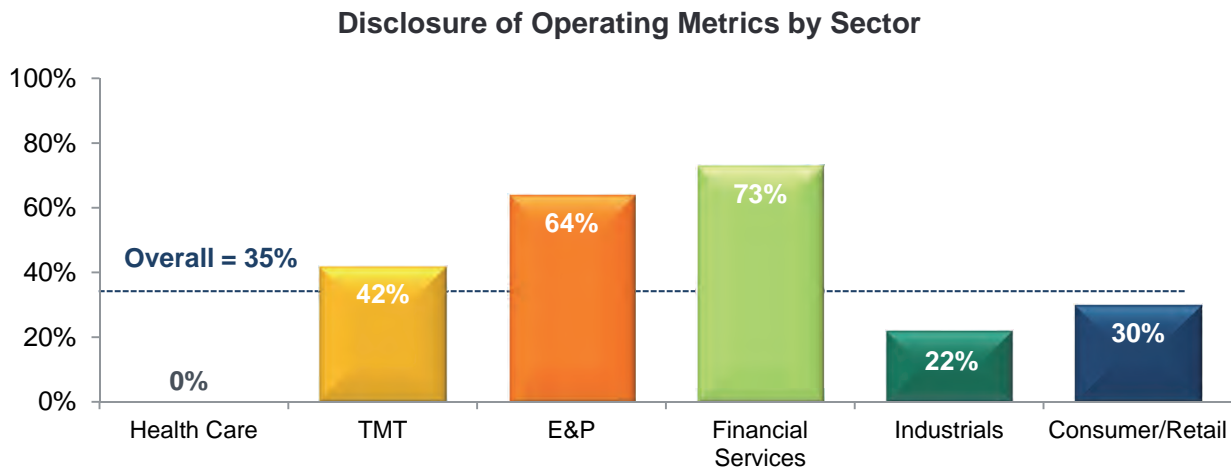
Sector Analysis

- » The percentage of issuers that disclosed EBITDA and/or Adjusted EBITDA in the IPO prospectus varied across sectors.



Operating Metrics**

- » Operating metrics are non-financial performance measures and vary by sector. Common examples include page views in TMT, production data in E&P, portfolio statistics, credit quality ratios and capital ratios in financial services, new orders and lots sold in industrials and units sold, backlog, store count and number of customers in consumer/retail.



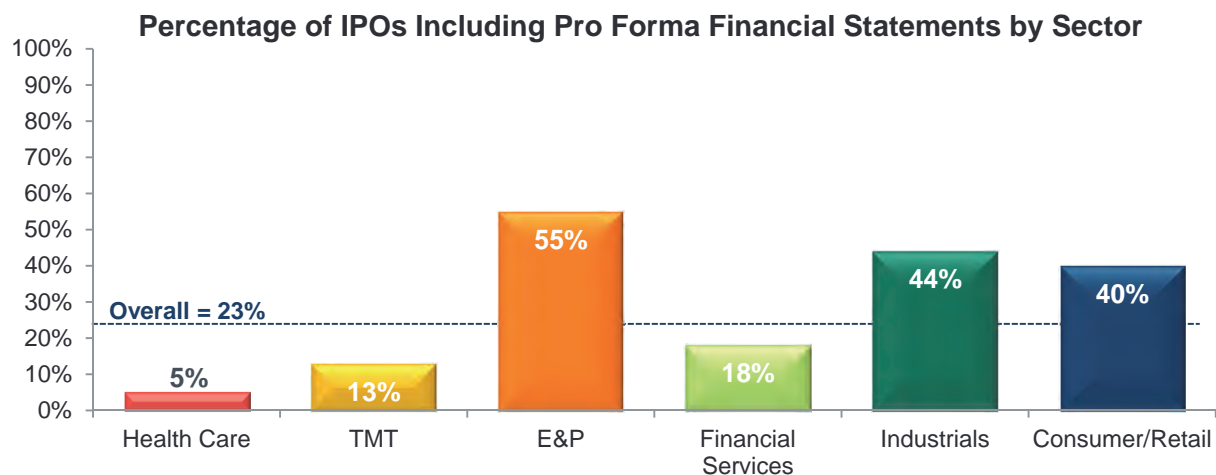
*Includes disclosure of EBITDAX.

**Based on review of summary financial information.

Pro Forma Financial Statements

Pro Forma Financial Statements

- » Under Regulation S-X, the SEC requires issuers that have made a significant business acquisition or for whom a significant business acquisition is probable to include standalone pro forma financial statements giving effect to the transaction.* Significance of a completed or probable acquisition is measured using the SEC's investment, assets and income tests. Pro forma financial statements may also be required for a recent or proposed significant business disposition** and other events where disclosure would be material to investors (e.g., a recapitalization of the company).
- » 20 of 86 (23%) IPOs included pro forma financial statements in the IPO prospectus.
 - The most common were in E&P (six of 11 (55%)) and industrials (four of nine (44%)).
- » Adjustments in pro forma financial statements gave effect to some or all of the following: acquisitions, dispositions, reorganizations, any related debt financings and others.



*See Article 11 of Regulation S-X. Pro forma financial statements giving effect to the transaction are not required if separate financial statements of the acquired or to be acquired business are not required to be included in the registration statement.

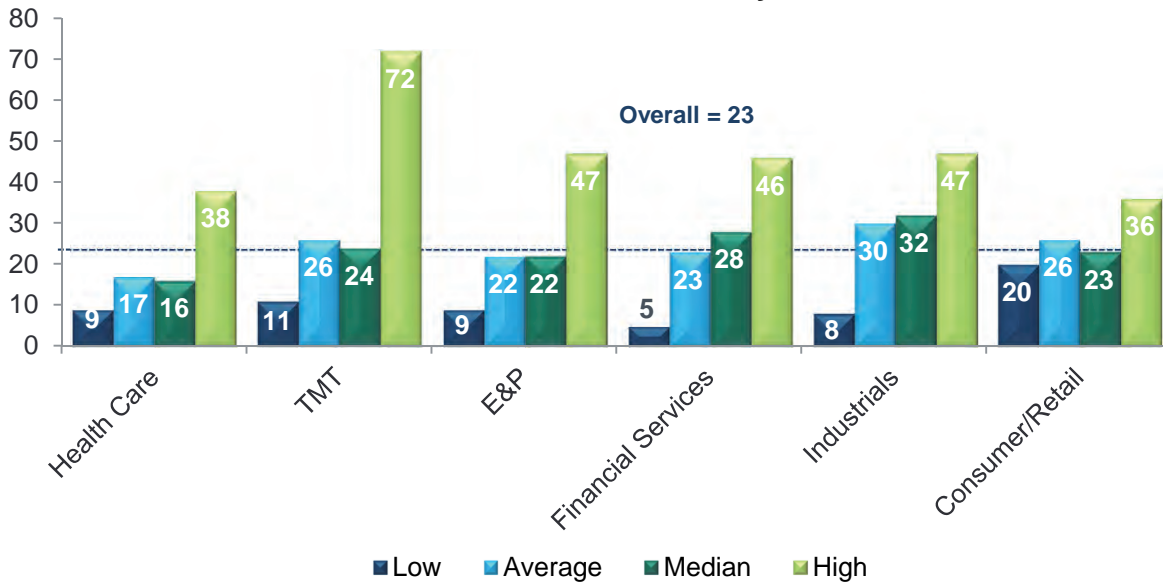
**These dispositions have a greater than 10% significance level and are not fully reflected in the issuer's financial statements.

SEC Comments: Total First Round Comments

Total First Round SEC Comments*

- » The lowest number of SEC comments received in a first round comment letter was five, the average was 23, the median was 22 and the highest was 72.

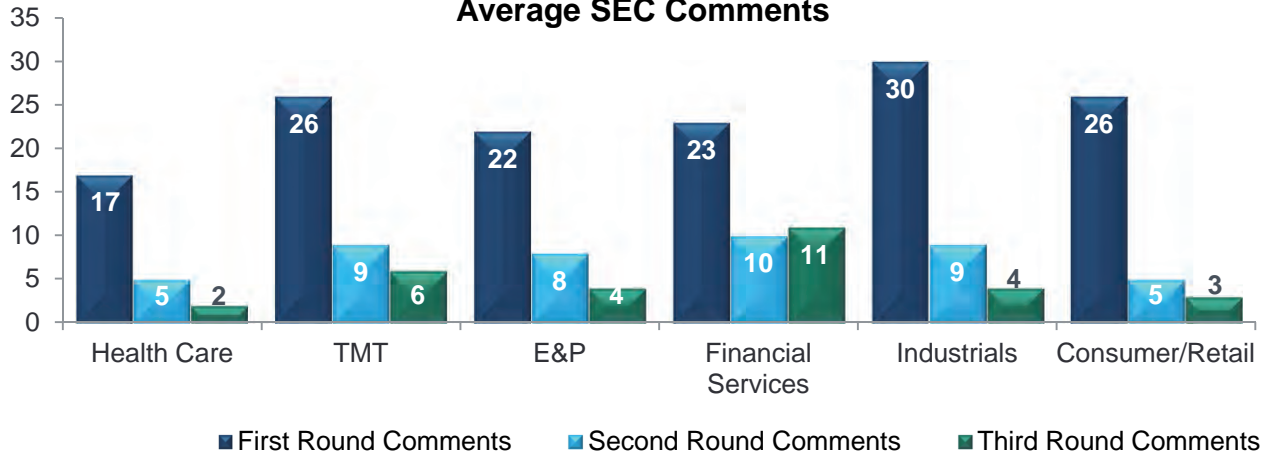
First Round SEC Comments by Sector



Additional SEC Comments and Letters*

- » The overall average for comments in the second comment letter was eight.
- » The overall average for comments in the third comment letter was four.
- » The overall average number of comment letters was four.

Average SEC Comments

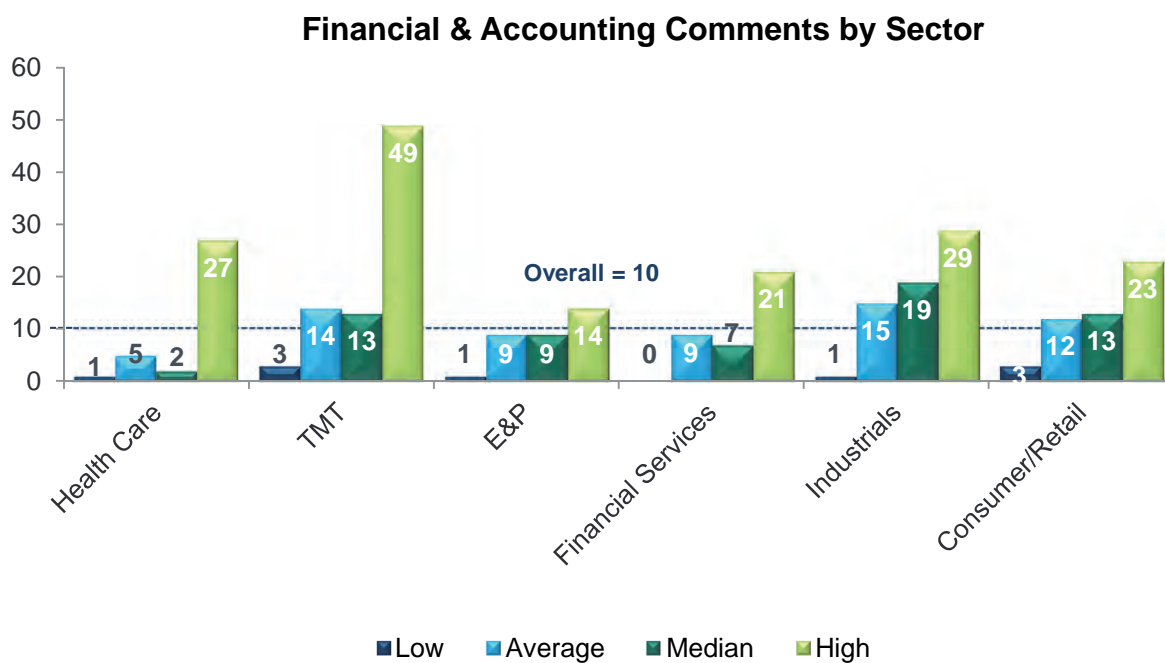


*Excludes four prior SEC-reviewed issuers.

SEC Comments: Total First Round Comments

Financial & Accounting Comments*

- » 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.
 - The average number of first round financial and accounting-related comments was 10, the median was 9, the lowest was zero and the highest was 49.

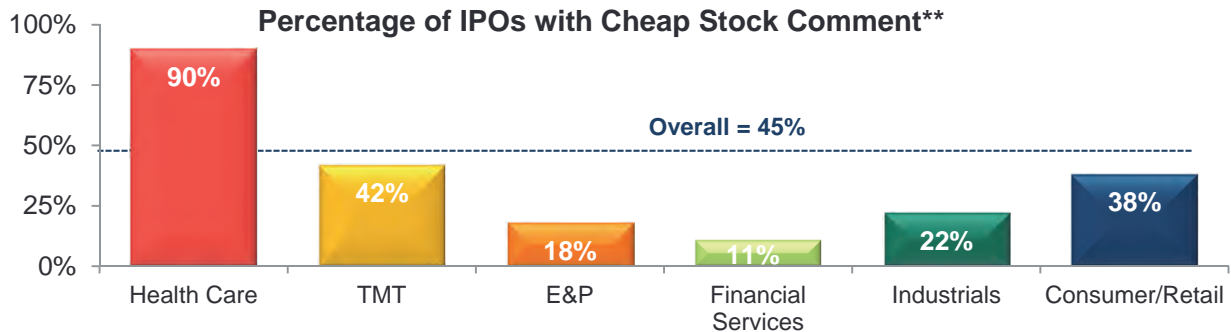


*Excludes four prior SEC-reviewed issuers.

SEC Comments: A Closer Examination

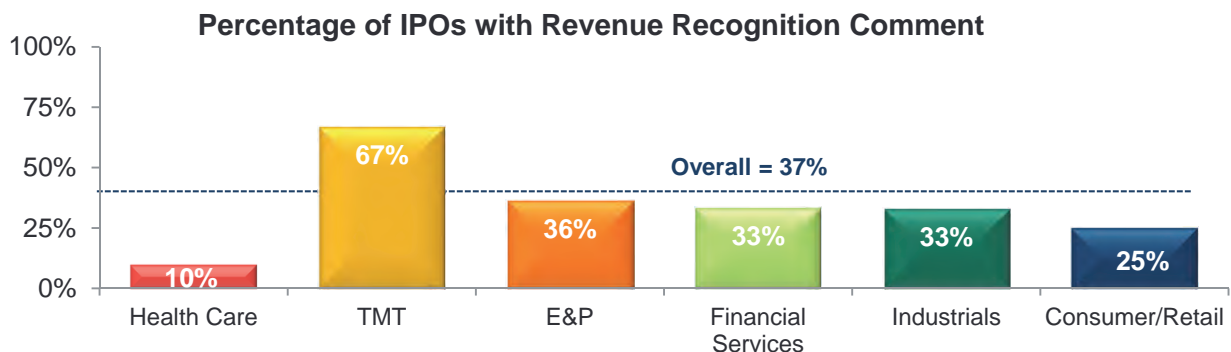
Cheap Stock*

- » 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.



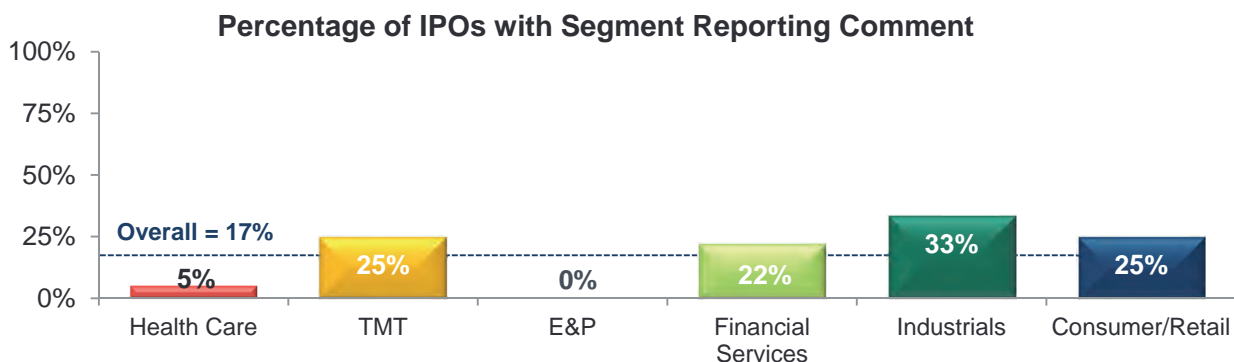
Revenue Recognition*

- » Revenue recognition comments relate to the accounting policies that govern when an issuer records revenue from its operations.



Segment Reporting*

- » Segment reporting comments relate to an issuer's identification of its operating segments – public issuer accounting rules require the issuer to provide more detailed financial reporting for each segment.



*Excludes four prior SEC-reviewed issuers.

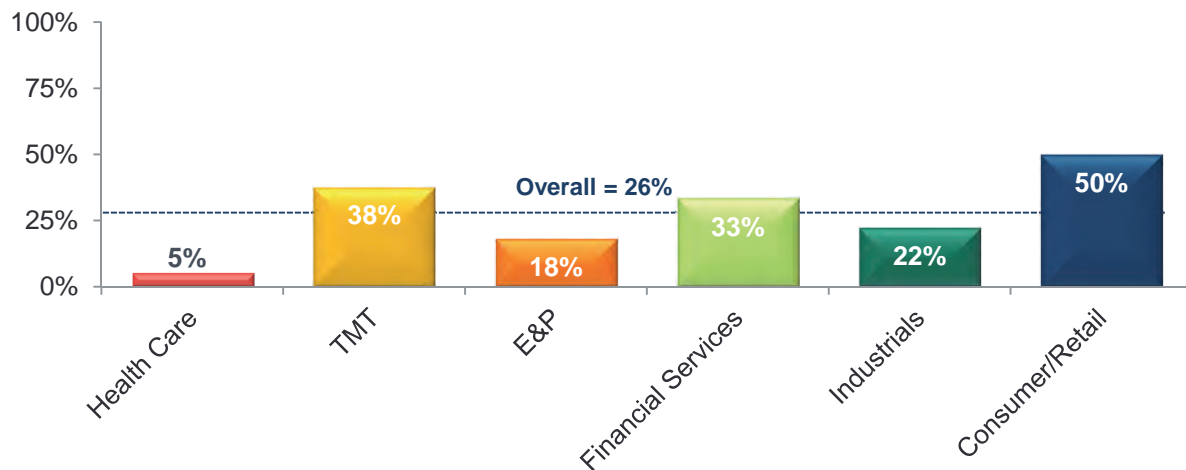
**Includes only comments issued by the SEC prior to the inclusion of a price range in the prospectus. These comments are intended to highlight potential cheap stock issues early in the SEC review process.

SEC Comments: A Closer Examination

Market Positioning Claim*

- » Market positioning claim comments relate to requests that the issuer substantiate claims regarding its competitive position in its market or sector and/or purported market share for its products and services.

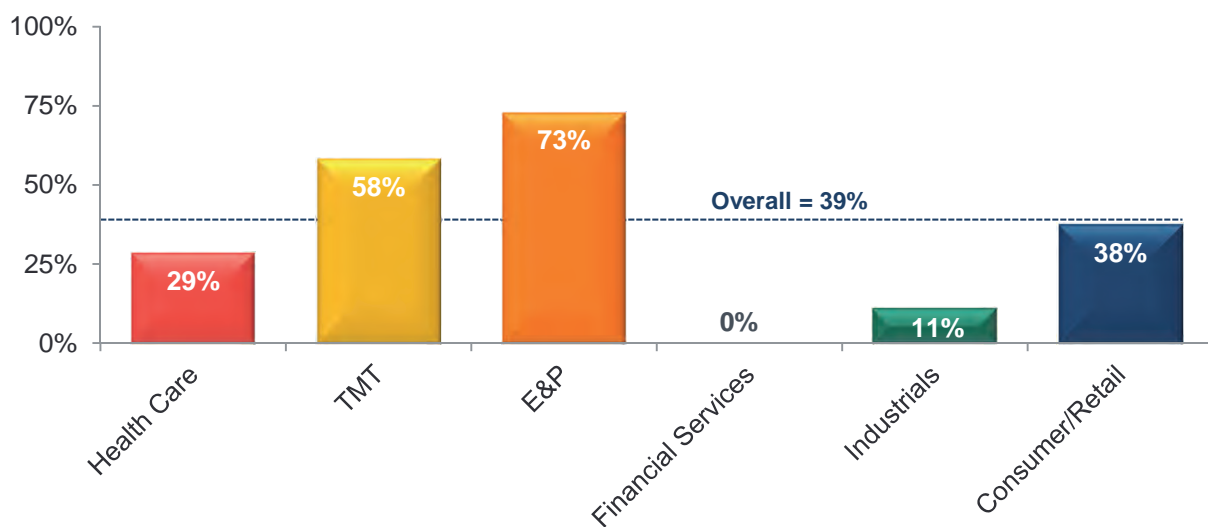
Percentage of IPOs with Market Positioning Comment



Back-Up Support*

- » Back-up support comments relate to requests that the issuer provide third-party or internal analysis, documentation or reasoning for superlative statements and/or market share or other similar data in the prospectus.

Percentage of IPOs with Back-Up Support Comment

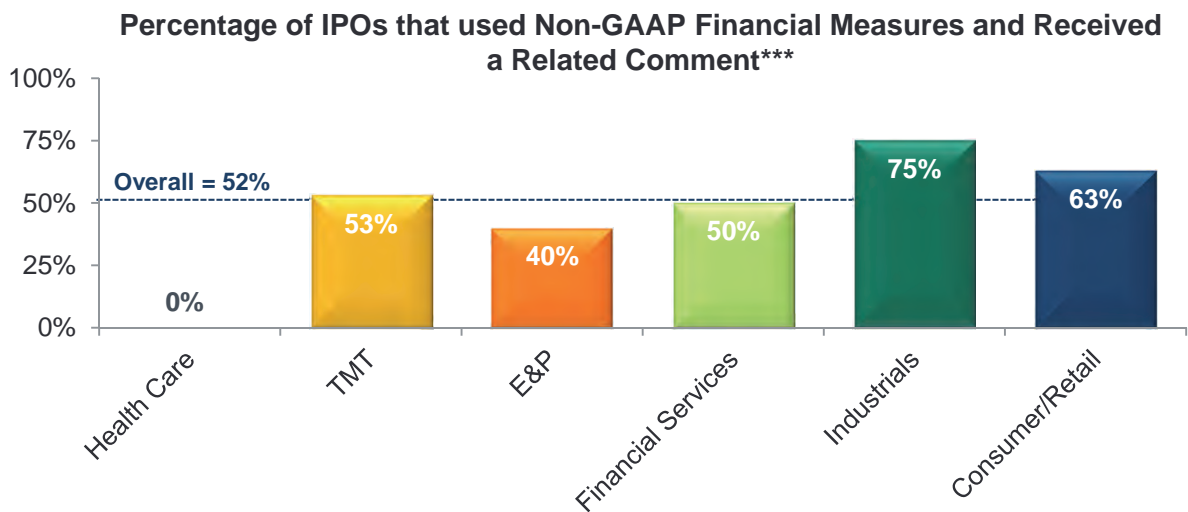


*Excludes four prior SEC-reviewed issuers.

SEC Comments: A Closer Examination

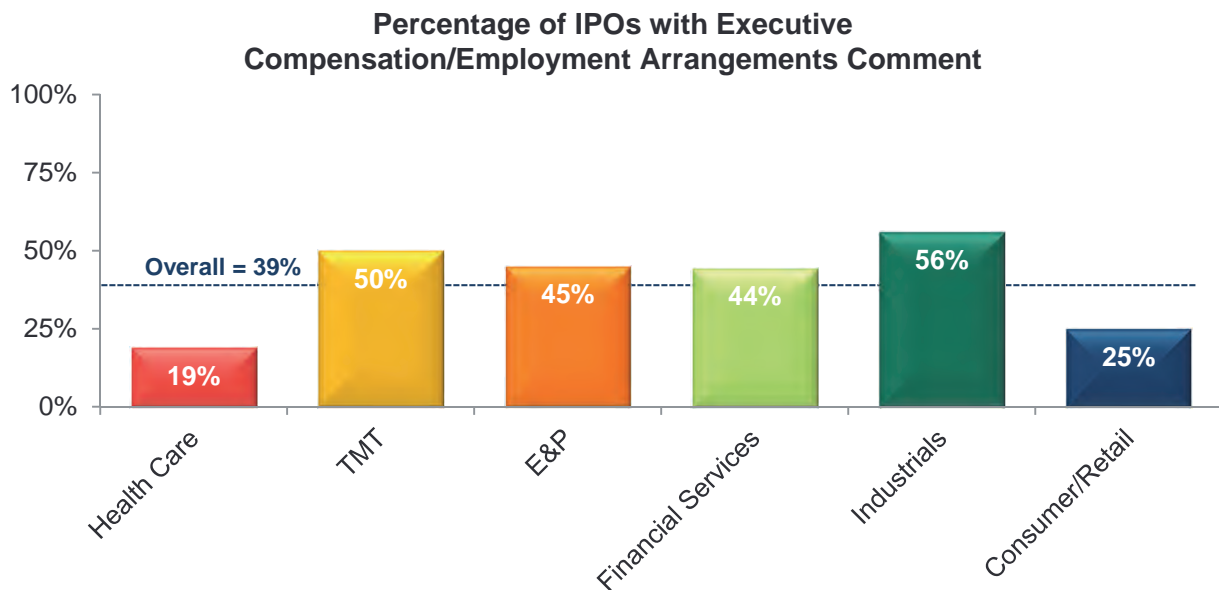
Non-GAAP Financial Measures*

- » Non-GAAP financial measures comments relate to an issuer’s use and presentation of non-GAAP financial measures, the rationale for such measures and the appropriateness of adjustments taken.**
- » 52 of 82 (63%) issuers used at least one non-GAAP financial measure. Of these 52 issuers, 27 (52%) received at least one comment related to non-GAAP financial measures.



Executive Compensation/Employment Arrangements*

- » Executive compensation/employment agreements comments relate to the compensation paid to the issuer’s officers, directors or consultants, and related employment matters.



*Excludes four prior SEC-reviewed issuers.

**Common non-GAAP financial measures used by issuers included adjusted EBITDA, adjusted net income and free cash flow.

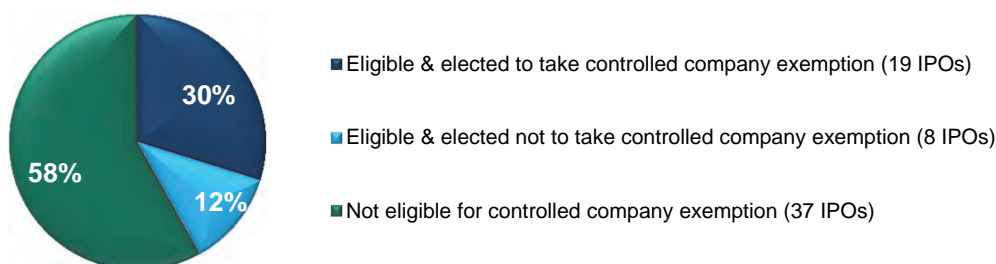
***Based on 52 issuers that used non-GAAP measures in the registration statement.

Corporate Governance: Controlled Company Exemption

Overview*

- » The listing standards of the NYSE and NASDAQ exempt controlled companies from certain corporate governance requirements, including the need to have a majority of independent directors on the board and fully independent nominating and compensation committees within one year of IPO pricing.
- » 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.
- » 27 of 64 (42%) issuers in our corporate governance analysis were eligible for the controlled company exemption and 19 of these 27 (70%) eligible issuers elected to take advantage of the exemption.
 - 16 of these 27 (59%) controlled companies were sponsor-backed.
 - 10 of these 27 (37%) had multiple classes of common stock.
 - 11 of these 27 (41%) had a majority of independent directors on their boards at pricing, despite being exempt from this requirement.
 - Average board independence for issuers eligible for the controlled company exemption and those issuers taking advantage of the exemption was 54% and 46%, respectively.

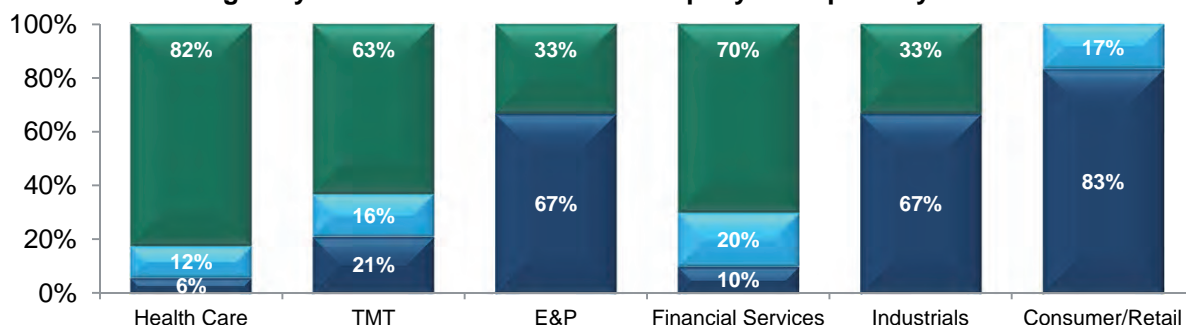
Eligibility & Election of Controlled Company Exemption



Controlled Companies by Sector

- » A majority of health care, TMT and financial services issuers were not eligible for the controlled company exemption, while most E&P, industrials and consumer/retail issuers were eligible.

Eligibility & Election of Controlled Company Exemption by Sector



# of IPOs	17	19	6	10	6	6
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- % Not eligible for controlled company exemption
- % Eligible & elected not to take controlled company exemption
- % Eligible & elected to take controlled company exemption

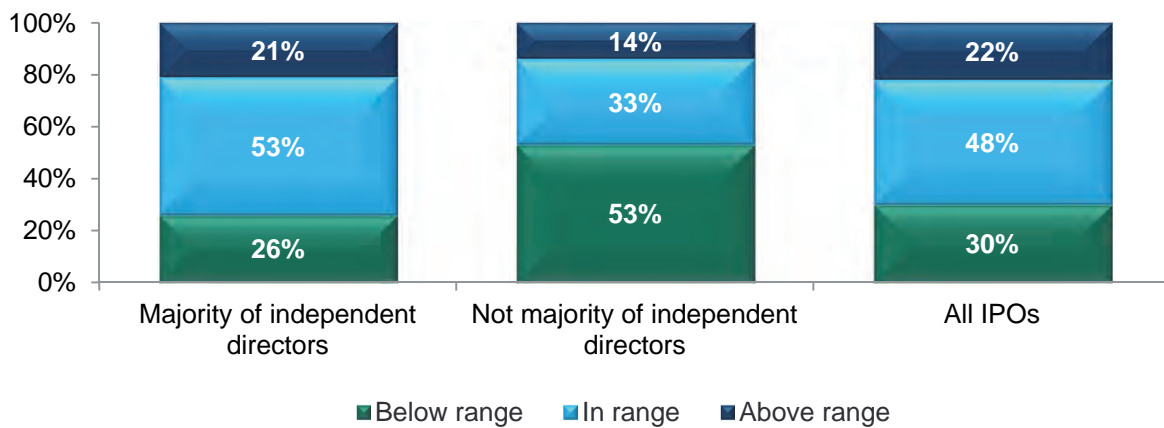
*Excludes MLPs and FPIs (no MLPs are FPIs). MLPs are excluded because they are generally exempt from NYSE and NASDAQ corporate governance requirements. FPIs are excluded because they are permitted to rely on home jurisdiction governance rules.

Corporate Governance: Key Items

Director Independence*

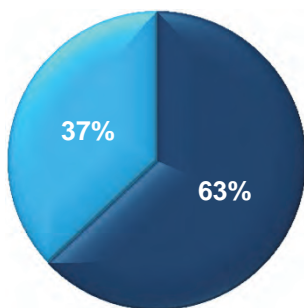
- » The average number of directors on the board at pricing was eight and the average number of independent directors was five.
- » 43 of 64 (67%) issuers had a majority of independent directors on the board at pricing.
 - Of the 43 issuers with a majority of independent directors, the average board independence was 77%.
- » Of the 21 issuers that did not have a majority of independent directors:
 - 16 of 21 (76%) were eligible for, and elected to take, the controlled company exemption.
 - Five of 21 (24%) elected to use the transition period under applicable stock exchange rules.**

Pricing vs. Range



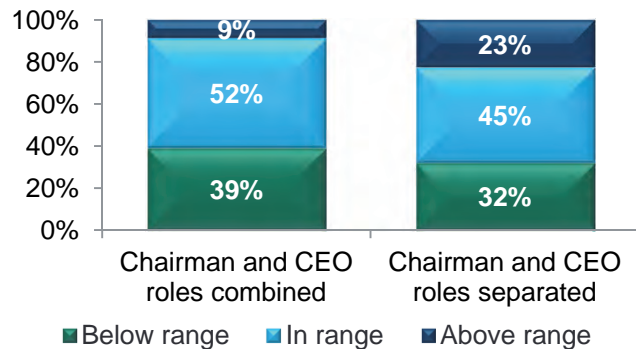
Separation of Chairman and CEO Roles*

- » 40 of 63 (63%) of issuers separated their Chairman and CEO roles at pricing.***



- Chairman and CEO roles separated
- Chairman and CEO roles combined

Pricing vs. Range



*Excludes MLPs (given their unique governance structures) and FPIs (subject to home jurisdiction governance rules).

**The NYSE and NASDAQ require that a majority of the issuer's board be independent within one year of pricing.

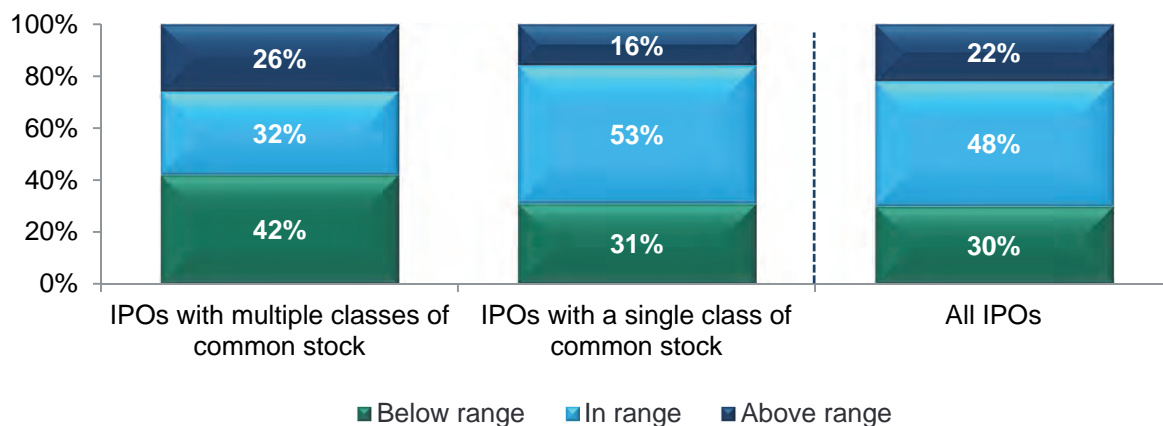
***Excludes one issuer that did not designate a Chairman at time of IPO.

Corporate Governance: Classes of Common Stock

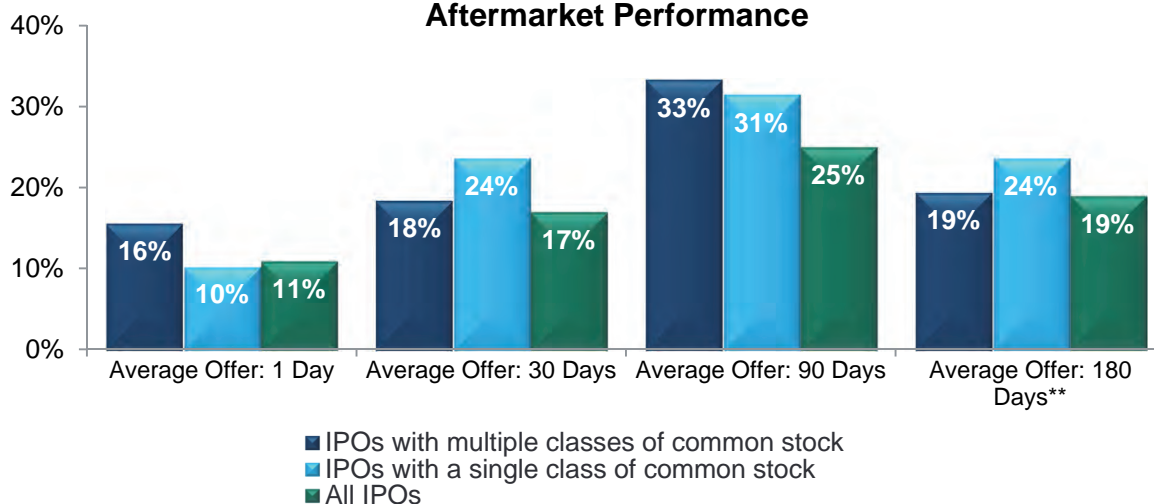
Classes of Common Stock*

- » 19 of 64 (30%) issuers went public with multiple classes of common stock.
- » 13 of these 19 (68%) issuers had multiple class structures with unequal voting rights. A majority of these issuers had a 10:1 voting ratio.
 - 2 of these 13 (15%) issuers included non-voting shares in their structures.
 - 3 of these 13 (23%) issuers provided for time-based sunset provisions for their unequal voting structures.
- » The 19 issuers with multiple classes of common stock consisted of 12 in TMT, three in consumer/retail, two in E&P, one in financial services and one in industrials.
- » 10 of these 19 (53%) were eligible for the controlled company exemption.

Pricing vs. Range



Aftermarket Performance



*Excludes MLPs (given their unique governance structures) and FPIs (subject to home jurisdiction governance rules).

**Only includes deals priced before October 1, 2017.

Corporate Governance: Anti-Takeover Measures & Exclusive Forum Provisions

Overview

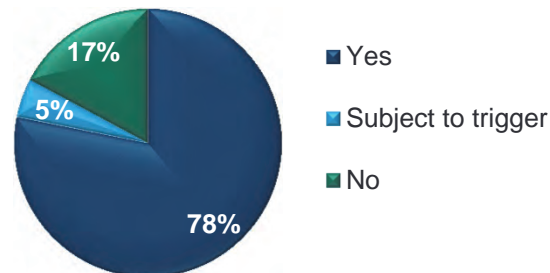
- » In connection with their IPO, issuers often adopt some or all of the following takeover defenses in their governing documents:
 - **Classified board:** Typically one-third of the directors are up for election each year for a three-year term, as opposed to annual elections for all directors.
 - **Blank check preferred stock:** Allows the board of directors to issue preferred stock, without stockholder approval, that may have special voting, conversion or control rights.
 - All issuers in our study had authorized blank check preferred stock.
 - **Restrictions on stockholder action by written consent:** Limits the ability of stockholders to act other than at a meeting.
 - **Supermajority voting:** More than a simple majority of the voting power of the issuer's outstanding stock is required to take certain corporate actions, which could include amendments to the issuer's governing documents.
 - **Limitations on stockholders' ability to call special meetings:** Limits the ability of stockholders to act other than at a meeting called by the board, the CEO, the Chairman or any other person authorized by the issuer's governing documents.
 - **Stockholder rights plan or poison pill:** Allows an issuer's existing stockholders, upon a hostile bidder's acquisition of a specified percentage of shares, to purchase additional shares at a deeply discounted price in order to deter a potential hostile takeover bid.
 - No issuers in our study had a poison pill at the time of the IPO.
- » Certain takeover defenses are **subject to triggers**, meaning that the provisions do not take effect until the stock ownership level of a significant stockholder or group of stockholders goes below a certain percentage.
- » Many issuers have also adopted **exclusive forum provisions**, which limit the courts in which certain types of internal-affairs stockholder litigation that can be brought.
- » The above-mentioned defenses are most common in companies incorporated in Delaware. Many non-U.S. jurisdictions do not allow certain of these; for example, a percentage of stockholders may be permitted by law to call a special meeting in certain countries.

Anti-Takeover: Classified Board

Classified Board*

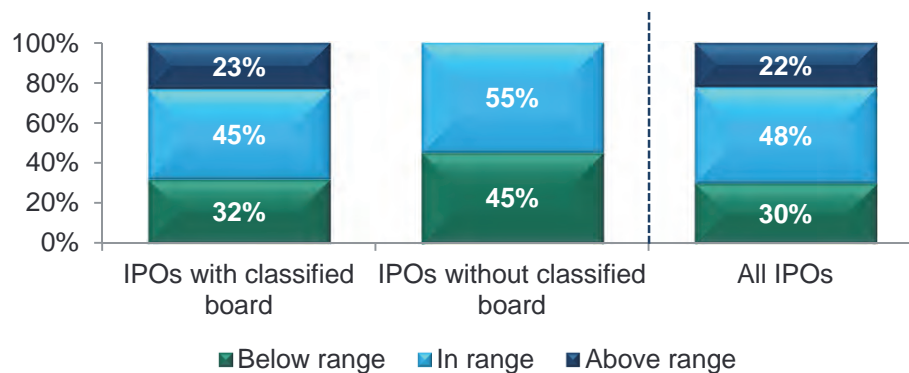
- » 53 of 64 (83%) issuers had a classified board (includes subject to trigger).

Percentage with Classified Board

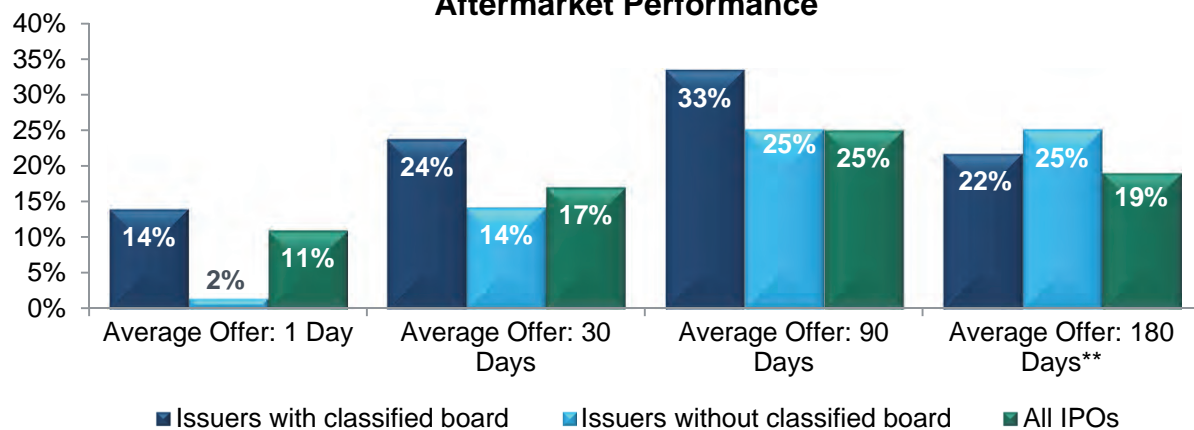


- » Issuers with a classified board more frequently priced above the range, and outperformed in the aftermarket compared to issuers that did not have a classified board.

Pricing vs. Range



Aftermarket Performance



*Excludes MLPs (given their unique governance structures) and FPIs (subject to home jurisdiction governance rules).

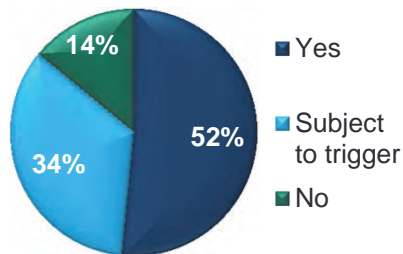
**Only includes deals priced before October 1, 2017.

Other Anti-Takeover Measures & Exclusive Forum Provisions

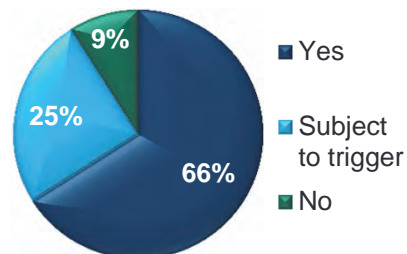
Anti-Takeover Measures and Exclusive Forum Provisions*

- » A majority of issuers adopted restrictions on stockholders' ability to act by written consent and to call a special meeting.
- » Most issuers included supermajority voting requirements in their organizational documents limiting the ability of stockholders to take certain corporate actions.
- » 60 of 64 (94%) issuers had exclusive forum provisions, compared to 90% in 2016, 85% in 2015 and 79% in 2014.
 - All of these 60 issuers elected the jurisdiction of organization as the exclusive forum.

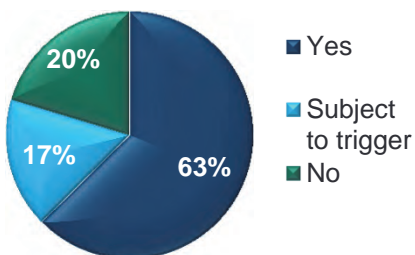
Percentage with Restrictions on Stockholder Actions by Written Consent



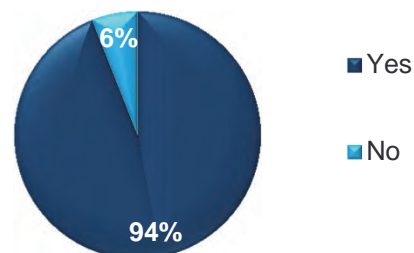
Percentage with Restrictions on Stockholders Ability to Call Special Meeting



Percentage with Supermajority Voting Requirements



Percentage with Exclusive Forum Provisions



*Excludes MLPs (given their unique governance structures) and FPIs (subject to home jurisdiction governance rules).

IPO Fees and Expenses

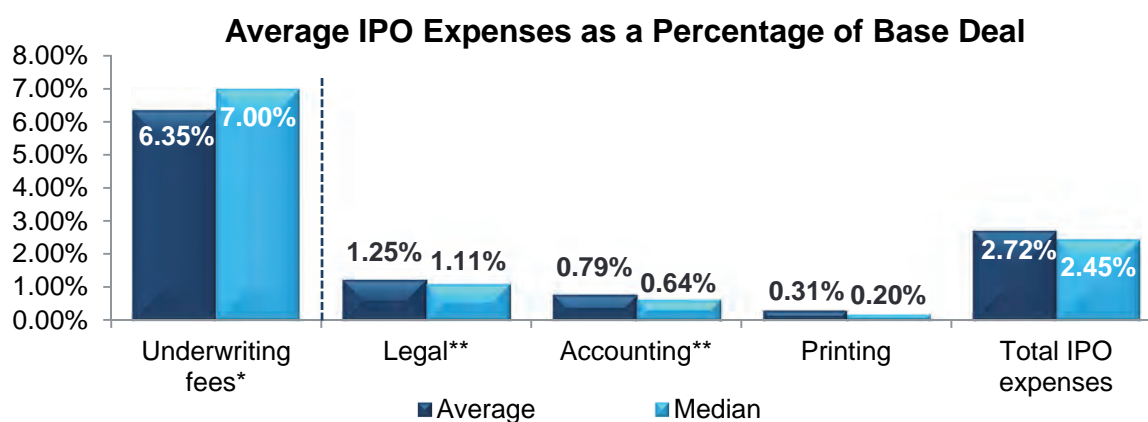
IPO Fees and Expenses

- » Underwriting fees and total IPO expenses (excluding underwriting fees) are summarized below:

Fee Category	Low	Average	Median	High
Underwriting Fees*	\$2,520,000	\$14,964,538	\$9,672,525	\$85,000,000
Total IPO Expenses	\$1,000,000	\$4,460,972	\$3,860,132	\$14,074,571

- » The most significant components of IPO expenses (excluding underwriting fees) are typically legal and accounting fees and printing costs.

Fee Category	Low	Average	Median	High
Legal**	\$400,000	\$1,908,681	\$1,600,000	\$4,700,000
Accounting**	\$200,000	\$1,341,704	\$960,000	\$6,882,000
Printing	\$36,000	\$446,382	\$350,000	\$1,895,000



*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.

**Excludes one IPO with insufficient information.

IPO Fees and Expenses: EGCs vs. Non-EGCs

EGCs

- » Underwriting fees and total IPO expenses (excluding underwriting fees) for EGC IPOs are summarized below:

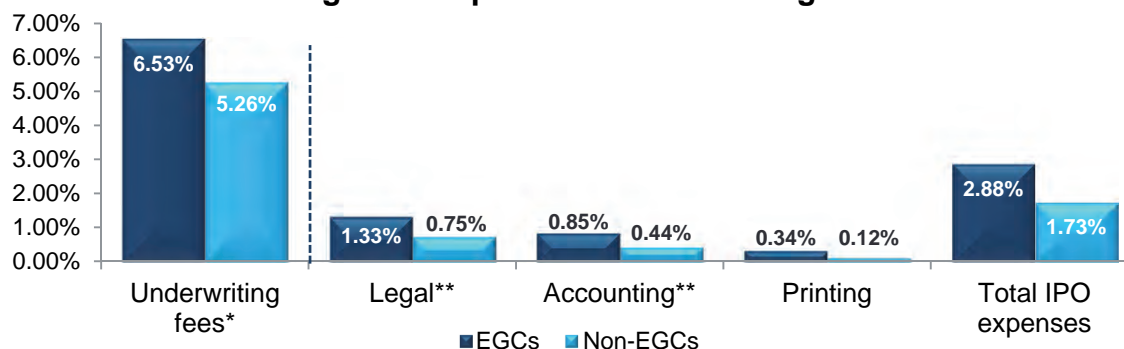
Fee Category	Low	Average	Median	High
Underwriting Fees*	\$2,520,000	\$13,035,460	\$8,242,500	\$85,000,000
Total IPO Expenses	\$1,000,000	\$4,050,493	\$3,717,239	\$12,500,000
Legal**	\$400,000	\$1,736,262	\$1,500,000	\$4,447,470
Accounting**	\$200,000	\$1,262,438	\$925,000	\$6,882,000
Printing	\$36,000	\$439,660	\$350,000	\$1,895,000

Non-EGCs

- » Underwriting fees and total IPO expenses (excluding underwriting fees) for non-EGC IPOs are summarized below:

Fee Category	Low	Average	Median	High
Underwriting Fees*	\$12,970,545	\$26,860,520	\$22,481,125	\$63,303,599
Total IPO Expenses	\$3,500,000	\$6,992,259	\$6,531,176	\$14,074,571
Legal**	\$1,500,000	\$2,957,559	\$3,254,257	\$4,700,000
Accounting**	\$522,759	\$1,823,906	\$1,880,058	\$4,000,000
Printing	\$148,000	\$487,833	\$420,000	\$956,000

Average IPO Expenses as a Percentage of Base Deal



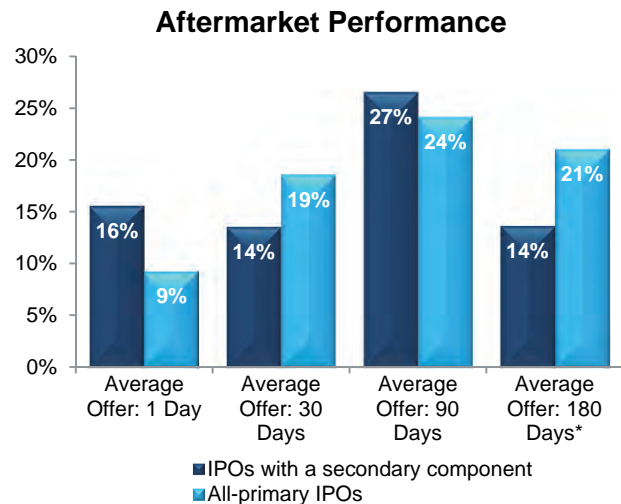
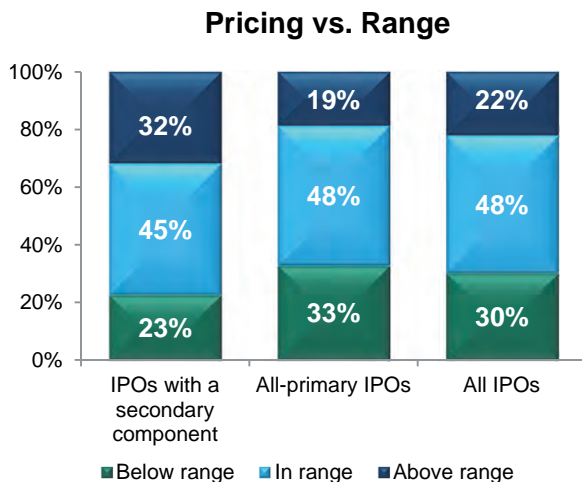
*Underwriting fees are the percentage of the IPO base deal that is paid as compensation to the underwriters in the form of a discount or commission.

**Excludes one IPO with insufficient information.

Deal Structure: Secondary Component & Management Sales

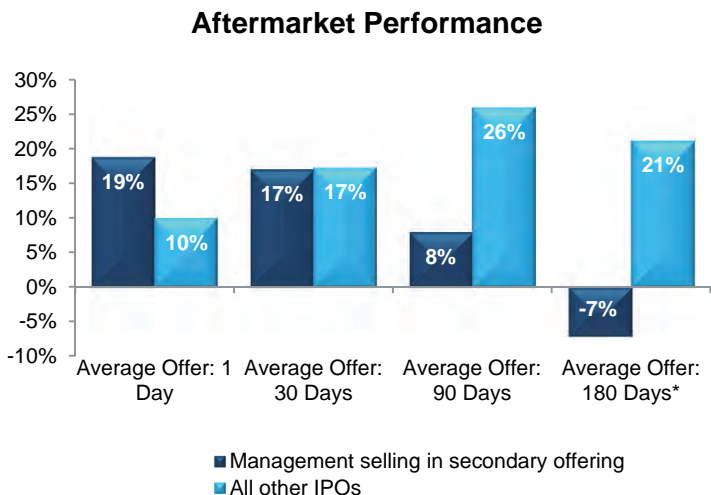
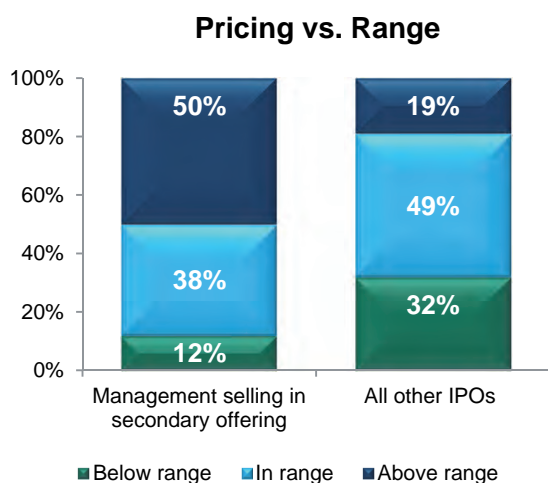
Secondary Component

» 22 of 86 (26%) IPOs had one or more selling stockholders in the base deal.



Management Sales

» Management participated as selling stockholders in the base offerings in eight of 22 (36%) IPOs with a secondary component.

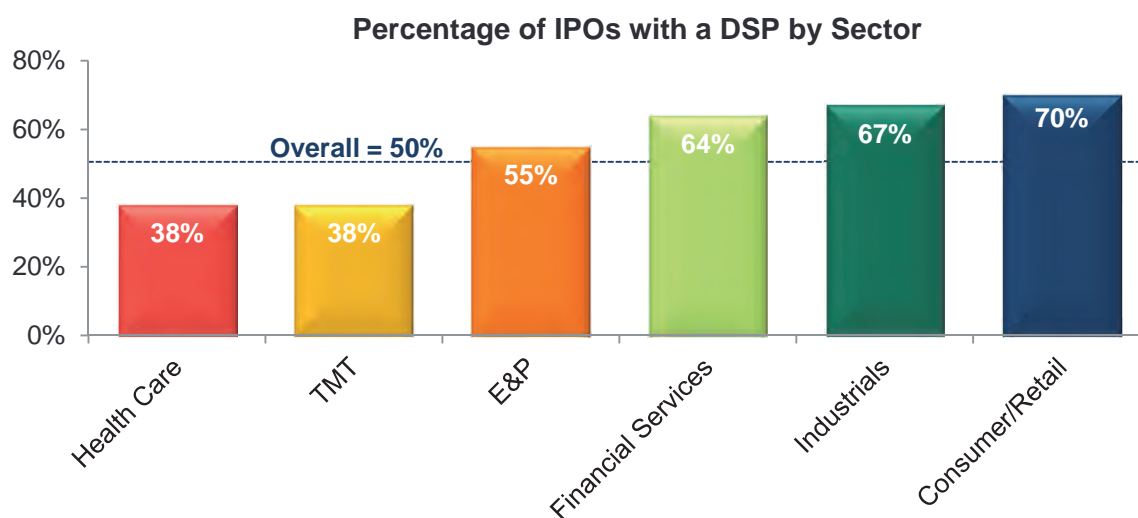


*Only includes deals priced before October 1, 2017.

Deal Structure: Directed Share Programs

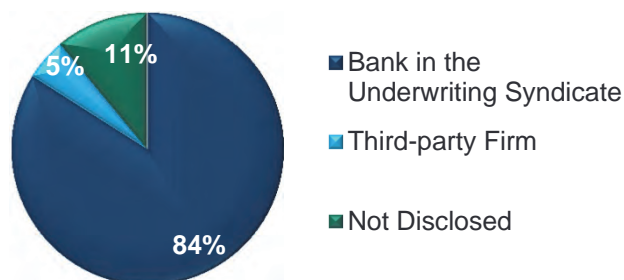
Directed Share Programs (DSPs)

- » 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.
- » 43 of 86 (50%) IPOs included DSPs.
- » The average disclosed DSP size for all IPOs was 6%, the lowest was 2.5% and the highest was 11%.



- » Of the 43 DSPs, 84% were administered by a bank in the underwriting syndicate, 5% were administered by a third-party firm not in the syndicate and 11% did not disclose the administrator of the DSP.

Firm Running DSP

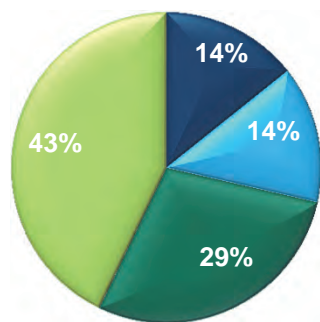


Deal Structure: Insiders Purchasing in IPO

Insiders Purchasing in IPO*

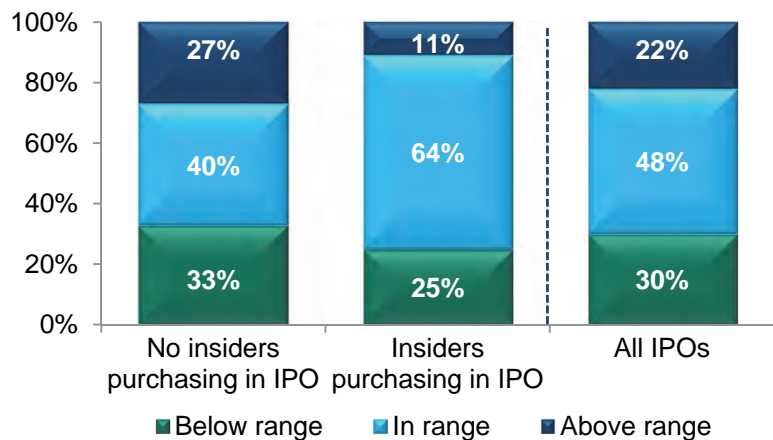
- » 28 of 86 (33%) issuers disclosed insiders purchasing in the IPO.
 - 17 of 28 (61%) issuers were in health care and four of 28 (14%) issuers were in TMT.
 - In these 28 IPOs, insiders purchased an average of 22% of the shares sold in the IPO. This is down from 34% in 2016 and 21% in 2015 and similar to 27% in 2014.
- » IPOs with insiders purchasing priced in the range more often than IPOs without insiders purchasing.

% of IPO Purchased by Insiders**



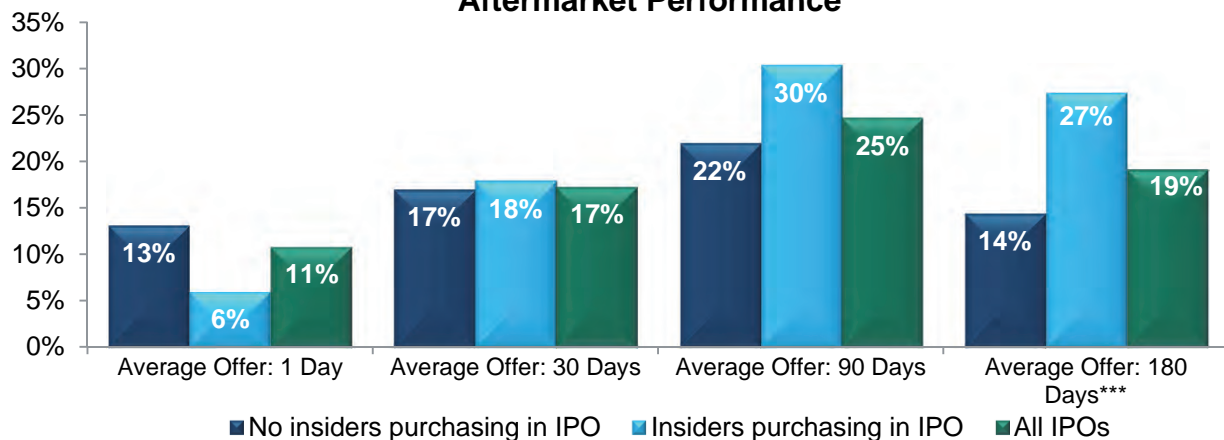
- Less than 5%
- 5.0%-9.9%
- 10.0%-19.9%
- 20%+

Pricing vs. Range



- » In the longer term, IPOs with insider purchases outperformed in the aftermarket as compared to those without.

Aftermarket Performance



*Does not include purchases through a DSP.
 **Only includes deals with insiders purchasing.
 ***Only includes deals priced before October 1, 2017.

Deal Structure: Use of Proceeds

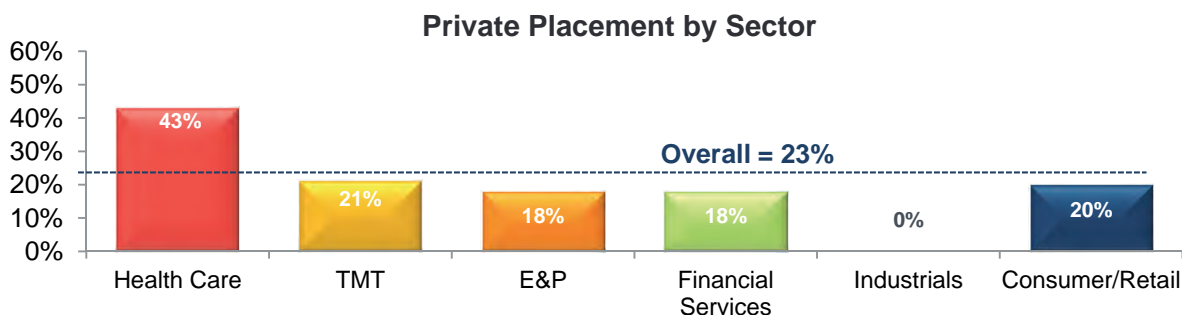
Use of Proceeds*

- » Four of 83 (5%) issuers paid a special dividend in connection with the IPO.
- » Four of 83 (5%) issuers entered into a bridge loan within six months prior to the IPO.



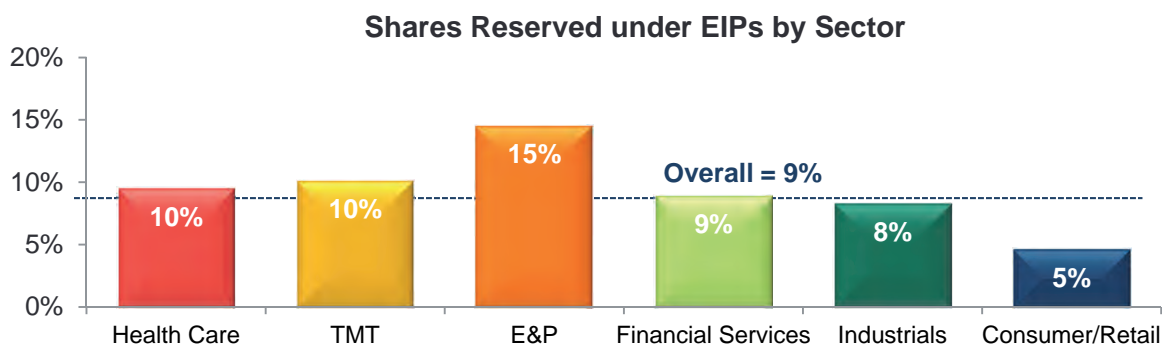
Private Placement

- » 20 of 86 (23%) issuers privately placed equity securities within the twelve months prior to the first submission/filing of the IPO registration statement.
 - 13 of these 20 (65%) issuers privately placed equity securities within the six months prior to the first submission/filing of the IPO registration statement.



Shares Reserved Under Equity Incentive Plans**

- » The average shares reserved under issuer equity incentive plans at the time of IPO as a percentage of outstanding shares following the IPO was 13%.



*Excludes three all-secondary IPOs.

**Excludes IPOs with multiple classes of common stock.

Lock-Ups

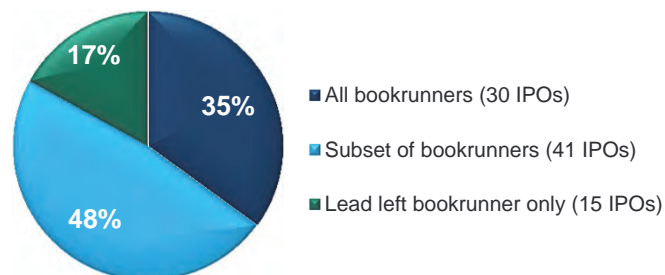
Overview

- » The underwriters in an IPO generally require the issuer, as well as directors, officers and pre-IPO stockholders, to agree not to sell shares of the issuer for a period of time – typically 180 days – following pricing. The lock-up agreement typically contains limited exceptions.
 - 85 of 86 (99%) IPOs had 180-day lock-ups.
 - The IPO surveyed that did not have a 180-day lock-up was the Snap IPO which has a number of unique features for its lock-up structure. For example, insiders in the Snap IPO were locked up for fewer than 180 days (150 or 120 depending on timing of earnings release) and approximately one-quarter of shares purchased in the IPO were locked up for one year by the issuer.
- » Most issuers either disclosed a percentage of shares locked up of very close to 100% or stated that “substantially all” pre-IPO shares were locked up.

Shares Locked Up*



Lock-Up Release**



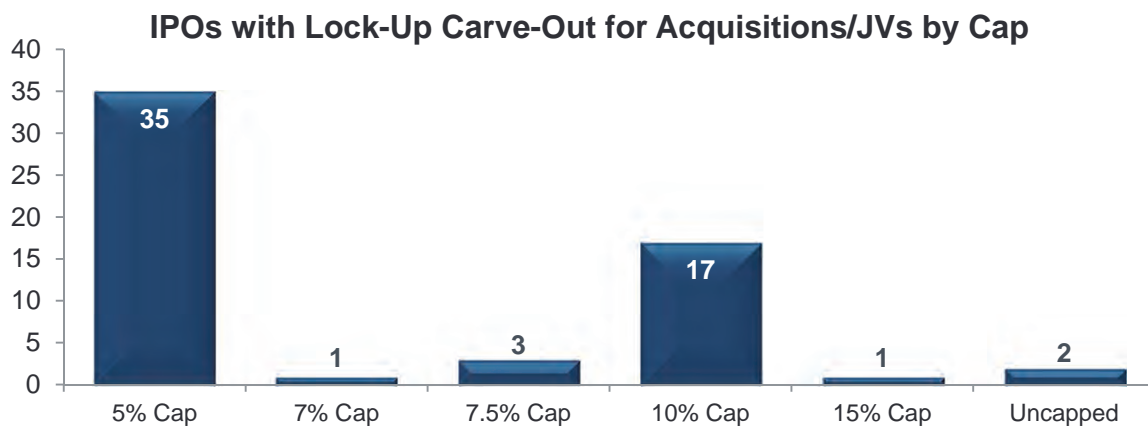
*Excludes seven IPOs with indeterminable information and two IPOs that were outliers.

**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 their shares in an organized follow-on offering or freely into the open market.

Lock-Ups: Carve-Out for Issuances in Connection with Acquisitions or Joint Ventures

Acquisition/JV Carve-Outs

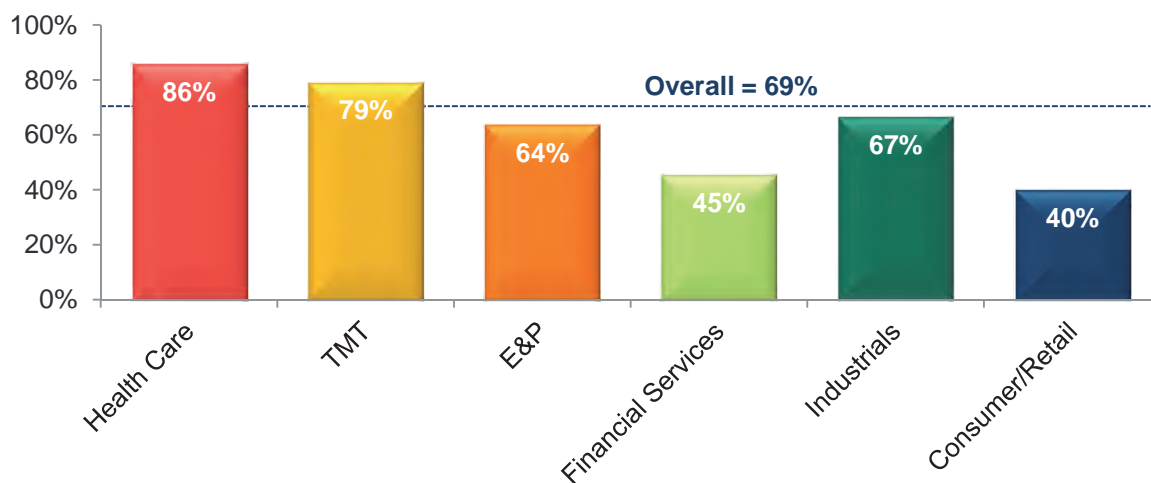
- » 59 of 86 (69%) IPOs included a carve-out in the issuer's lock-up agreement for stock issuances in connection with acquisitions/joint ventures (JVs), commercial collaborations and similar transactions.
- » A majority of the 59 IPOs included a 5% cap for this carve-out.



Sector Analysis

- » Issuer lock-up carve-outs for stock issuances in connection with acquisitions/JVs and commercial collaborations were most prevalent in health care, industrials and TMT IPOs.

Percentage of IPOs with Lock-Up Carve-Out For Acquisitions/JVs by Sector

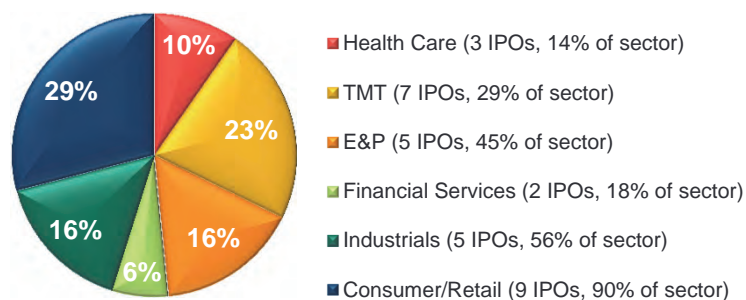


Sponsor-Backed IPOs

Overview

- » 31 of 86 (36%) IPOs were sponsor-backed.*
 - 22 of these 31 (71%) were EGCs as compared to 95% for all non-sponsor-backed IPOs.
- » 90% of consumer/retail IPOs were sponsor-backed and consumer/retail IPOs represented 29% of sponsor-backed IPOs, the most of any sector.

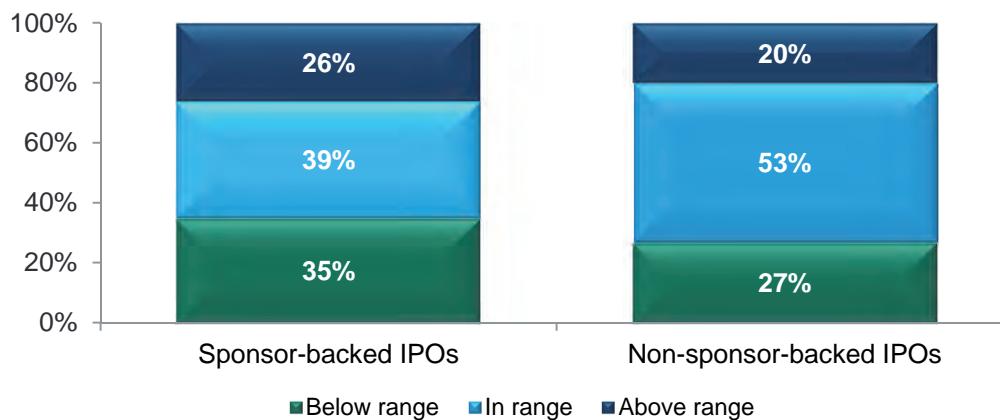
Sponsor-Backed IPOs by Sector



Performance

- » Non-sponsor-backed IPOs were more likely to price in or above the range than sponsor-backed IPOs.

Pricing vs. Range

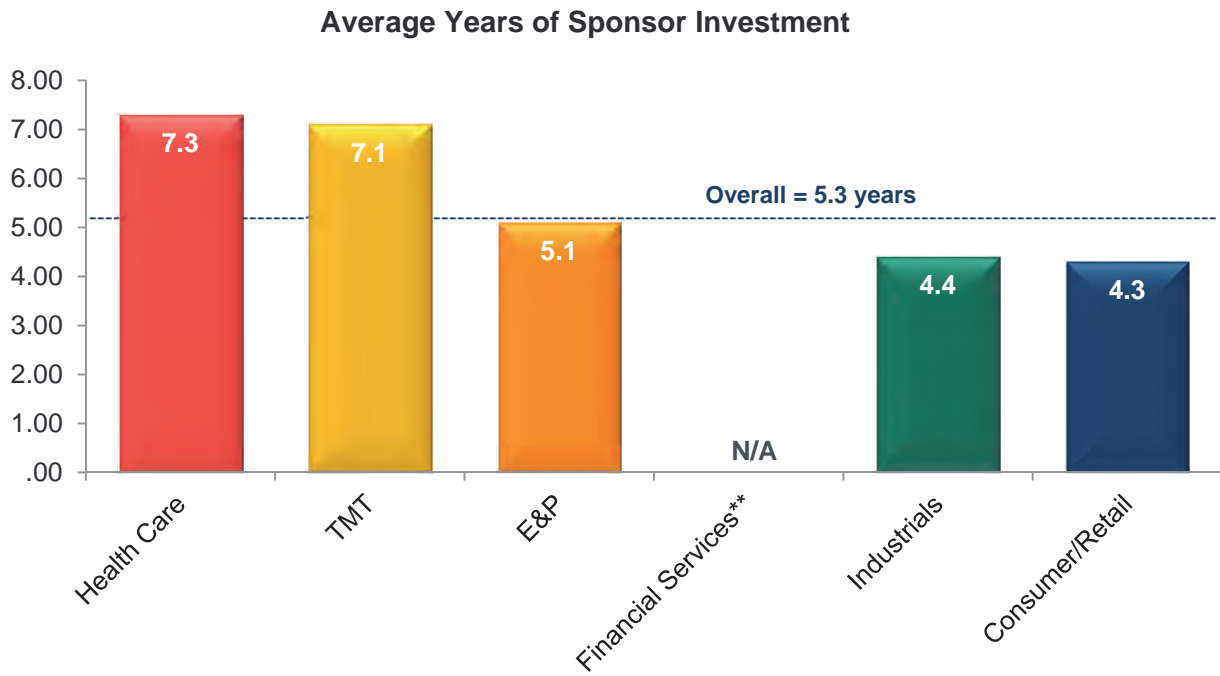


*As defined by Dealogic.

Sponsor-Backed IPOs: Length of Investment

Length of Sponsor Investment*

» The average length of sponsor investment prior to the IPO was 5.3 years.



*Excludes twelve sponsor-backed IPOs that did not disclose sponsor buy-in date.

**The two sponsor-backed IPOs in financial services did not disclose management/sponsor buy-in date.

Sponsor-Backed IPOs: Key Comparisons

Key Comparisons

	Sponsor-Backed	Non-Sponsor-Backed
Percentage of total IPOs	36%	64%
Percentage of IPOs that are EGCs	71%	95%
Average market capitalization at pricing	\$2.0bn	\$1.5bn
Percentage of IPOs eligible for the controlled company exemption*	57%	29%
Average number of total first round SEC comments**	25	22
Average number of SEC comment letters**	3	4
Average number of days from first submission/filing to pricing** (excludes an IPO with submission to pricing over 18 months)	120	143
Average total IPO expenses (excluding underwriting fees)	\$5.2mm	\$4.1mm
Median total IPO expenses (excluding underwriting fees)	\$4.5mm	\$3.3mm
Percentage of IPOs with a secondary component	42%	16%
Percentage of IPOs disclosing EBITDA and/or Adjusted EBITDA	77%	35%
Percentage of IPOs with DSPs	42%	55%
Percentage of IPOs with insiders purchasing	23%	38%

*Excludes MLPs (given their unique governance structures) and FPIs (subject to home jurisdiction governance rules).

**Excludes four prior SEC-reviewed issuers.



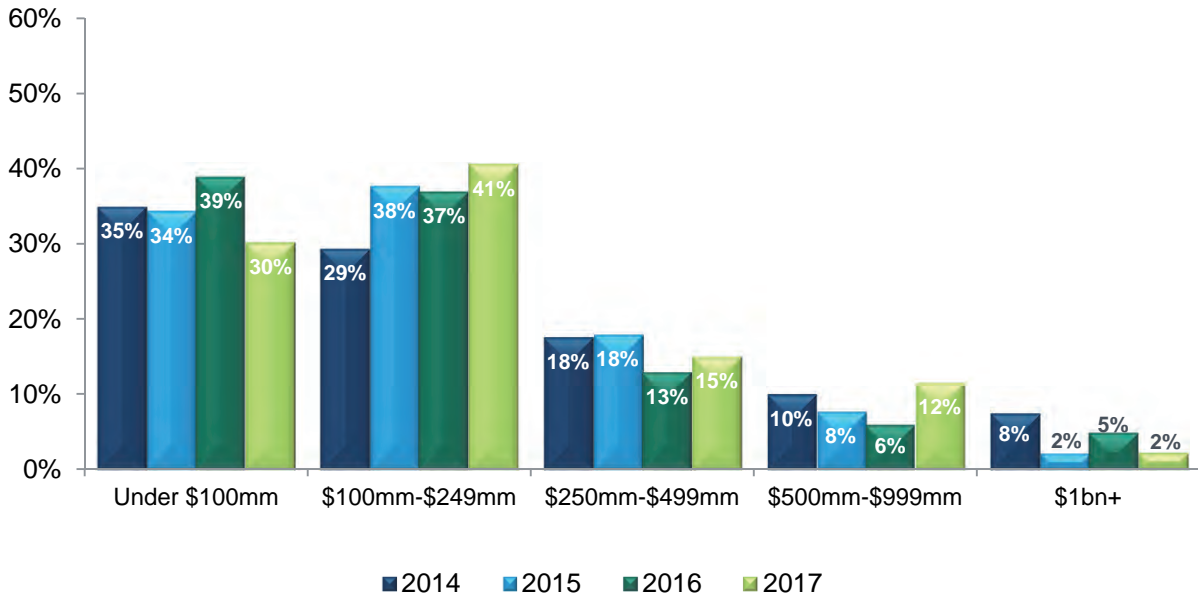
INITIAL PUBLIC OFFERINGS

Trend Analysis

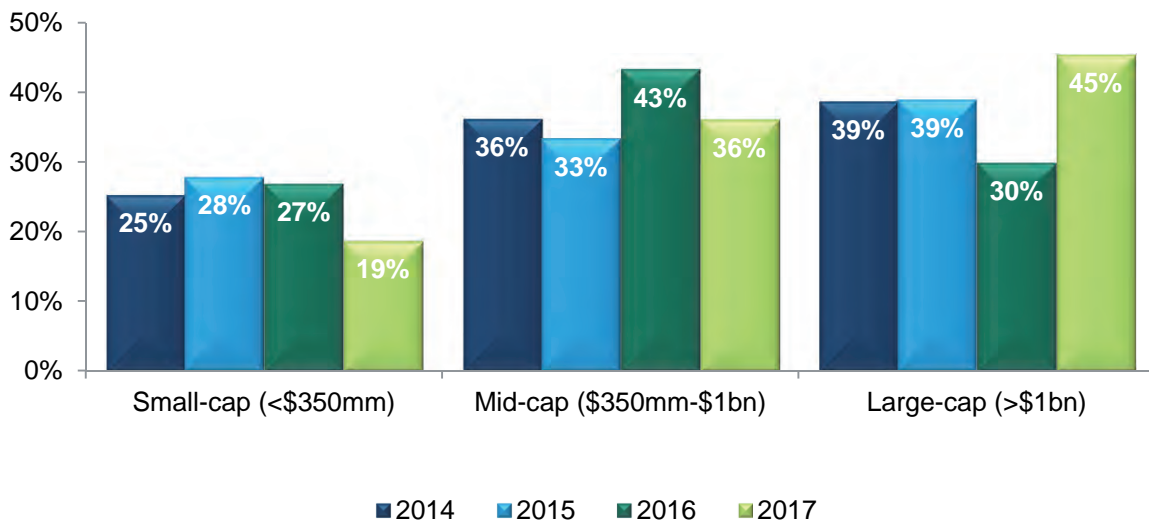
Overview

Population

Percentage of IPOs by Deal Value*



Percentage of IPOs by Market Cap at Pricing

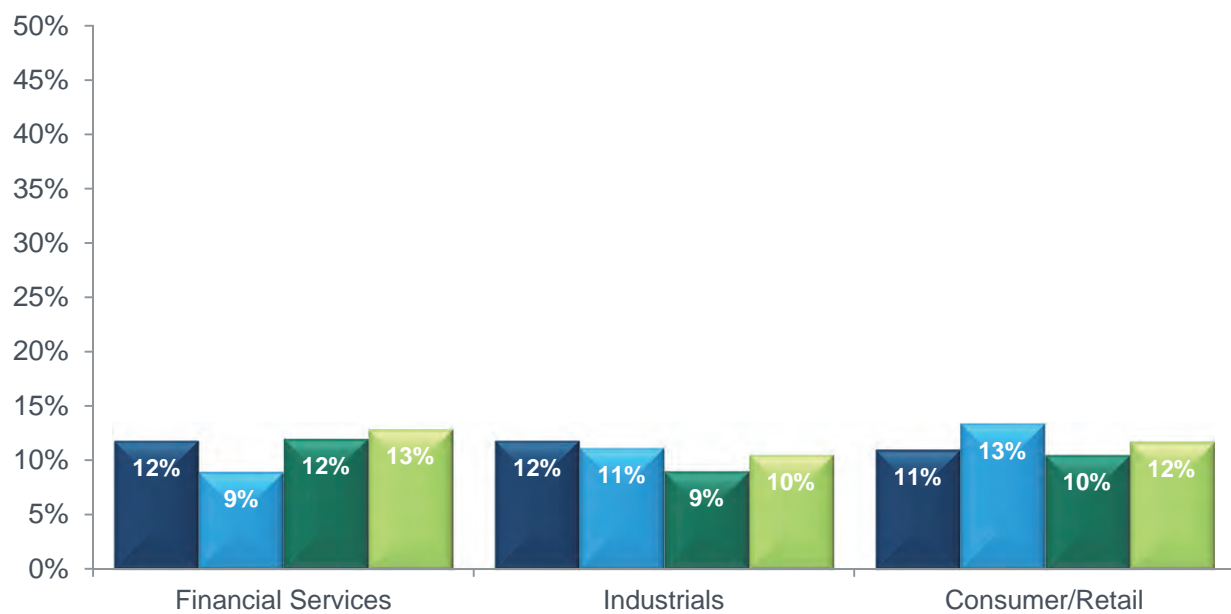
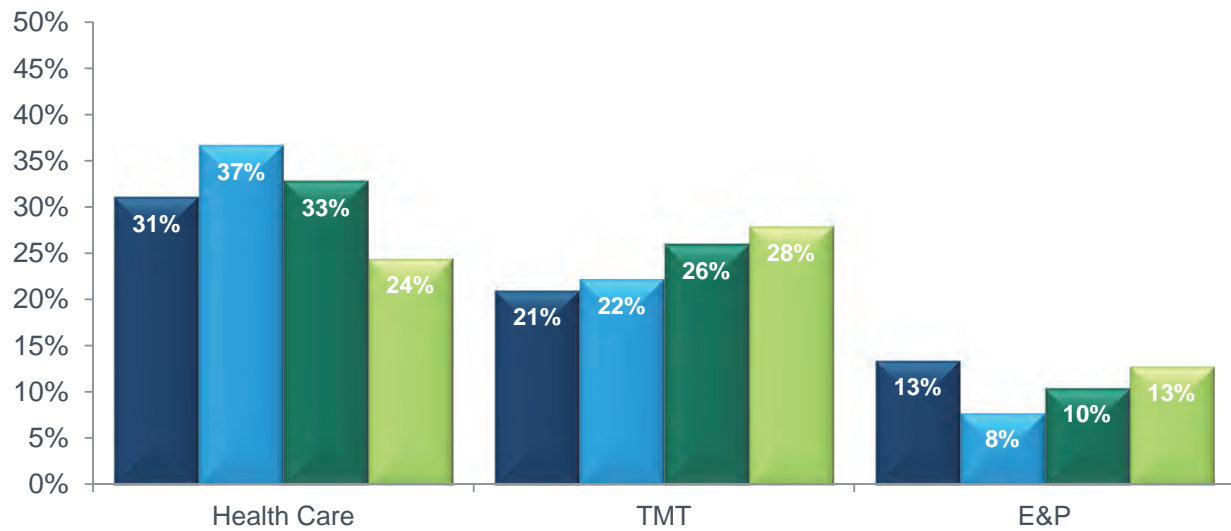


*Deal value consists of priced amount in base offering and excludes any exercise of the over-allotment option.

Sector Analysis

Sector Trends

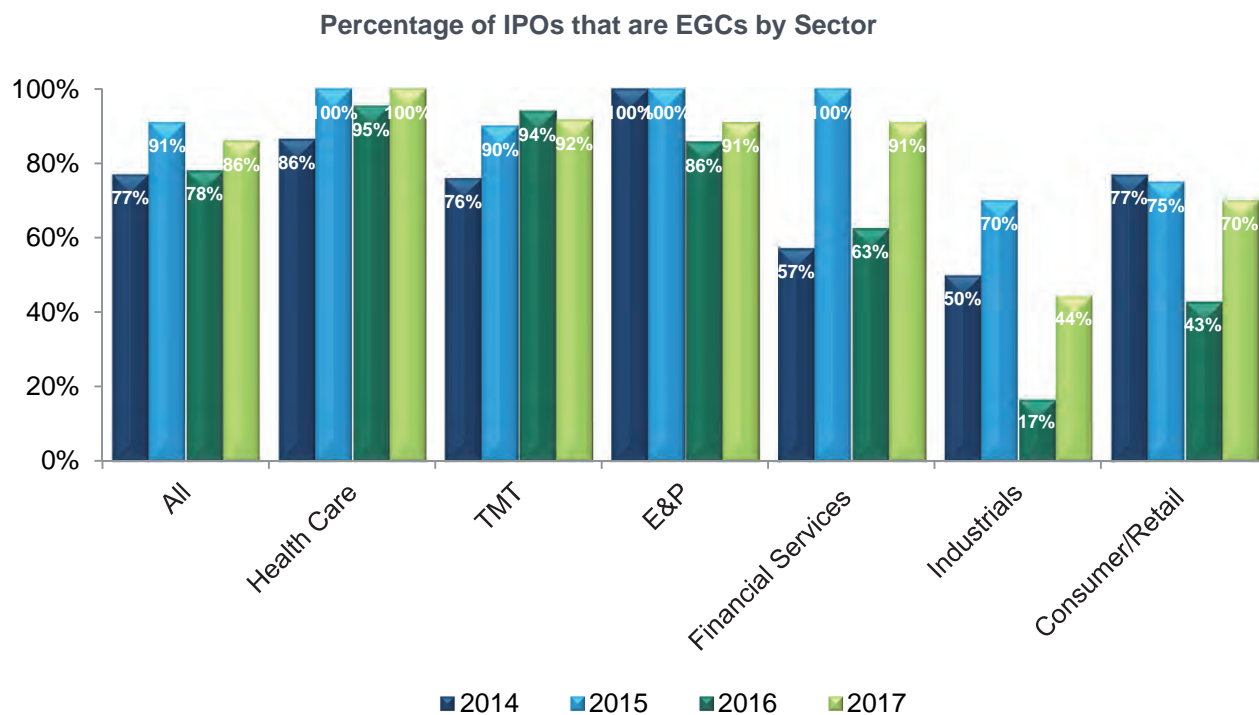
Sectors by Deal Count
(As a % of IPOs)



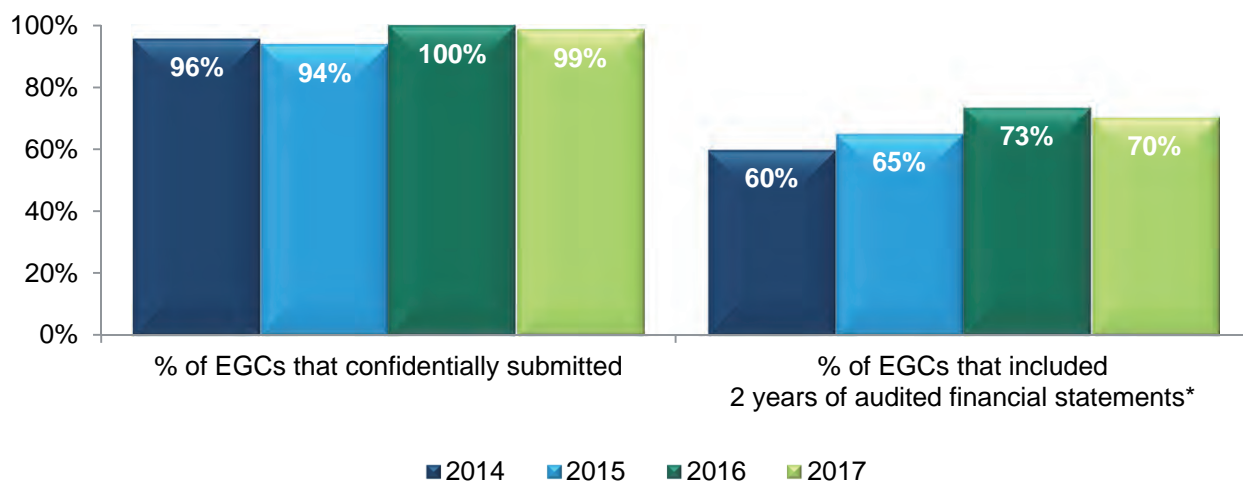
■ 2014 ■ 2015 ■ 2016 ■ 2017

EGCs

Sector Analysis



EGC Exemptions

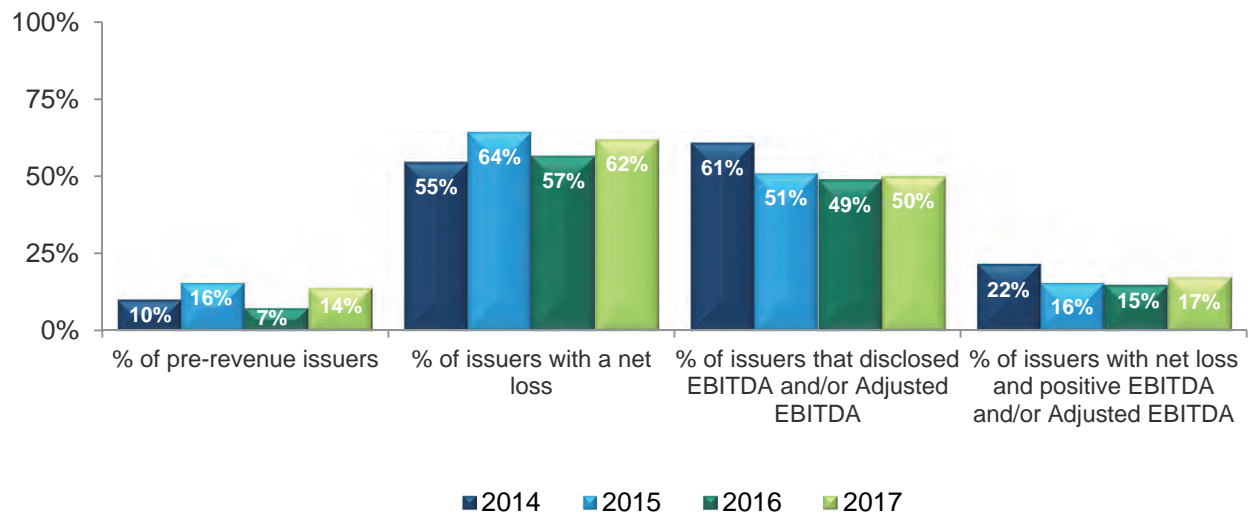


*Excludes two EGCs in 2015, three in 2016 and one in 2017 that provided financial statements since inception, which period, in each case, was less than two years.

Financial Information

Financial Information

- » There was an increase in pre-revenue issuers from 2016 to 2017.
- » There was a similar percentage of issuers disclosing EBITDA and/or Adjusted EBITDA and issuers with net loss and positive EBITDA and/or Adjusted EBITDA for the third year in a row.

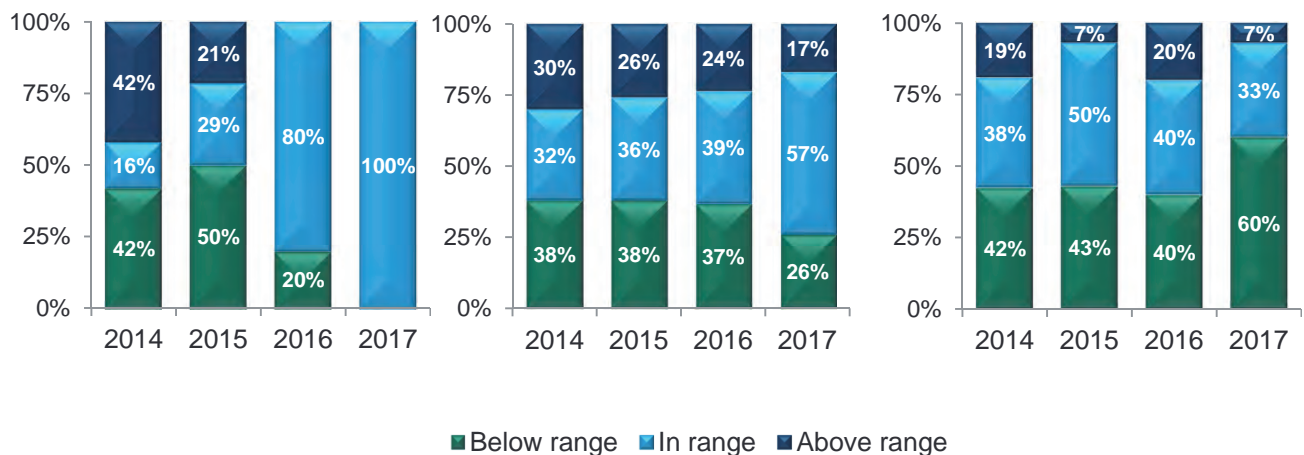


Pricing vs. Range

Pre-Revenue Issuers

Issuers with a Net Loss

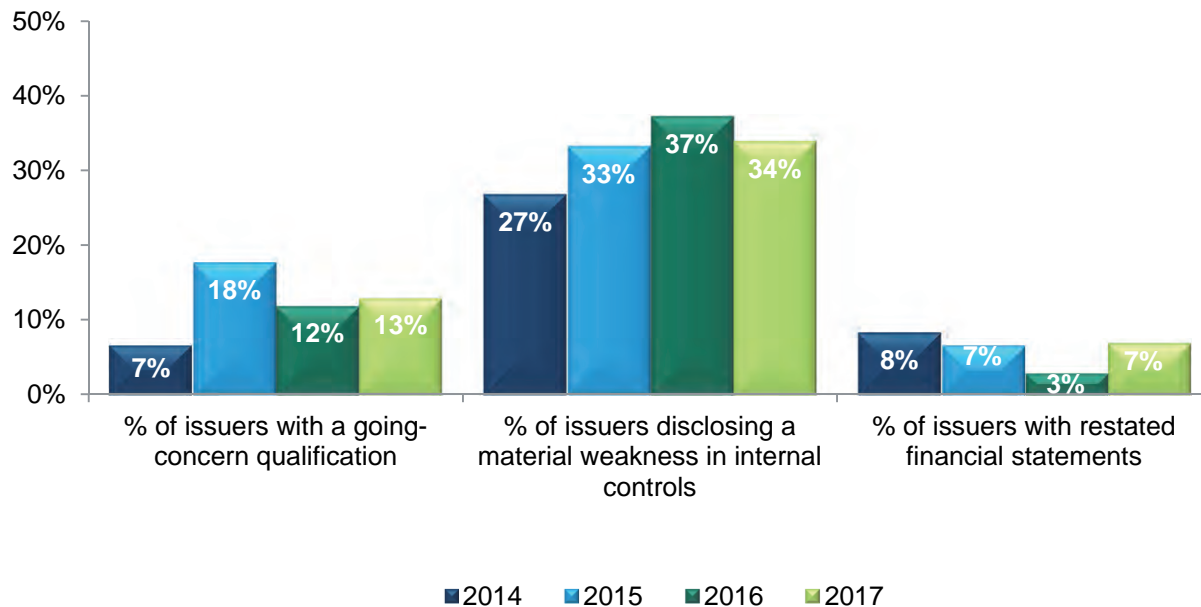
Issuers with a Net Loss and Positive EBITDA and/or Adjusted EBITDA



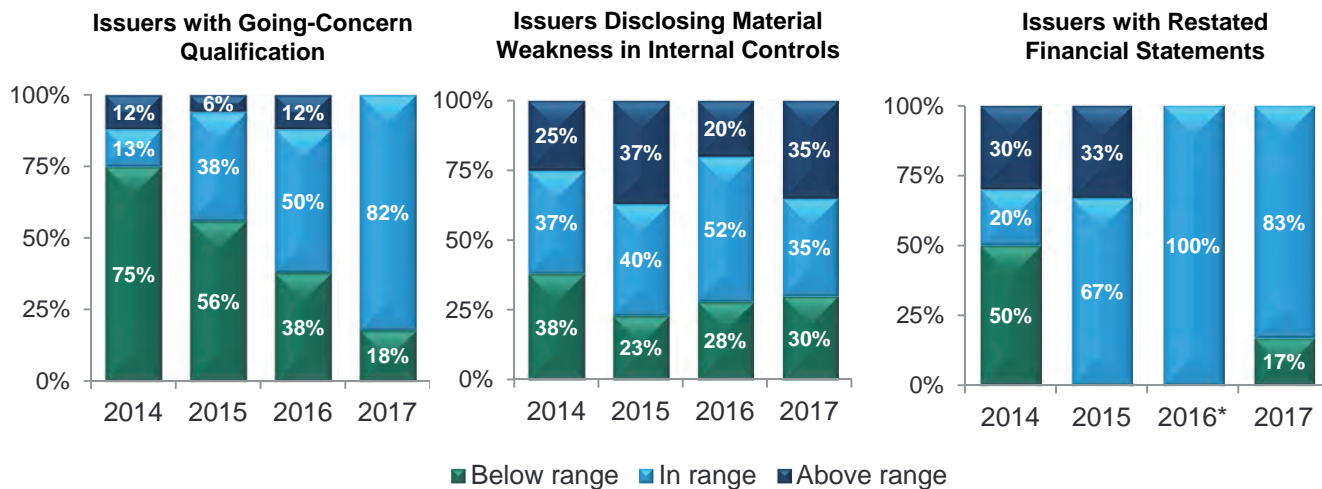
Accounting/Internal Controls

Accounting/Internal Controls

» Since 2014, about a third of the issuers disclosed a material weakness in internal controls.



Pricing vs. Range



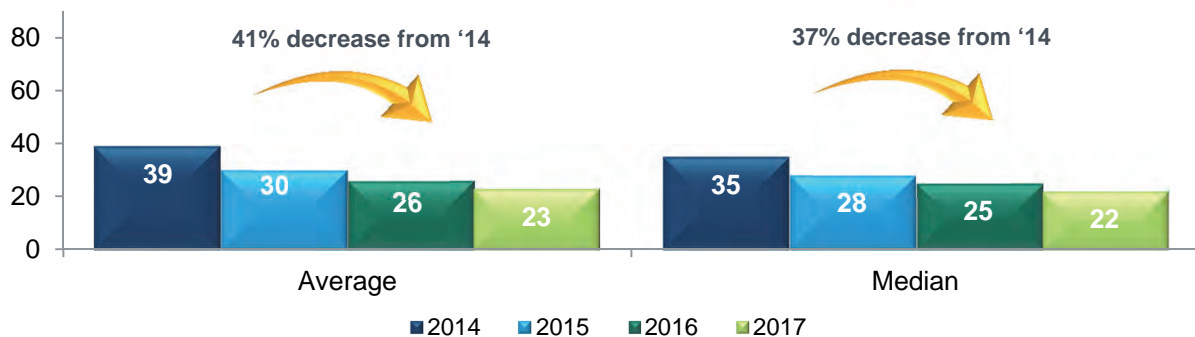
*Only two issuers in 2016.

SEC Review

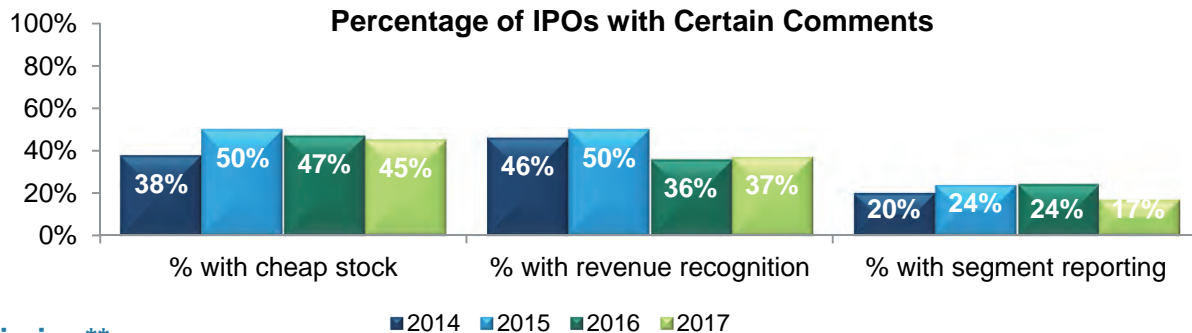
Total First Round SEC Comments*

- » There continues to be a decrease in both the average and median number of first round comments received by issuers from the SEC.

Number of First Round SEC Comments



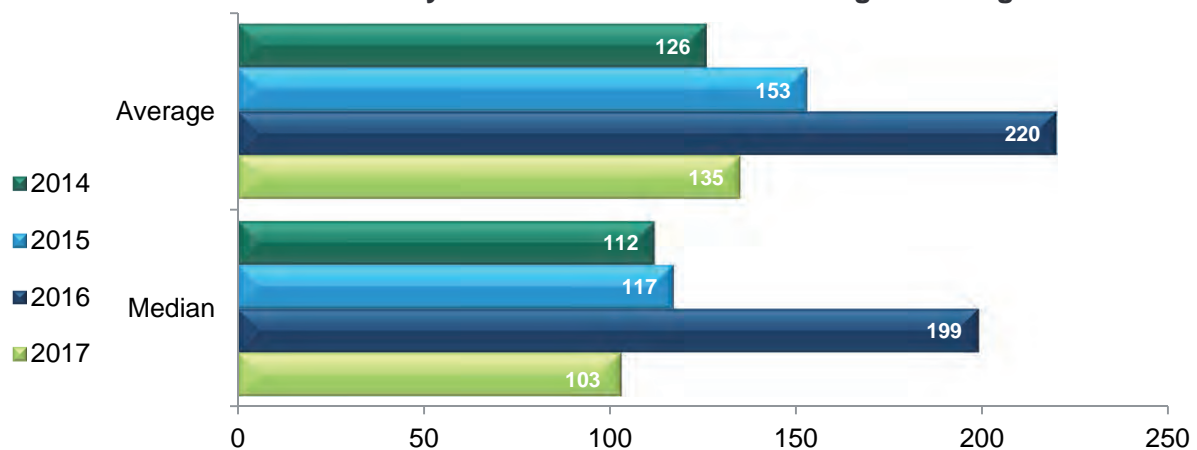
Percentage of IPOs with Certain Comments



Timing**

- » There was a significant decrease in 2017 in the average and median time to pricing from first submission/filing.

Number of Days From First Submission/Filing to Pricing

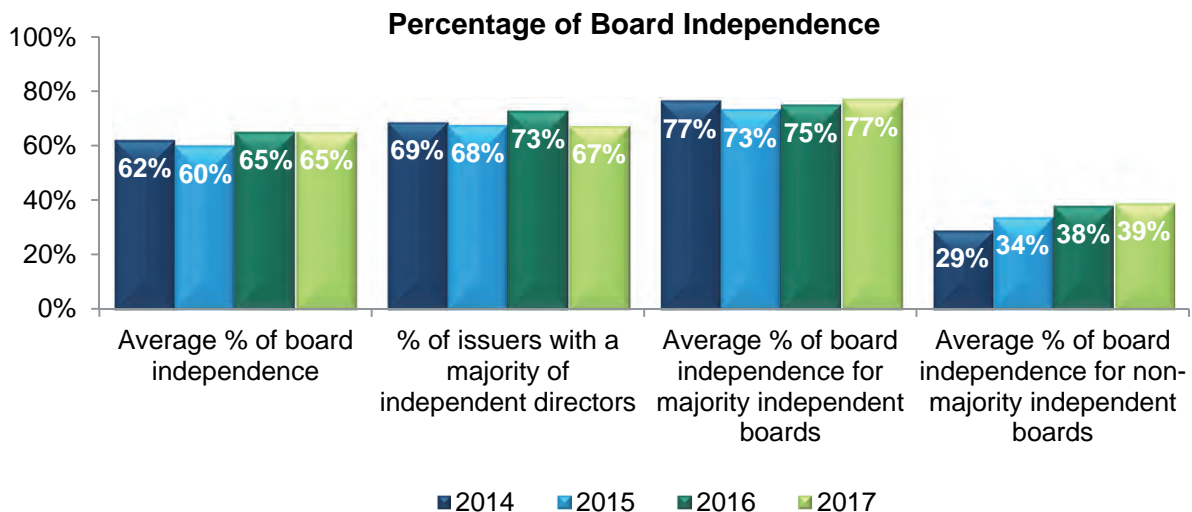
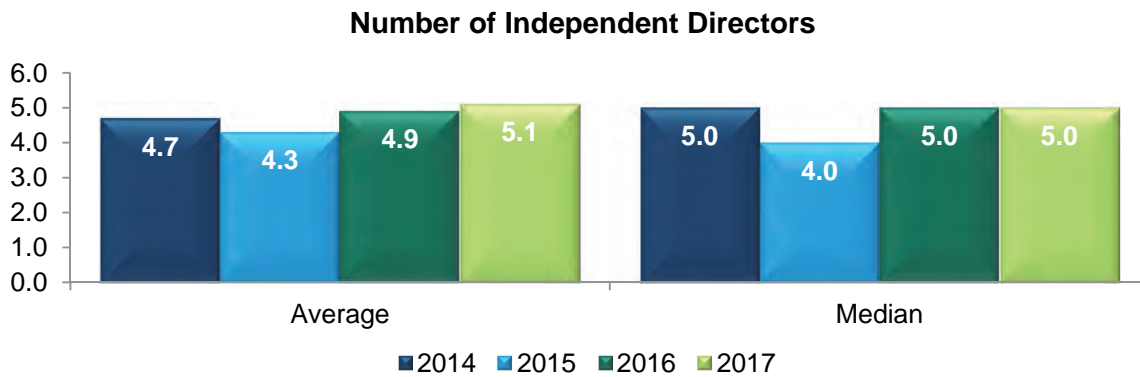
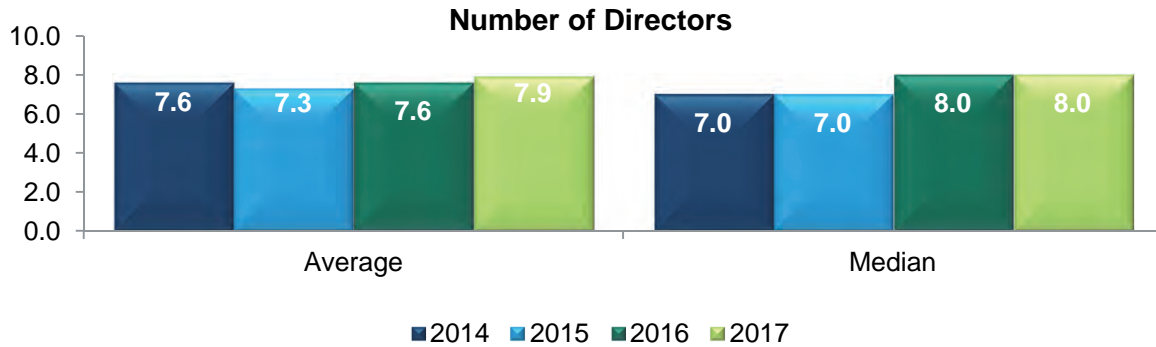


*Excludes prior SEC-reviewed issuers and issuers for which SEC comment letters are not publicly available (one in 2015).

**Excludes prior SEC-reviewed issuers and also an additional two 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.

Corporate Governance: Director Independence

Director Independence*



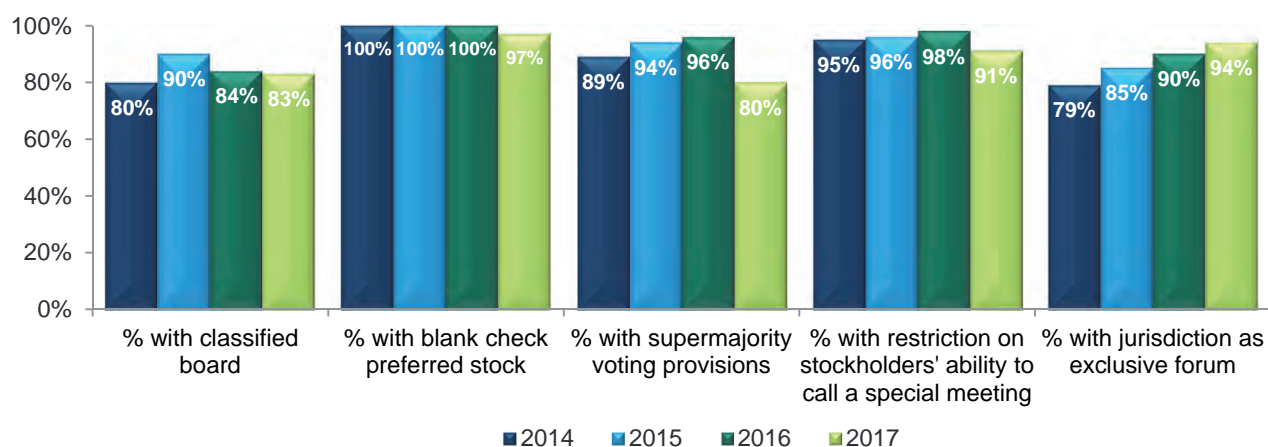
*Excludes MLPs (given their unique governance structures), FPIs (subject to home jurisdiction governance rules) and, for 2016, an issuer listed on the Bats BZX Exchange.

Corporate Governance: Anti-Takeover Measures and Key Items

Anti-Takeover Measures*

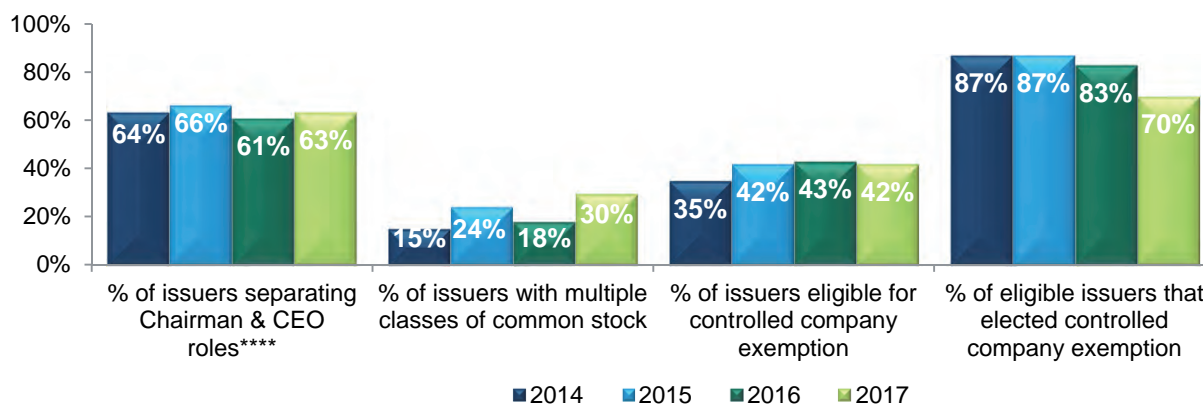
- » A number of anti-takeover measures for IPOs have decreased including supermajority voting provisions and restriction on stockholders' ability to call special meeting.
- » There has been an increase in the percentage of IPOs including an exclusive forum provision in their organizational documents since 2014.

Percentage of IPOs with Anti-Takeover Measures and Exclusive Forum**



Other Key Corporate Governance Items***

- » There was an increase in the percentage and number of issuers with multiple classes of common stock in 2017.
- » There was a decrease in the percentage of issuers that are eligible for controlled company exemption taking advantage of it.



*Excludes MLPs (given their unique governance structures), FPIs (subject to home jurisdiction governance rules), non-U.S. incorporated issuers that are not FPIs and, for 2016, an issuer listed on the Bats BZX Exchange

**Includes anti-takeover measures subject to trigger.

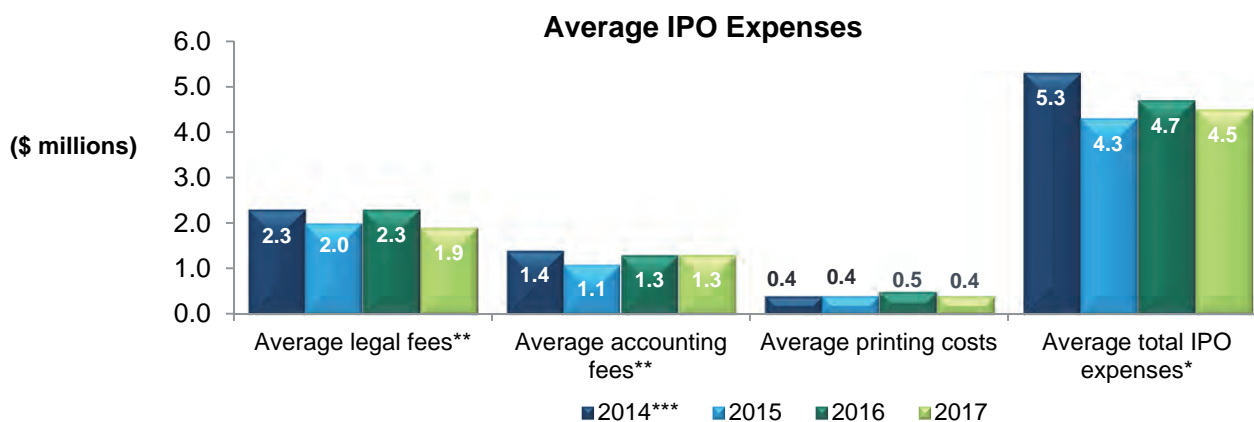
***Excludes MLPs (given their unique governance structures) and FPIs (subject to home jurisdiction governance rules).

****Excludes one IPO in 2014, two IPOs in 2016 and one in 2017 with insufficient information.

IPO Fees and Expenses

IPO Fees and Expenses*

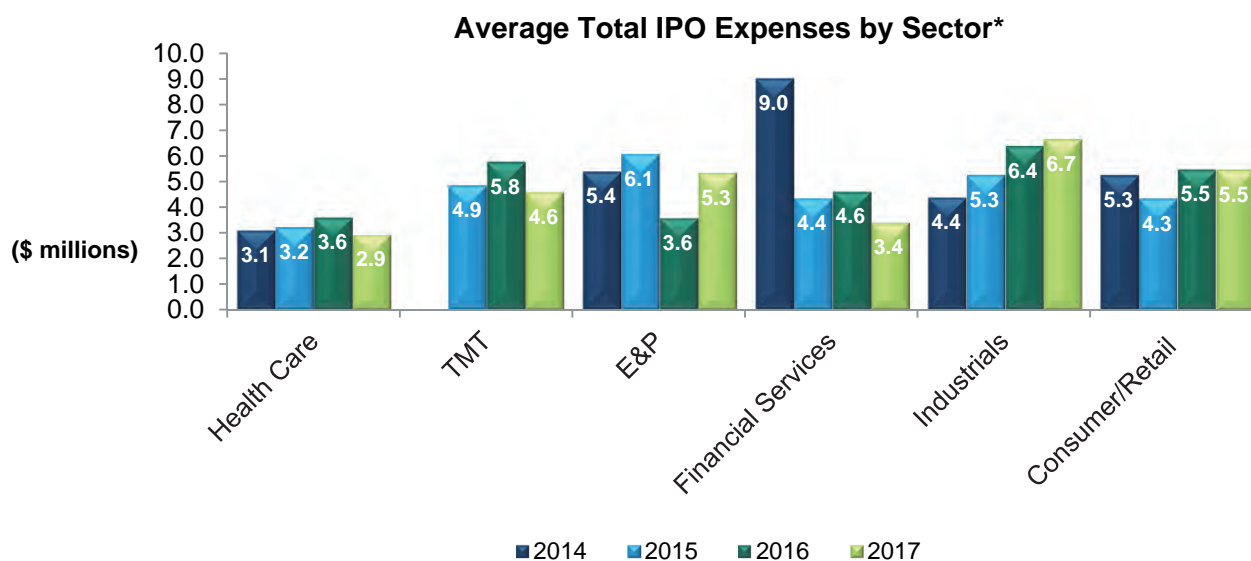
» In 2017, total IPO expenses remained relatively flat and, with larger deal sizes this year, expenses as a percentage of the base deal decreased.



Median (\$mm)	2014	2015	2016	2017
Average legal fees**	\$1.5	\$1.7	\$2.0	\$1.6
Average accounting fees**	\$1.0	\$0.9	\$1.0	\$1.0
Average printing costs	\$0.3	\$0.3	\$0.4	\$0.4
Average total IPO expenses*	\$3.3	\$3.7	\$3.9	\$3.9

Expenses as % of base deal	2014	2015	2016	2017
Average legal fees**	1.3%	1.5%	1.8%	1.3%
Average accounting fees**	0.8%	0.8%	1.0%	0.8%
Average printing costs	0.2%	0.3%	0.4%	0.3%
Average total IPO expenses*	2.9%	3.1%	3.5%	2.7%

IPO Expenses by Sector



*Excludes underwriting fees.

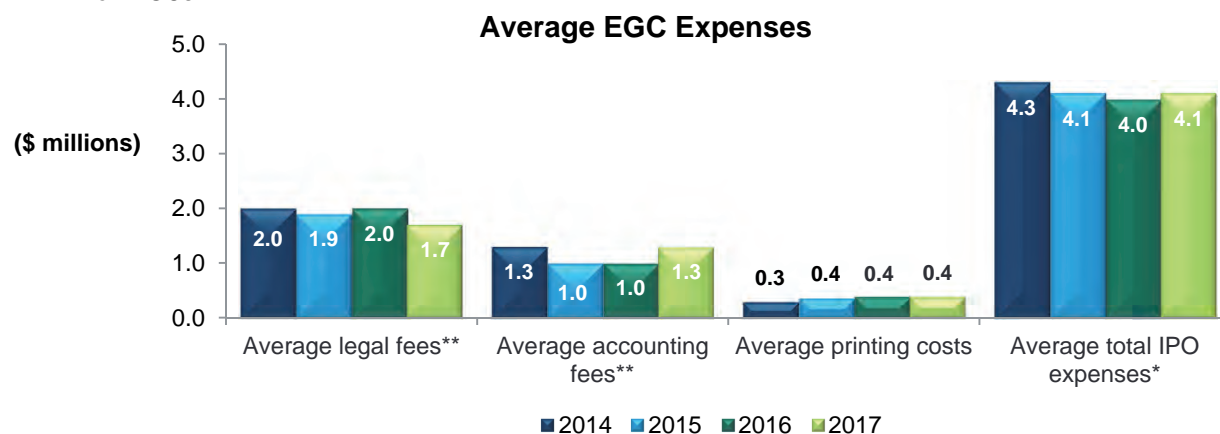
**Excludes one IPO in 2014, two in 2016 and one in 2017 with insufficient information.

***Alibaba is excluded in 2014.

IPO Fees and Expenses: EGCs vs. Non-EGCs

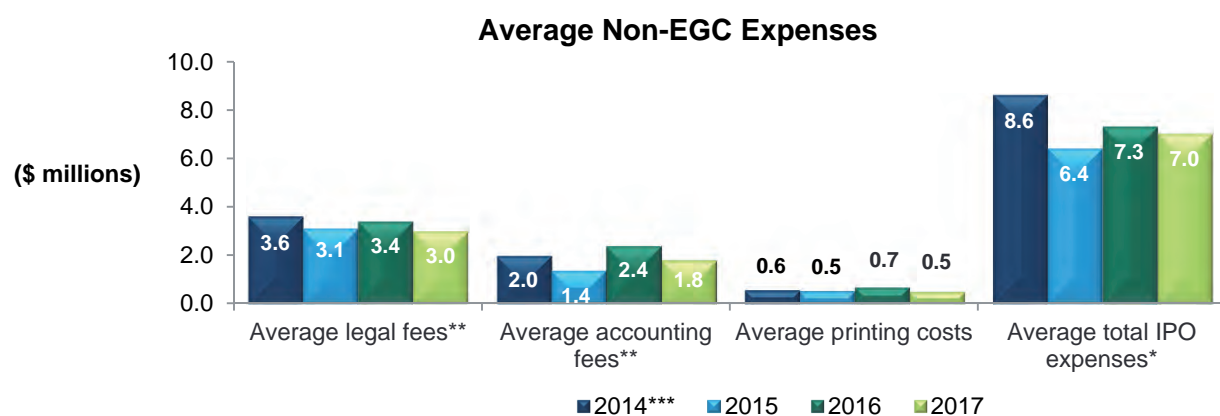
EGCs vs. Non-EGCs*

- » IPO expenses for EGCs continue to be lower than for non-EGCs.
- » In 2017, total IPO expenses as a percentage of the base deal were the lowest in four years for both EGCs and Non-EGCs.



Median (\$mm)	2014	2015	2016	2017
Average legal fees**	\$1.5	\$1.6	\$1.8	\$1.5
Average accounting fees**	\$0.9	\$0.9	\$0.9	\$0.9
Average printing costs	\$0.3	\$0.3	\$0.3	\$0.4
Average total IPO expenses*	\$3.0	\$3.6	\$3.6	\$3.7

Expenses as % of base deal	2014	2015	2016	2017
Average legal fees**	1.5%	1.5%	2.1%	1.3%
Average accounting fees**	0.9%	0.9%	1.1%	0.9%
Average printing costs	0.3%	0.3%	0.4%	0.3%
Average total IPO expenses*	3.2%	3.2%	4.0%	2.9%



Median (\$mm)	2014	2015	2016	2017
Average legal fees**	\$2.8	\$3.0	\$2.8	\$3.3
Average accounting fees**	\$1.3	\$0.7	\$2.1	\$1.9
Average printing costs	\$0.4	\$0.6	\$0.6	\$0.4
Average total IPO expenses*	\$6.1	\$5.9	\$6.2	\$6.5

Expenses as % of base deal	2014	2015	2016	2017
Average legal fees**	0.8%	0.7%	0.9%	0.8%
Average accounting fees**	0.4%	0.3%	0.6%	0.4%
Average printing costs	0.1%	0.1%	0.2%	0.1%
Average total IPO expenses*	1.8%	1.3%	1.9%	1.7%

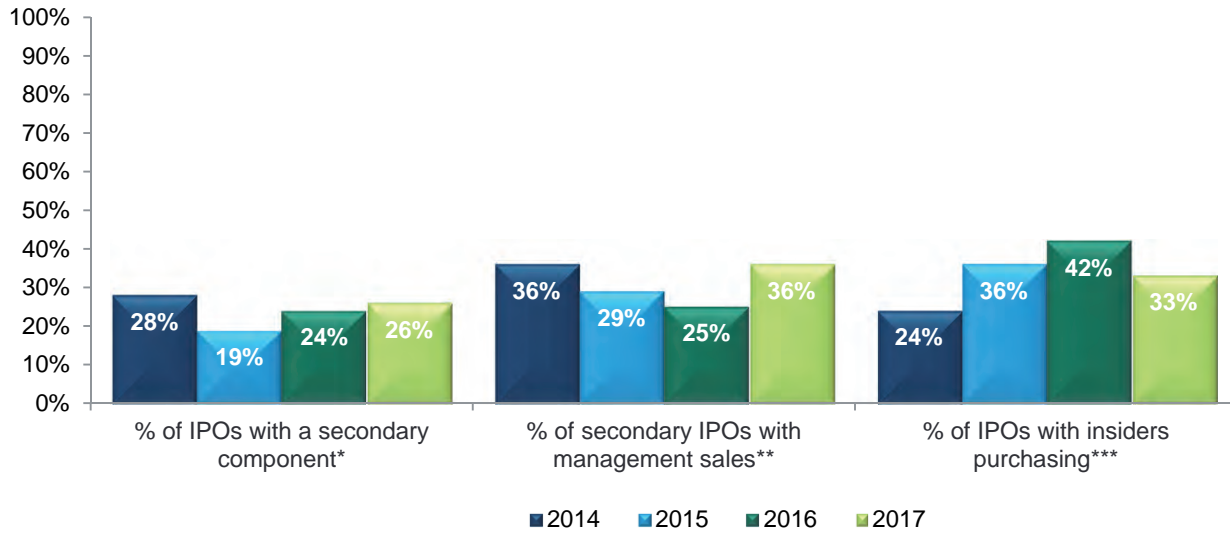
*Excludes underwriting fees.

**Excludes one IPO in 2014, two in 2016 and one in 2017 with insufficient information.

***Alibaba is excluded in 2014.

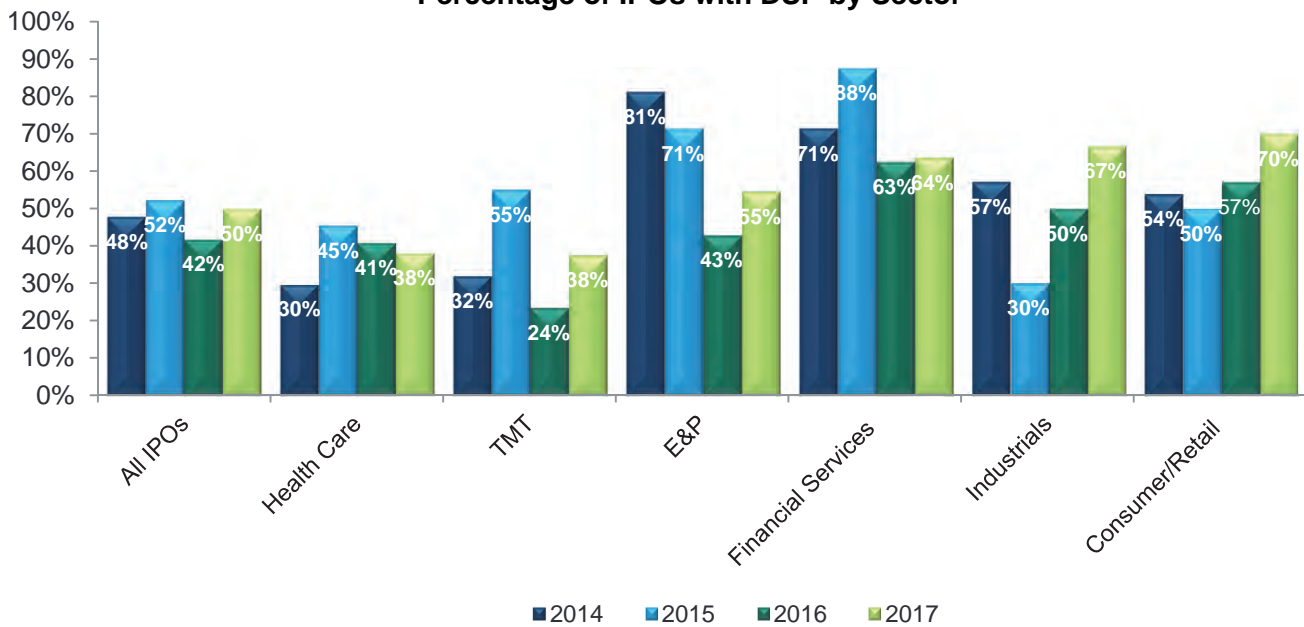
Deal Structure & DSPs

Deal Structure



Directed Share Programs (DSPs)

Percentage of IPOs with DSP by Sector



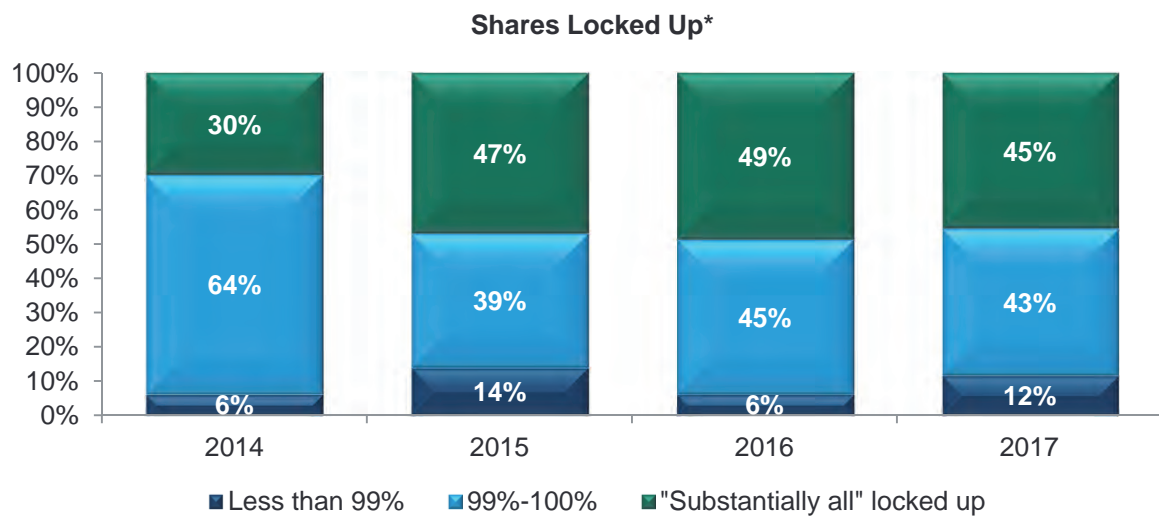
*IPOs with a secondary component only in the over-allotment option are counted as without a secondary component.

**Excludes two IPOs in 2014 with insufficient information.

***Does not include purchases through a DSP.

Lock-Ups & Carve-Outs

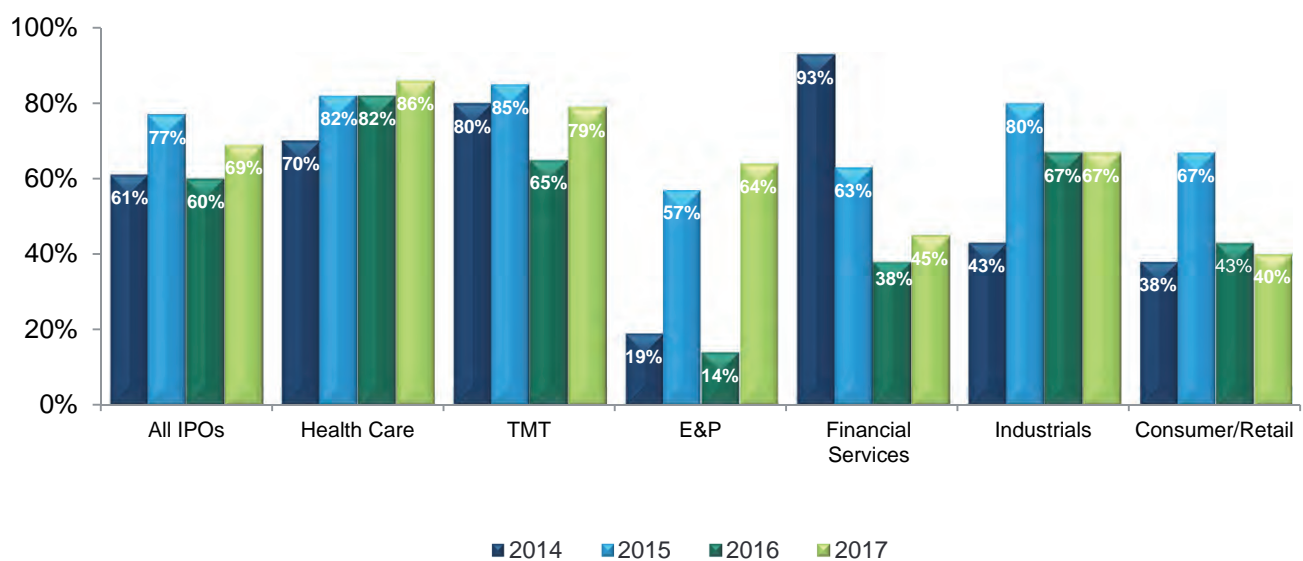
Lock-Ups



Issuer Carve-out for Acquisitions/JVs

- » 2017 saw an increase in issuer carve-outs for stock issuances in connection with acquisitions/JVs and commercial collaborations.

Percentage of IPOs with Issuer Lock-Up Carve-out for Acquisitions/JVs by Sector

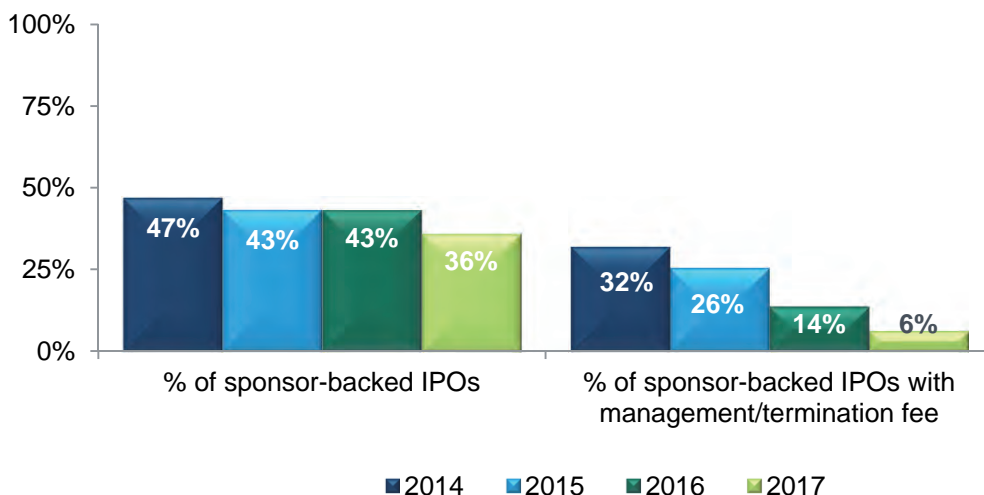


*Excludes IPOs with indeterminable information (four IPOs in 2014, one in 2015, two in 2016 and seven in 2017) and IPOs with outlier percentages (one IPO in 2014, one in 2016, and two in 2017).

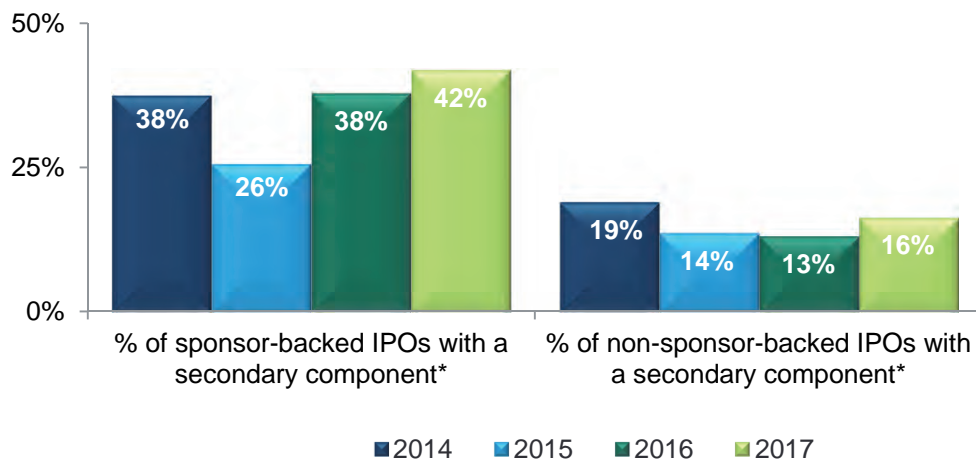
Sponsor-Backed IPOs

Sponsor-Backed IPOs

» There was a decrease in sponsor-backed IPOs with management/termination fees.



» There was an increase in the percentage of sponsor-backed IPOs with a secondary component.



*IPOs with a secondary component only in the over-allotment option are not counted as having a secondary component.

Sponsor-Backed IPOs

Key Comparisons

	Sponsor-Backed	Non-Sponsor-Backed
	2014-2017	2014-2017
Percentage of IPOs	43%	57%
Percentage of IPOs that are EGCs	70%	93%
Average market capitalization at pricing*	\$1.8bn	\$1.4bn
Percentage of IPOs eligible for the controlled company exemption**	52%	15%
Average number of total first round SEC comments***	32	30
Average number of days from first submission/filing to pricing date****	162	145
Average total IPO expenses (excluding underwriting fees)	\$5.1mm	\$4.5mm
Median total IPO expenses (excluding underwriting fees)	\$4.5mm	\$3.2mm
Percentage of IPOs with a secondary component	35%	16%
Percentage of IPOs disclosing Adjusted EBITDA	76%	33%
Percentage of IPOs with DSPs	47%	49%
Percentage of IPOs with insiders purchasing	19%	43%

*Excludes Alibaba in non-sponsor-backed.

**Excludes MLPs (given their unique governance structures) and FPIs (subject to home jurisdiction governance rules).

***Excludes prior SEC-reviewed issuers and issuers for which SEC comment letters that are not publicly available.

****Excludes prior SEC-reviewed issuers and IPOs with time from first submission/filing to pricing of greater than 18 months.



INITIAL PUBLIC OFFERINGS

Health Care

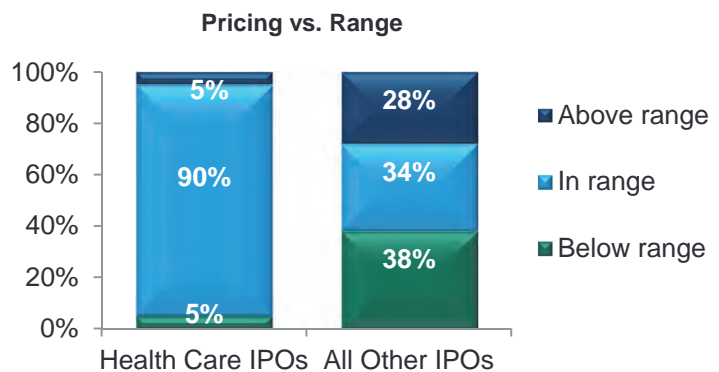
Health Care Market Analysis

Overview

- » We analyzed 21 health care IPOs in 2017:
 - 20 (95%) biotech/biopharm.
 - 1 (5%) medical devices/diagnostics.
- » Four of 21 (19%) were FPIs, with headquarters in Canada, Germany, Switzerland and the United Kingdom.
- » U.S. health care issuers were headquartered in seven states, with the highest number in Massachusetts (eight of 17 (47%)) and California (four of 17 (24%)).

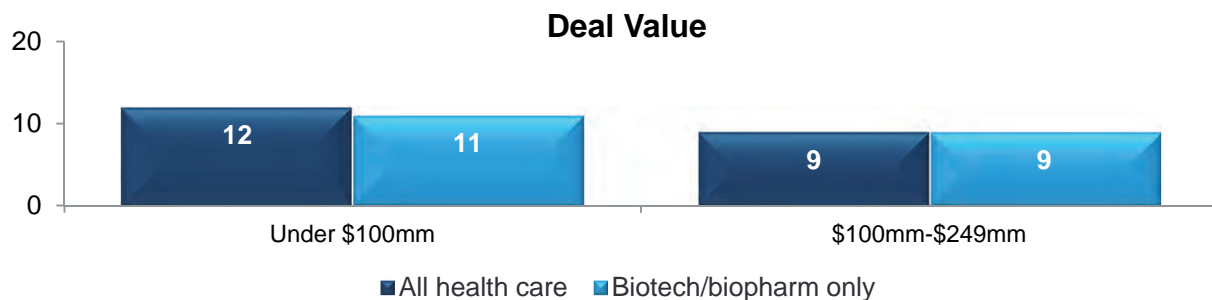
Deal Execution

- » 90% of health care IPOs priced in the range, compared to 34% for all other IPOs.

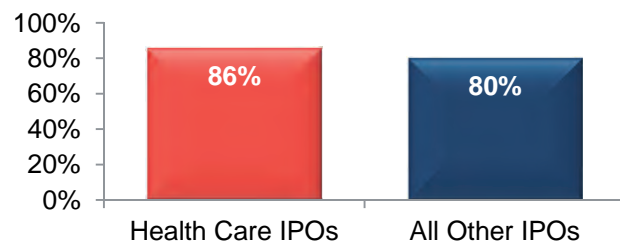


Deal Value & Over-Allotment*

- » All health care IPOs had deal values below \$250 million.



- » The over-allotment option was partially or fully exercised in 18 of 21 (86%) health care IPOs, compared to 80% for all other IPOs.

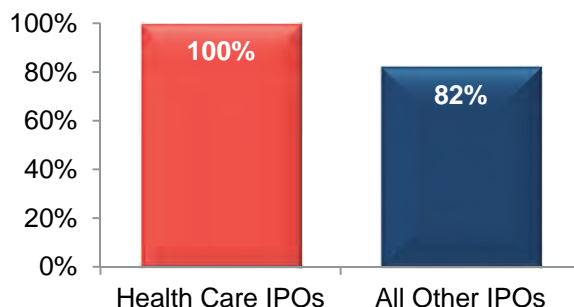


*Deal value consists of priced amount in base offering and excludes any exercise of the over-allotment option.

EGCs/Confidential Submission & Financial Statements

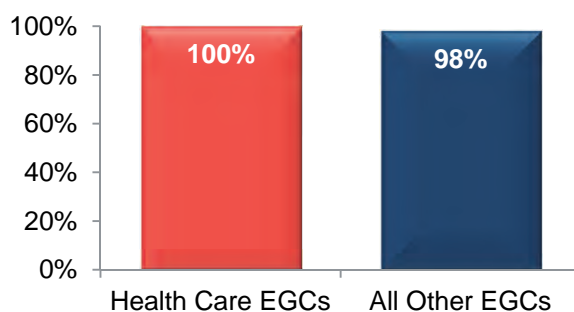
Overview

» All health care IPOs were EGCs, compared to 82% for all other IPOs.



Confidential Submission

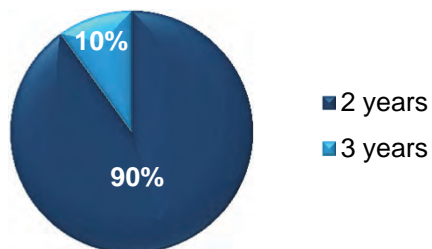
» All health care EGCs elected confidential submission, compared to 98% for all other EGCs.



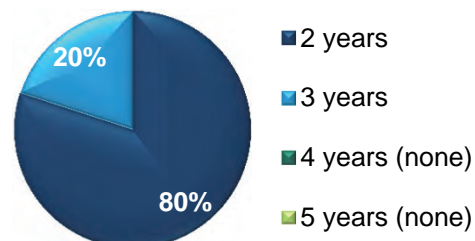
Years of Financial Statements

» 90% of health care EGCs included two years of audited financial statements (compared to 62% for all other EGCs) and 80% included two years of selected financial data (compared to 47% for all other EGCs).*

Years of Audited Financial Statements



Years of Selected Financial Data



*Excludes one issuer that provided financials since inception, which period was less than two years.

Accounting/Internal Controls & Flash Results

Accounting/Internal Controls: All Health Care IPOs

- » Of the 21 health care IPOs:
 - Nine (43%) had a going-concern qualification.
 - Four (19%) disclosed a material weakness in internal control over financial reporting.
 - Two (10%) had restated financial statements.
 - 12 (57%) health care IPOs had at least one of the issues above (going-concern, material weakness, or restated financial statements).

Accounting/Internal Controls: Biotech/Biopharm IPOs

- » Of the 20 biotech/biopharm IPOs:
 - Eight (40%) had a going-concern qualification.
 - Three (15%) disclosed a material weakness in internal control over financial reporting.
 - Two (10%) had restated financial statements.
 - 11 (55%) had at least one of the issues above (going-concern, material weakness or restated financial statements).

Flash Results

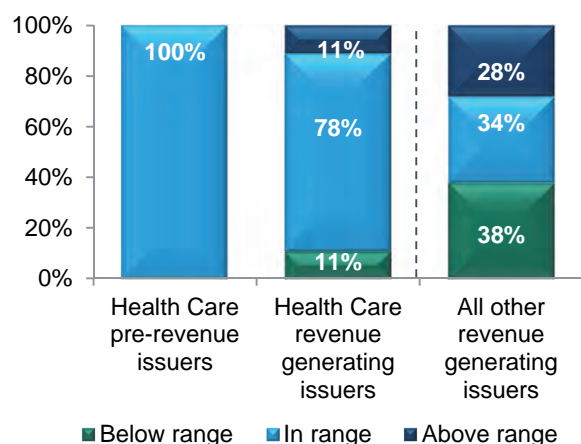
- » 14 of 21 (67%) health care IPOs priced within 45 days of the end of the fourth quarter of 2016 or the first, second or third quarter of 2017.
 - None showed flash results. Flash results may be less meaningful for health care IPOs due to a high percentage of pre-revenue issuers.

Revenue, Net Income/Loss & EBITDA/Adjusted EBITDA

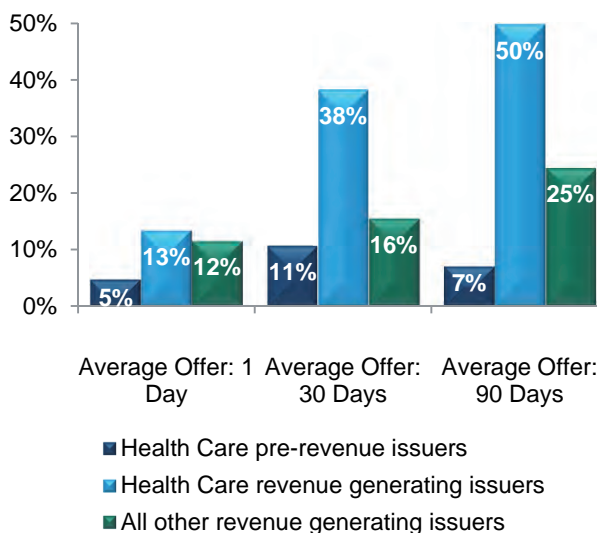
Revenue

- » 12 of 21 (57%) health care issuers were pre-revenue.
 - These 12 represent all of the pre-revenue issuers in our study.

Pricing vs. Range



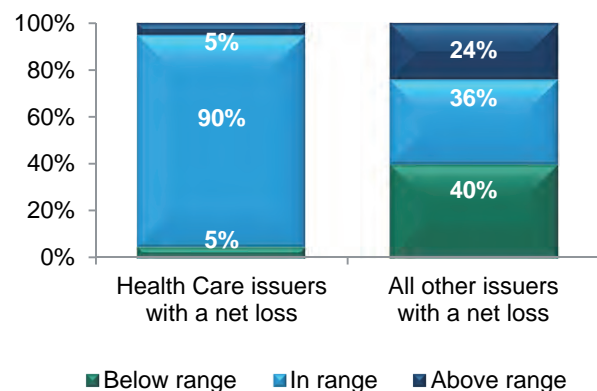
Aftermarket Performance



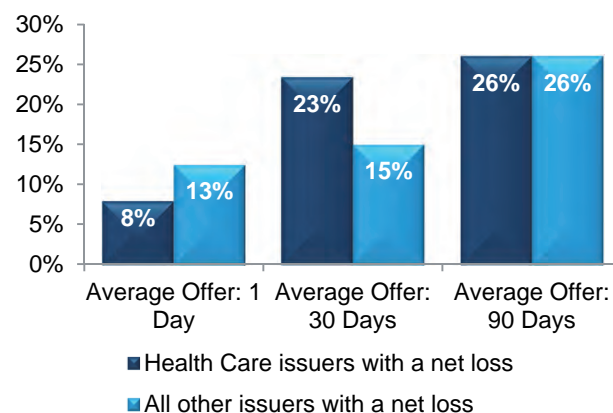
Net Income/Loss

- » 20 of 21 (95%) health care issuers had a net loss, compared to 51% for all other issuers.
- » 19 of 20 (95%) biotech/biopharm issuers had a net loss.
- » The one health care issuer that had net income priced in the range.

Pricing vs. Range



Aftermarket Performance



EBITDA/Adjusted EBITDA

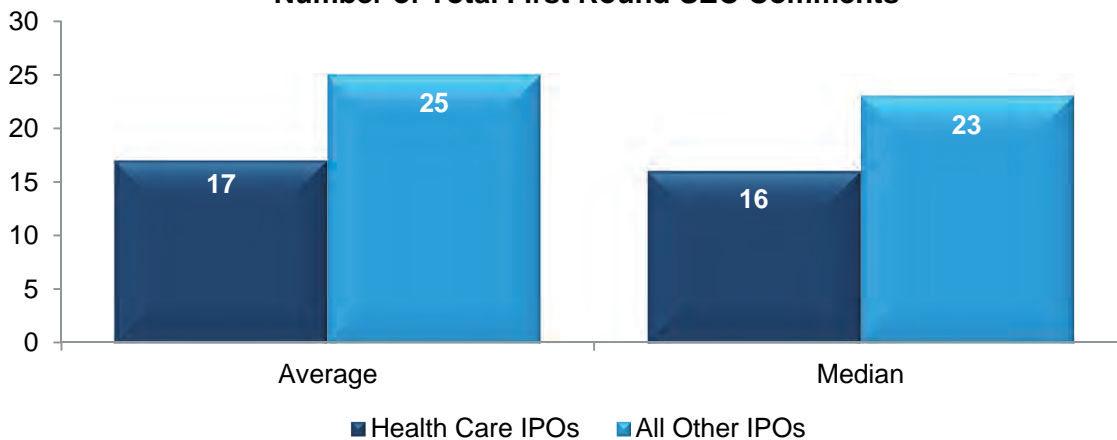
- » No health care issuers disclosed EBITDA and/or Adjusted EBITDA, compared to 66% for all other issuers.

SEC Comments

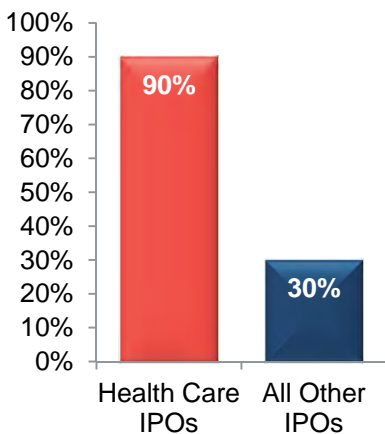
Total First Round SEC Comments*

- » On average, the total number of first round SEC comments for health care IPOs was lower than for all other sectors.
- » 19 of 21 (90%) health care IPOs received a cheap stock comment, compared to 30% for all other IPOs.
- » Segment reporting and revenue recognition were less common for health care IPOs than for all other IPOs on average.

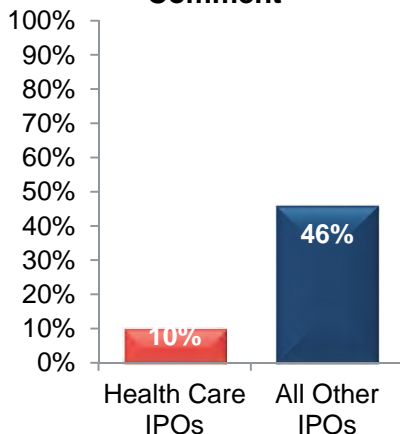
Number of Total First Round SEC Comments



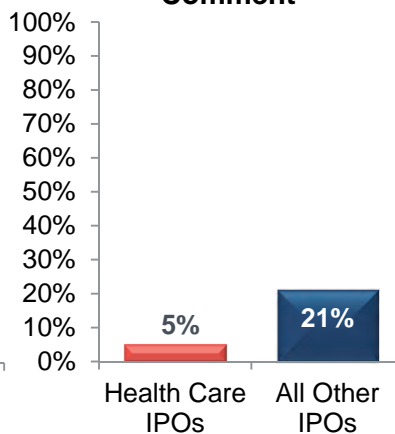
Percentage with Cheap Stock Comment



Percentage with Revenue Recognition Comment



Percentage with Segment Reporting Comment



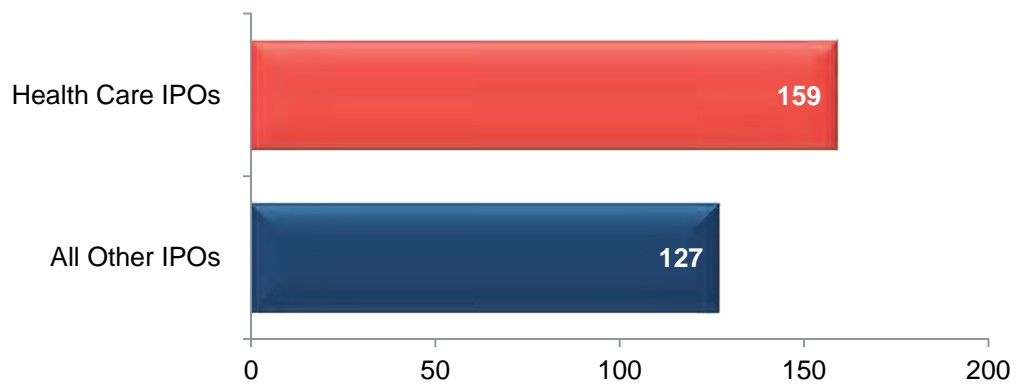
*Excludes prior SEC-reviewed issuers (none in health care, four in all other IPOs).

Timing

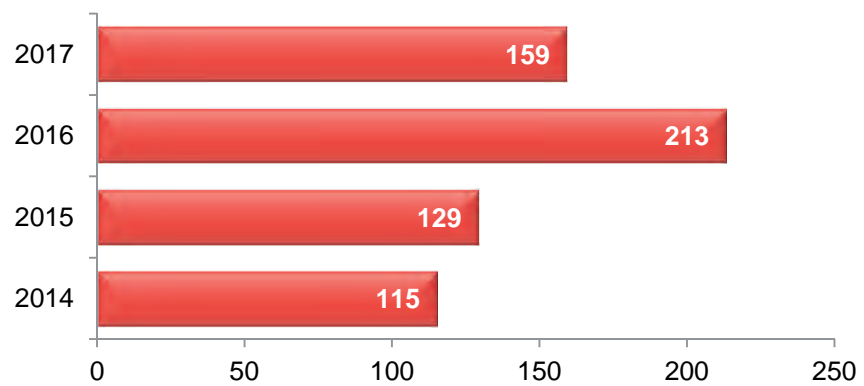
Timing*

- » The time period from first submission/filing to pricing for health care IPOs was longer than the average for all other IPOs.

Average Number of Days From First Submission/Filing to Pricing



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



*Excludes prior SEC-reviewed issuers (none in health care, four in all other IPOs) and IPOs with confidential submission to pricing greater than 18 months (three in health care, six in all other IPOs).

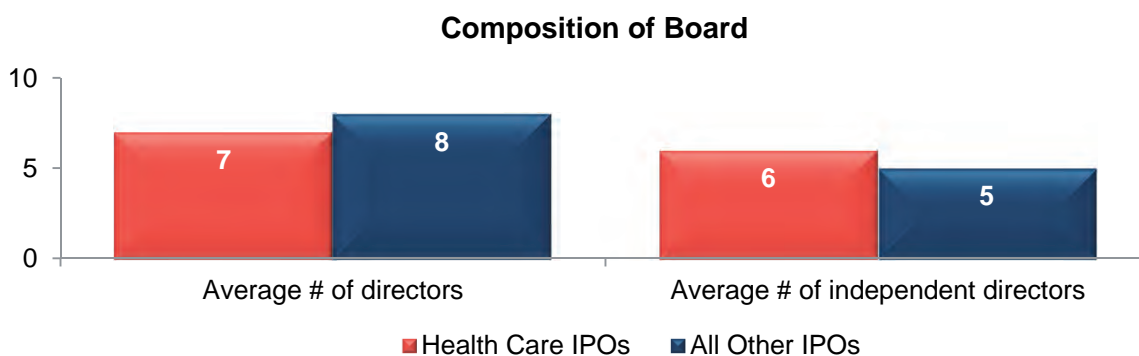
Corporate Governance: Key Items

Controlled Company Exemption*

- » Three of 17 (18%) health care issuers were eligible for the controlled company exemption, compared to 51% for all other issuers.
 - One of these three (33%) elected to take advantage of the exemption.

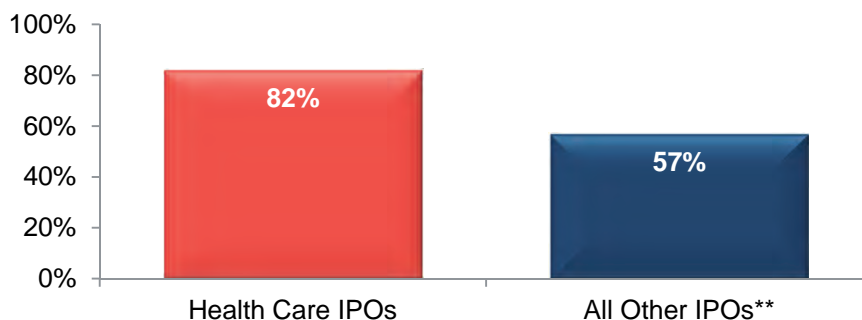
Director Independence*

- » 15 of 17 (88%) health care issuers had a majority of independent directors on their boards, compared to 60% for all other issuers.
 - On average, these 15 had 77% board independence.



Separation of Chairman & CEO Roles*

- » 14 of 17 (82%) health care issuers separated their Chairman and CEO roles, compared to 57% for all other issuers.



Classes of Common Stock*

- » No health care issuers had multiple classes of common stock, compared to 40% for all other issuers.

*Excludes FPIs (subject to home jurisdiction governance rules) (four in health care, 14 in all other IPOs) and four MLPs in all other IPOs.

**Excludes one additional with insufficient information.

IPO Fees and Expenses

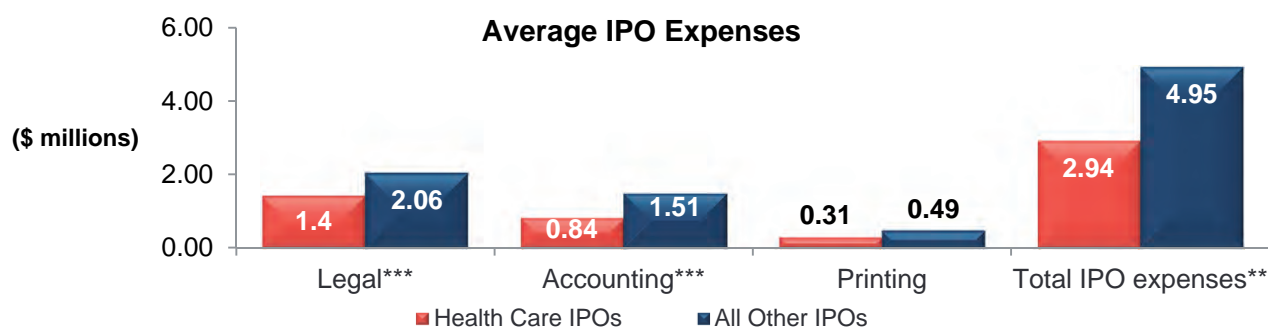
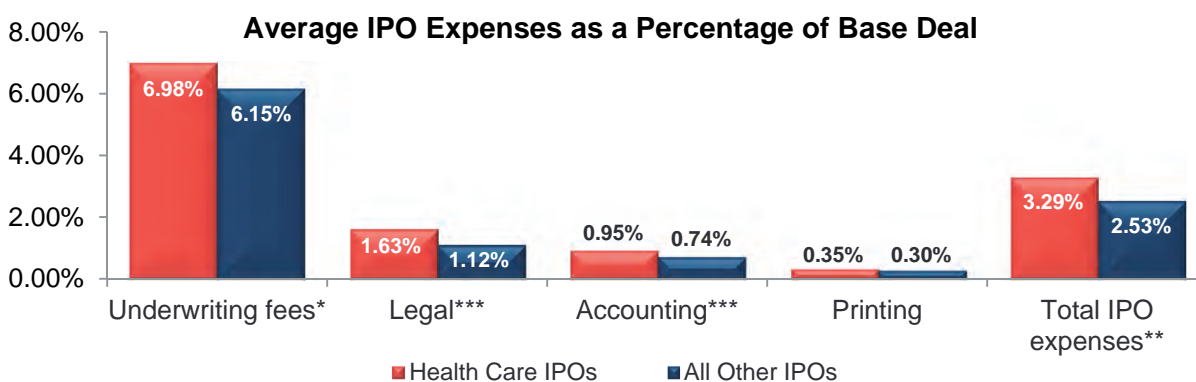
IPO Fees and Expenses

» Underwriting fees and total IPO expenses (excluding underwriting fees) for health care IPOs are summarized below:

Fee Category	Low	Average	Median	High
Underwriting Fees*	\$3,640,000	\$6,999,487	\$6,300,000	\$17,499,999
Total IPO Expenses**	\$1,900,000	\$2,942,983	\$3,000,000	\$4,900,000

» Legal fees, accounting fees and printing costs for health care IPOs are summarized below:

Fee Category	Low	Average	Median	High
Legal	\$782,813	\$1,440,809	\$1,500,000	\$2,700,000
Accounting	\$275,000	\$842,234	\$836,913	\$1,500,000
Printing	\$60,000	\$309,952	\$280,000	\$675,000



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

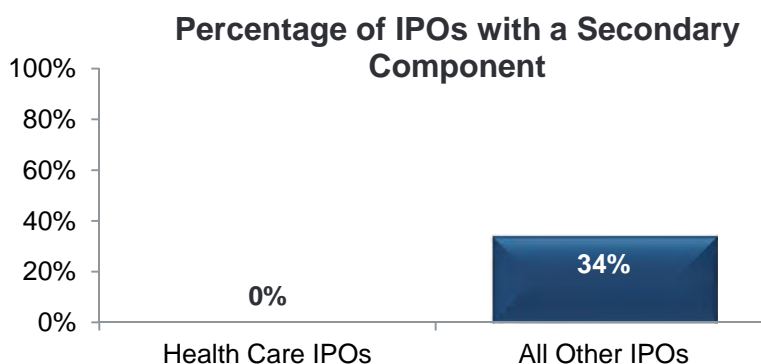
**Total IPO expenses excludes underwriting fees.

***Excludes one IPO with insufficient information in all other IPOs.

Deal Structure: Secondary Component & DSPs

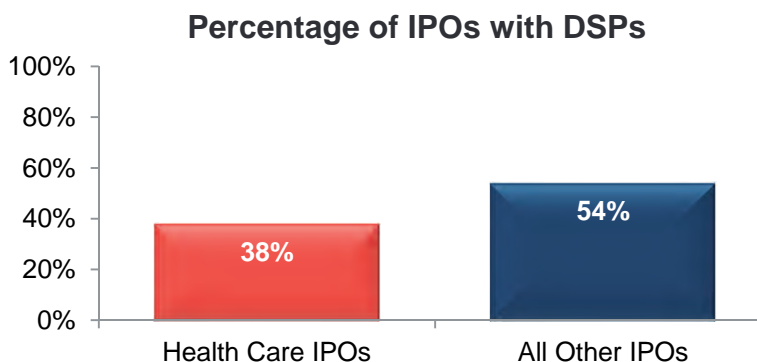
Secondary Component

- » No health care IPOs had a secondary component, compared to 34% for all other IPOs.



Directed Share Programs (DSPs)

- » Eight of 21 (38%) health care IPOs included DSPs, compared to 54% for all other IPOs.

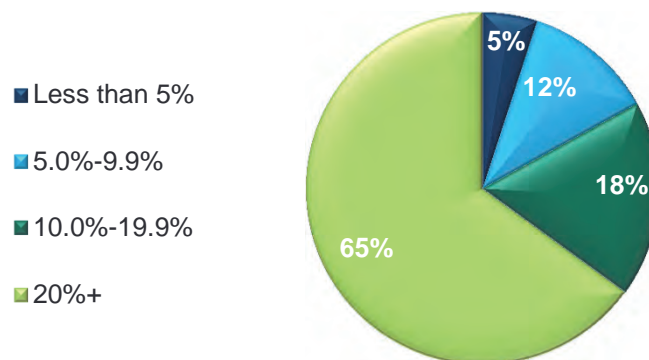


Deal Structure: Insiders Purchasing

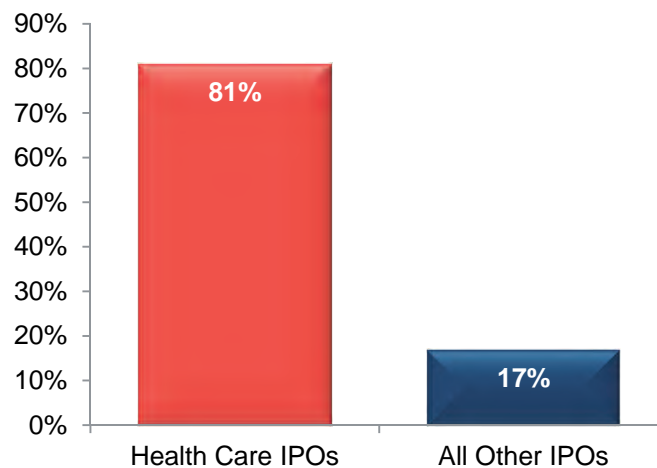
Insiders Purchasing in IPO*

- » 17 of 21 (81%) health care issuers disclosed insiders purchasing in the IPO, compared to 17% for all other IPOs.
- » 17 of 20 (85%) biotech/biopharm issuers disclosed insiders purchasing in the IPO.
- » In these 17 IPOs, insiders purchased an average of 29% of the shares sold in the IPO, compared to an average of 11% for all other IPOs.

% of IPO Purchased by Insiders



% IPOs with Insiders Purchasing

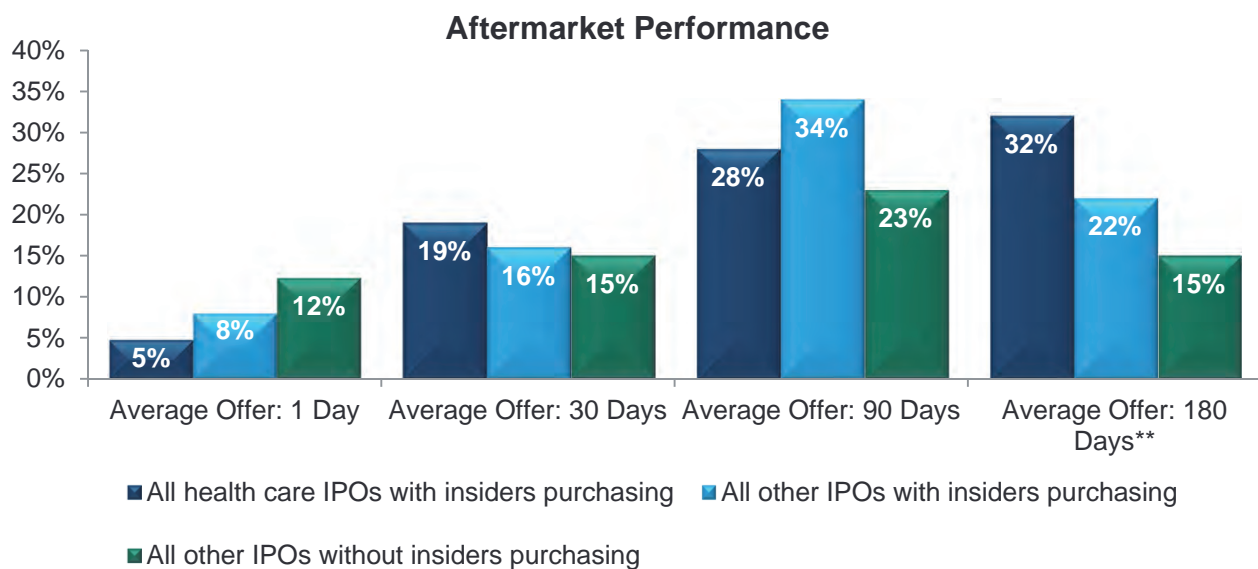
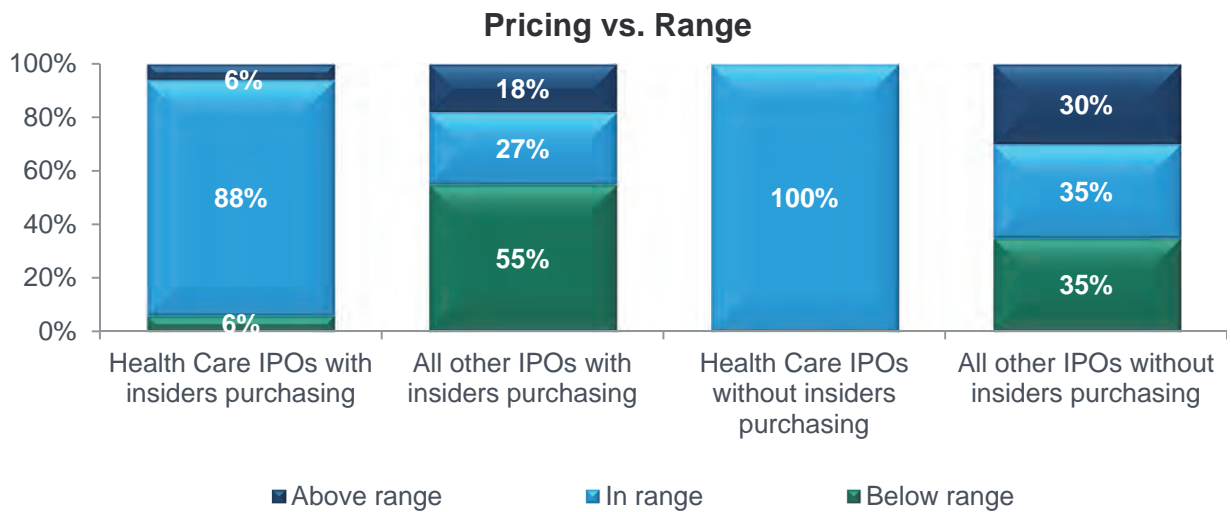


*Does not include purchases through a DSP.

Deal Structure: Insiders Purchasing

Insiders Purchasing in IPO*

» 88% of health care IPOs with insiders purchasing priced in the range, compared to 27% for all other IPOs with insiders purchasing.



*Does not include purchases through a DSP.

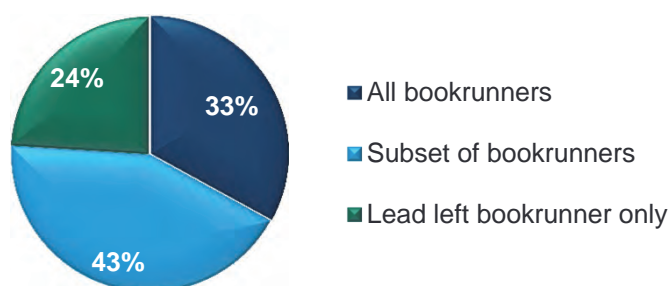
**Only includes deals priced before October 1, 2017.

Lock-Ups & Carve-Outs

Lock-Ups

- » Nine of 21 (43%) health care IPOs disclosed the percentage or number of shares locked up and of these IPOs, on average, 99.1% of pre-IPO shares were locked up, compared to 98.5% for all other IPOs.*
- » 12 of 21 (57%) health care IPOs disclosed that “substantially all” pre-IPO shares were locked up.
- » Seven of 21 (33%) health care IPOs required all bookrunners to release the locked-up shares, 9 of 21 (43%) required a subset of bookrunners and five of 21 (24%) required only the lead left bookrunner.

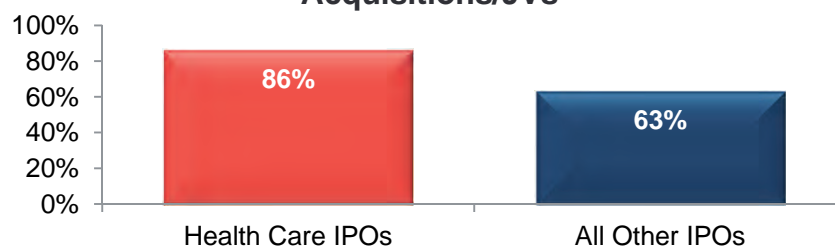
Lock-up Release



Carve-Outs

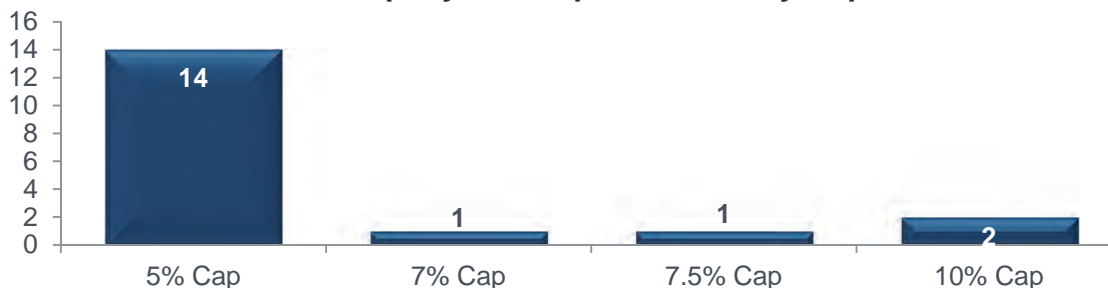
- » 18 of 21 (86%) health care IPOs included a carve-out in the issuer lock-up for stock issuances in connection with acquisitions/joint ventures (JVs), commercial collaborations and similar transactions, compared to 63% for all other IPOs.

Percentage of IPOs with Carve-Out for Acquisitions/JVs



- » All 18 health care IPOs with acquisition/JV carve-outs included a cap, reflected as a percentage of shares outstanding, on the number of shares that could be issued.

Company Lock-up/Carve-out by Cap



*Excludes seven IPOs with indeterminable information and two IPOs that were outliers.

Sponsor-Backed IPOs

Sponsor-Backed and Management/Termination Fees

- » Three of 21 (14%) health care IPOs were sponsor-backed, compared to 43% for all other IPOs.
 - None of these three issuers paid management or termination fees to the sponsor group in connection with the IPO, compared to 7% for all other IPOs.
- » The average length of sponsor investment was 7.3 years.

Key Comparisons

	Sponsor-Backed	Non-Sponsor-Backed
Percentage of total IPOs	14%	86%
Average market capitalization at pricing	\$387mm	\$461mm
Percentage of IPOs eligible for the controlled company exemption*	33%	14%
Average number of total first round SEC comments	13	18
Average number of SEC comment letters	3	3
Average number of days from first submission/filing to pricing (excludes an IPO with submission to pricing over 18 months)	92	167
Average total IPO expenses (excluding underwriting fees)	\$3.3mm	\$2.9mm
Median total IPO expenses (excluding underwriting fees)	\$3.0mm	\$3.0mm
Percentage of IPOs with DSPs	0%	44%
Percentage of IPOs with insiders purchasing	100%	78%
Percentage of pre-revenue Issuers	33%	61%

*Excludes MLPs (given their unique governance structures) and FPIs (subject to home jurisdiction governance rules).

Technology, Media & Telecommunications

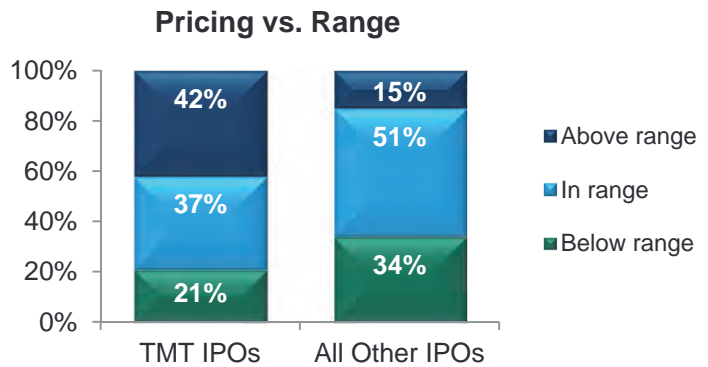
TMT Market Analysis

Overview

- » We analyzed 24 technology, media & telecommunications (TMT) IPOs in 2017.
 - 18 (75%) software companies.
 - One (4%) semiconductor company.
 - Three (13%) services/devices companies.
 - Two (8%) telecommunication companies.
- » Five of 24 (21%) were FPIs, with headquarters in Brazil, China (three) and Singapore.
- » U.S. TMT issuers were headquartered in nine states, with the most in California (seven of 19 (37%)).

Deal Execution

- » 10 of 24 (42%) TMT IPOs priced above the range, compared to 15% for all other IPOs.

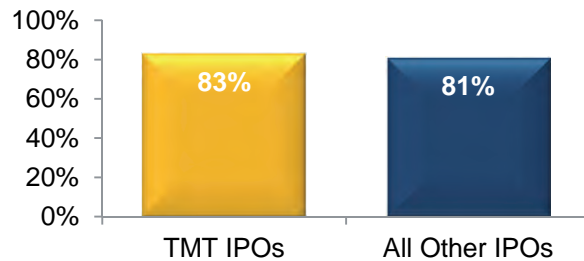


Deal Value & Over-Allotment*

13 of 24 (54%) TMT IPOs had a deal value between \$100 million and \$250 million.



- » The over-allotment option was partially or fully exercised in 20 of 24 (83%) TMT IPOs, compared to 81% for all other IPOs.

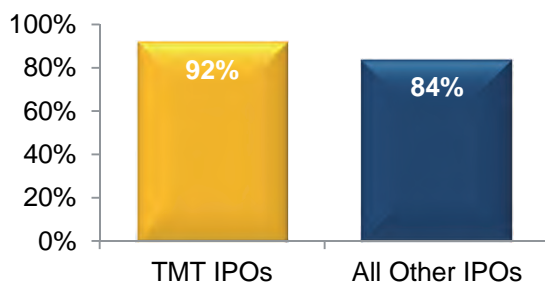


*Deal value consists of priced amount in base offering and excludes any exercise of the over-allotment option.

EGCs/Confidential Submission & Financial Statements

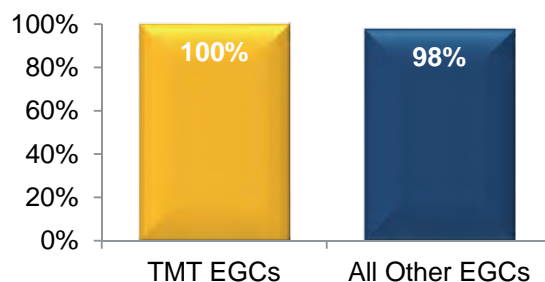
Overview

- » 22 of 24 (92%) TMT IPOs were EGCs, compared to 84% for all other IPOs.



Confidential Submission

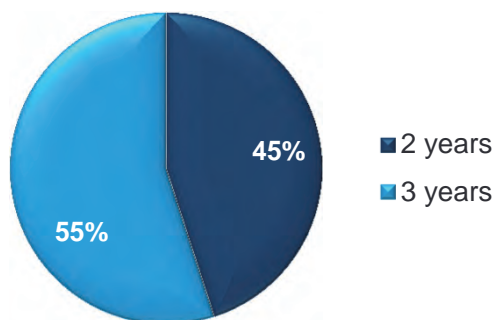
- » All TMT EGCs elected confidential submission, compared to 98% for all other EGCs.



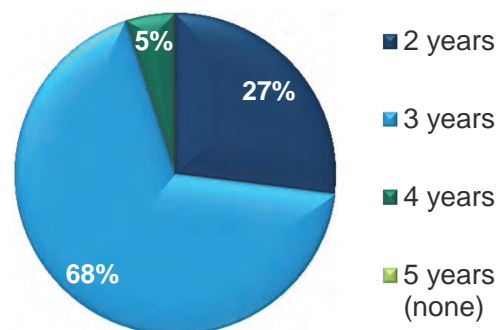
Years of Financial Statements

- » 45% of TMT EGCs included two years of audited financial statements (compared to 80% for all other EGCs) and 27% included two years of selected financial data (compared to 69% for all other EGCs).*

Years of Audited Financial Statements



Years of Selected Financial Data



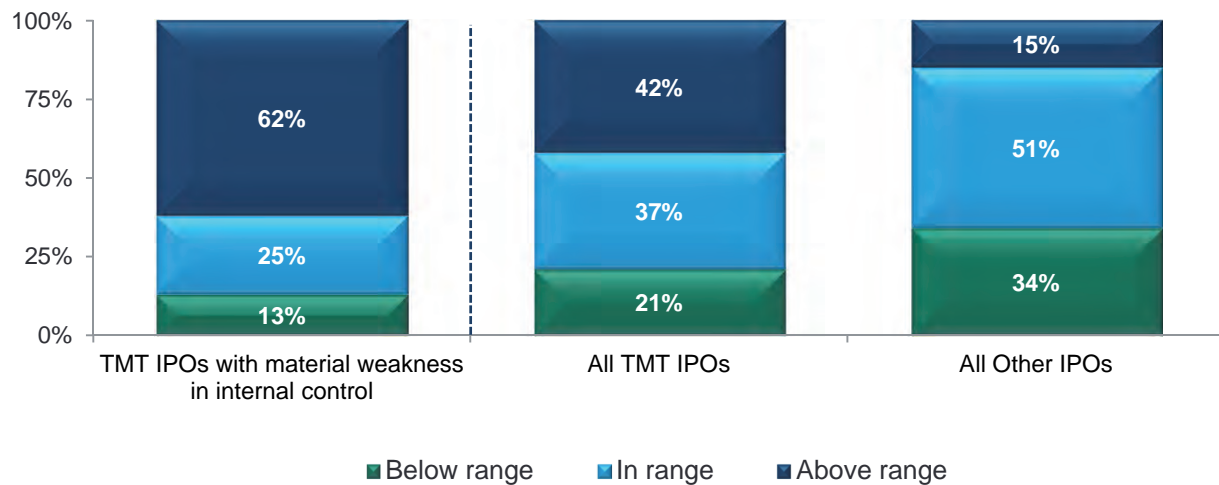
*Excludes one issuer that provided financials since inception, which period was less than two years.

Accounting/Internal Controls & Flash Results

Accounting/Internal Controls

- » Of the 24 TMT IPOs:
 - One (4%) had a going-concern qualification. This IPO priced in the range.
 - Eight (33%) disclosed a material weakness in internal control over financial reporting.
 - One (4%) had restated financial statements. This IPO priced in the range.

Pricing vs. Range



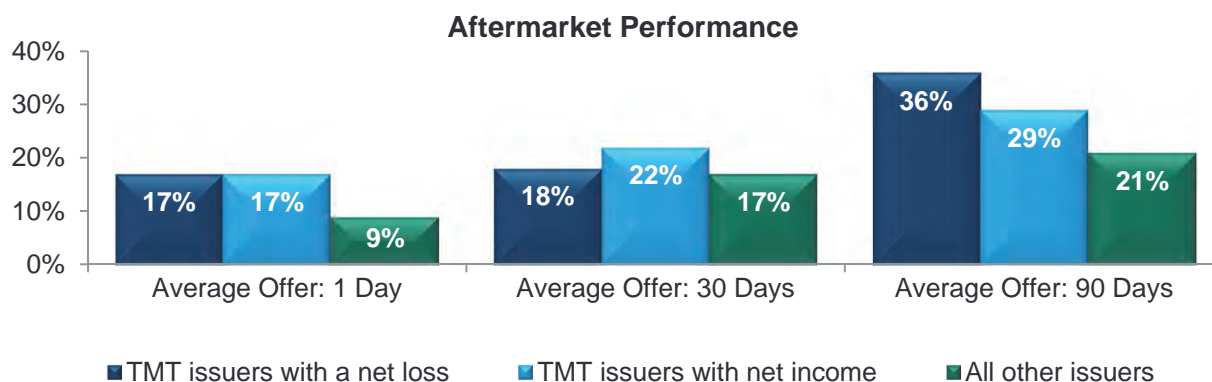
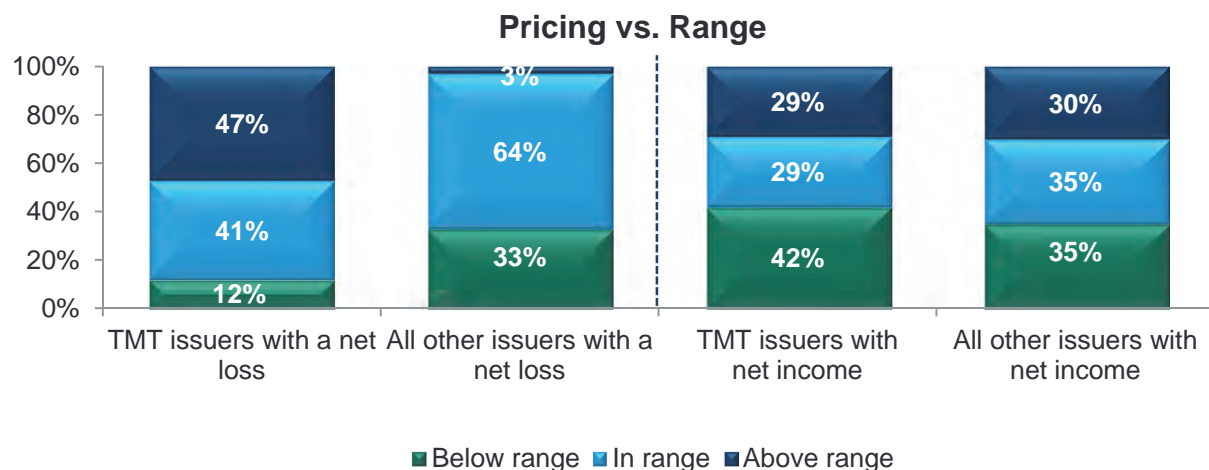
Flash Results

- » 12 of 24 (50%) TMT IPOs priced within 45 days of the end of the fourth quarter of 2016 and the first, second or third quarter of 2017.
 - Four of these 12 (33%) showed flash results.

Net Income/Loss & EBITDA/Adjusted EBITDA

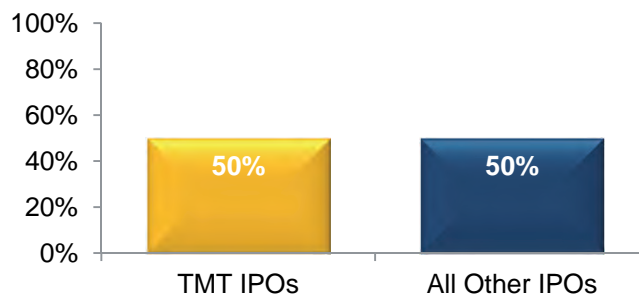
Net Income/Loss

» 17 of 24 (71%) TMT issuers had a net loss, compared to 58% for all other issuers.



EBITDA/Adjusted EBITDA

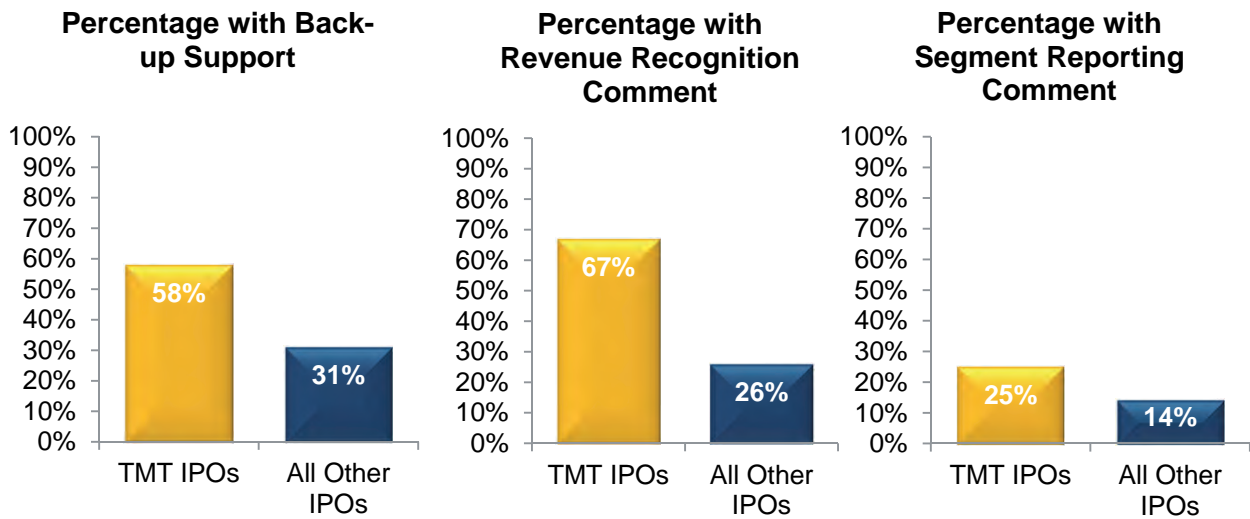
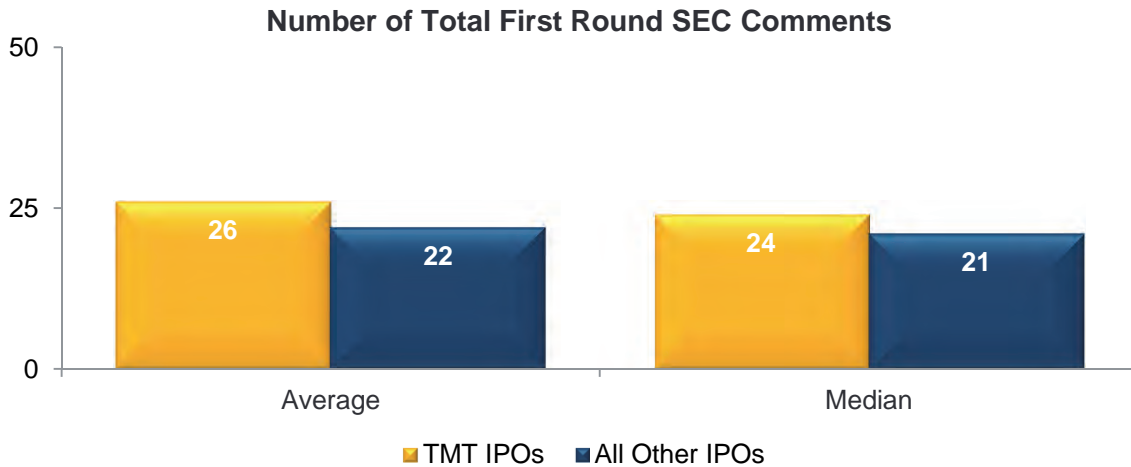
» 12 of 24 (50%) TMT issuers disclosed EBITDA and/or Adjusted EBITDA, the same as all other issuers.



SEC Comments

Total First Round SEC Comments*

» On average, the total number of first round SEC comments for TMT IPOs was slightly higher than for all other IPOs.



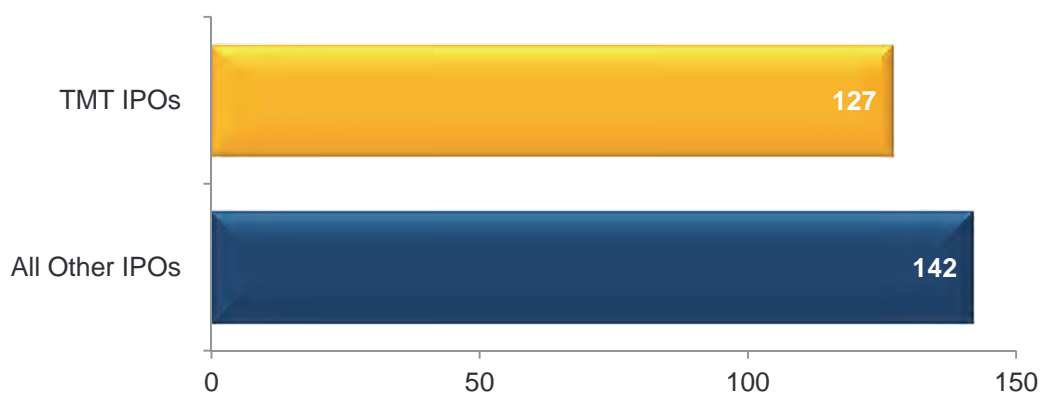
*Excludes prior SEC-reviewed issuers (none in TMT, four in all other IPOs).

Timing

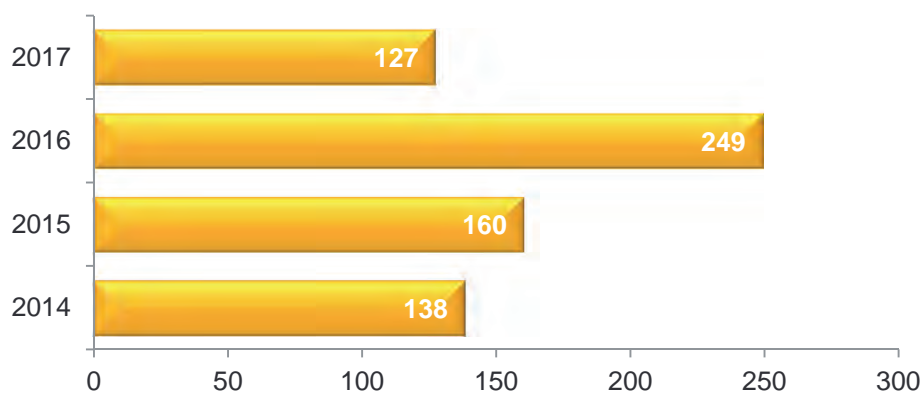
Timing*

- » The time period from first submission/filing to pricing for TMT IPOs was shorter than the average for all other IPOs.

Average Number of Days From First Submission/Filing to Pricing



Average Number of Days From First Submission/Filing to Pricing



*Excludes prior SEC-reviewed issuers (none in TMT, four in all others) and IPOs with confidential submission to pricing greater than 18 months (two in TMT, seven in all other IPOs).

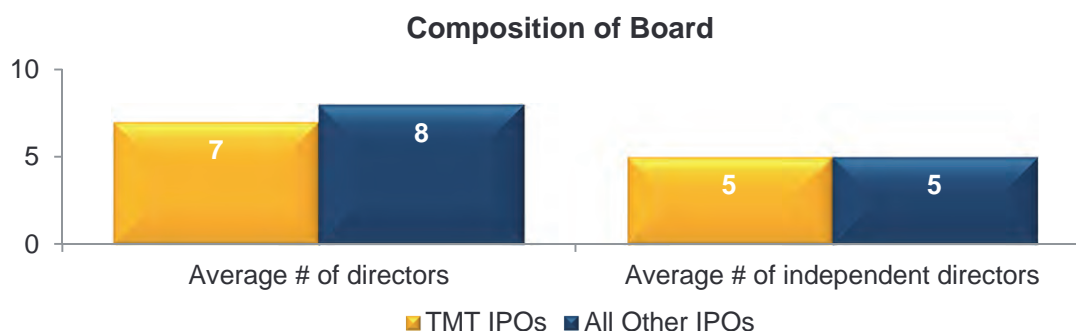
Corporate Governance: Key Items

Controlled Company Exemption*

- » Seven of 19 (37%) TMT issuers were eligible for the controlled company exemption, compared to 44% for all other IPOs.
 - Four of these seven (57%) elected to take advantage of the exemption.

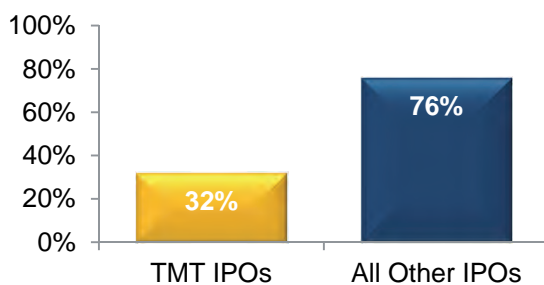
Director Independence*

- » 14 of 19 (74%) TMT issuers had a majority of independent directors on their boards, compared to 64% for all other IPOs.
 - On average, these 14 had 79% board independence.



Separation of Chairman & CEO Roles*

- » Six of 19 (32%) TMT issuers separated their Chairman and CEO roles, compared to 76% for all other IPOs.**



Classes of Common Stock*

- » 12 of 19 (63%) TMT issuers had multiple classes of common stock, compared to 15% for all other IPOs.

*Excludes FPIs (subject to home jurisdiction governance rules) (five in TMT, 13 in all others) and four MLPs in all other IPOs.

**Excludes one IPO with insufficient information.

IPO Fees and Expenses

IPO Fees and Expenses

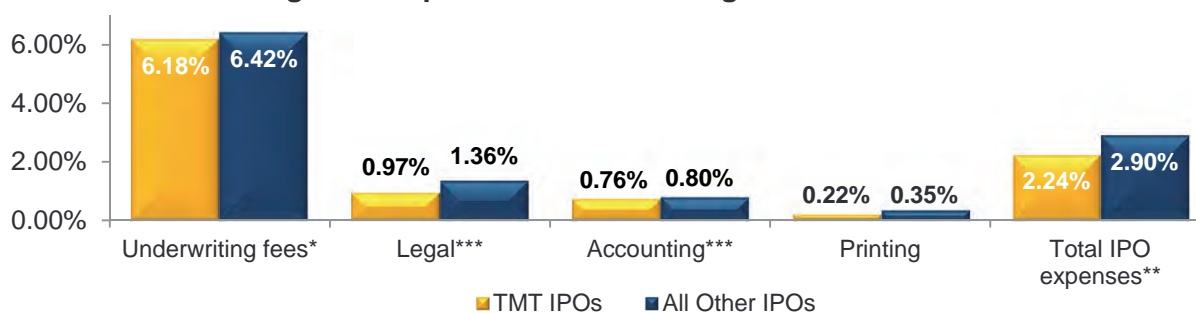
» Underwriting fees and total IPO expenses (excluding underwriting fees) for TMT IPOs are summarized below:

Fee Category	Low	Average	Median	Maximum
Underwriting Fees*	\$4,295,340	\$19,949,651	\$13,895,000	\$85,000,000
Total IPO Expenses**	\$1,900,000	\$4,607,907	\$4,000,000	\$12,500,000

» Legal fees, accounting fees and printing costs for TMT IPOs are summarized below:

Fee Category	Low	Average	Median	High
Legal	\$400,000	\$1,899,728	\$1,732,500	\$4,447,470
Accounting	\$500,000	\$1,564,429	\$1,274,350	\$6,882,000
Printing	\$150,000	\$391,754	\$350,000	\$1,294,100

Average IPO Expenses as a Percentage of IPO Base Deal



Average IPO Expenses



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

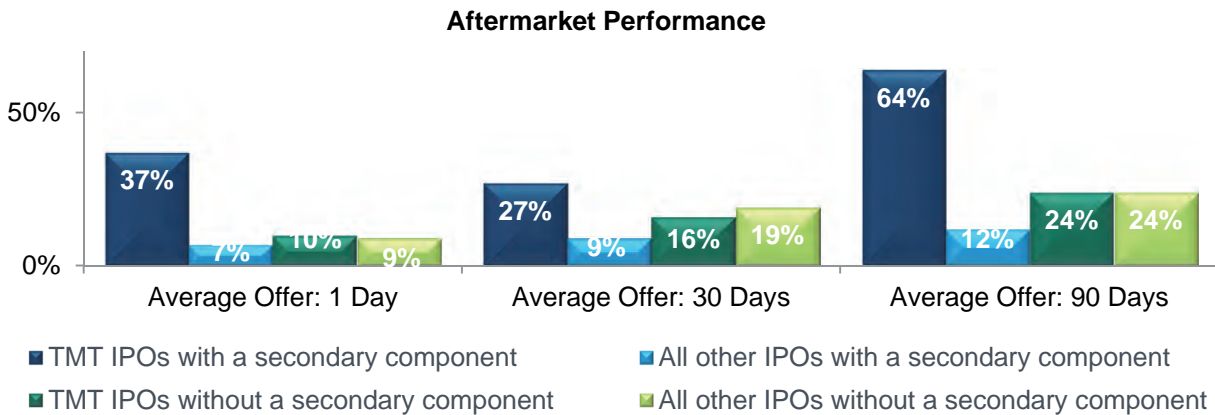
**Total IPO expenses excludes underwriting fees.

***Excludes one IPO with insufficient information in all other IPOs.

Deal Structure: Secondary Component, DSPs & Insiders Purchasing

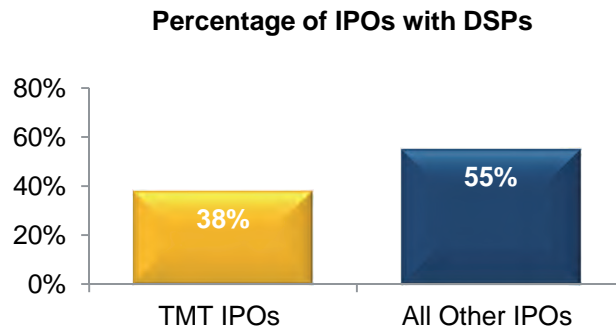
Secondary Component

- » Six of 24 (25%) TMT IPOs had a secondary component, compared to 26% for all other IPOs and compared to 6% of TMT IPOs in 2016, 15% in 2015 and 48% in 2014.



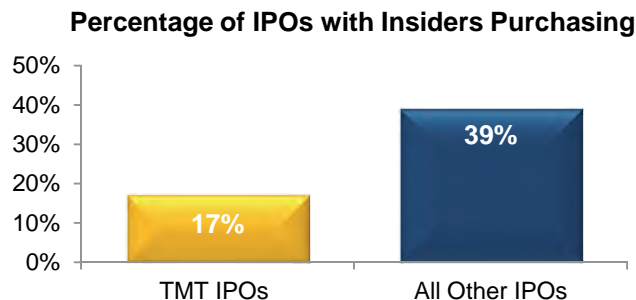
Directed Share Programs (DSPs)

- » Nine of 24 (38%) TMT IPOs included DSPs, compared to 55% for all other IPOs.



Insiders Purchasing*

- » Four of 24 (17%) TMT issuers disclosed insiders purchasing in the IPO, compared to 39% for all other IPOs.
- » In these four IPOs, insiders purchased an average of 7% of the shares sold in the IPO, compared to an average of 24% for all other IPOs.

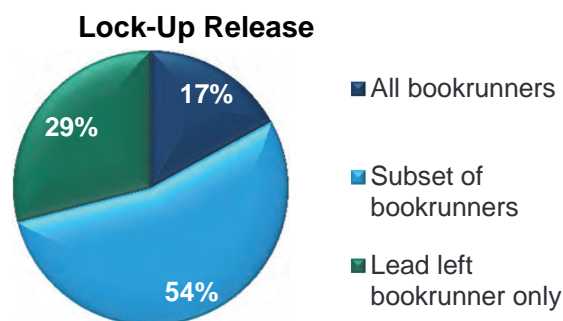


*Does not include purchases through a DSP.

Lock-Ups & Carve-Outs

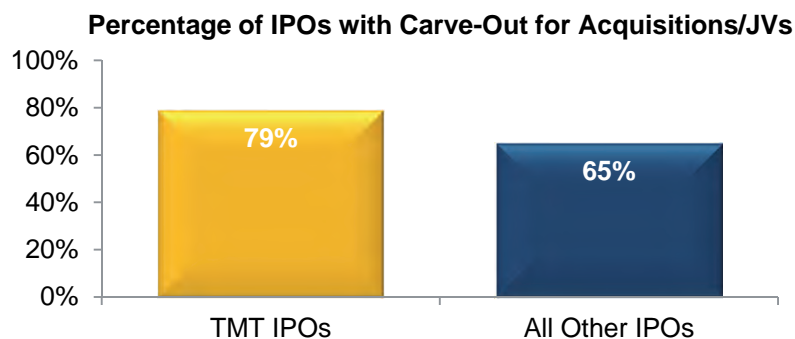
Lock-Ups

- » Eight of 24 (38%) TMT IPOs disclosed the percentage or number of shares locked up and of these IPOs, on average, 99.6% of pre-IPO shares were locked up, compared to 98.4% for all other IPOs.*
- » 15 of 24 (58%) TMT IPOs disclosed that “substantially all” pre-IPO shares were locked up.
- » Four of 24 (17%) TMT IPOs required all bookrunners to release the lock-up, 13 of 24 (54%) required a subset of bookrunners and seven of 24 (29%) required only the lead left bookrunner.

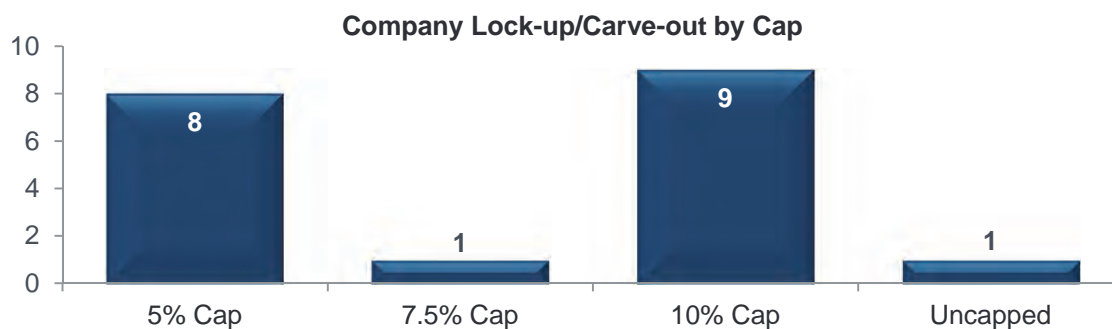


Carve-Outs

- » 19 of 24 (79%) TMT IPOs included a carve-out in the issuer lock-up for stock issuances in connection with acquisitions/joint ventures (JVs), commercial collaborations and similar transactions, compared to 65% for all other IPOs.



- » Of the 19 TMT IPOs with acquisition/JV carve-outs, 18 included a cap on the number of shares that could be issued (reflected as a percentage of shares outstanding).



*Excludes seven IPOs with indeterminable information and two IPOs that were outliers.

Sponsor-Backed IPOs

Sponsor-Backed and Management/Termination Fees

- » Seven of 24 (29%) TMT IPOs were sponsor-backed, compared to 39% for all other IPOs.
 - None of these issuers paid management or termination fees to the sponsor group in connection with the IPO, compared to 8% for all other IPOs.
 - The average length of sponsor investment was 7.1 years.

Key Comparisons

	Sponsor-Backed	Non-Sponsor-Backed
Percentage of IPOs	29%	71%
Percentage of IPOs that are EGCs	71%	100%
Average market capitalization at pricing	\$4.1bn	\$3.2bn
Percentage of IPOs eligible for the controlled company exemption*	43%	33%
Average number of total first round SEC comments	22	28
Average number of days from first submission/filing to pricing date	136	124
Average total IPO expenses (excluding underwriting fees)	\$4.4mm	\$4.7mm
Median total IPO expenses (excluding underwriting fees)	\$3.8mm	\$4.0mm
Percentage of IPOs with a secondary component	40%	24%
Percentage of IPOs disclosing EBITDA and/or Adjusted EBITDA	80%	47%
Percentage of IPOs with DSPs	14%	47%
Percentage of IPOs with insiders purchasing	14%	18%

*Excludes MLPs (given their unique governance structures) and FPIs (subject to home jurisdiction governance rules).

Energy & Power

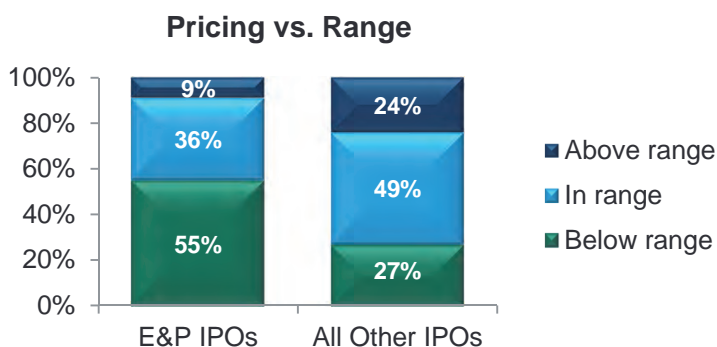
Energy & Power Market Analysis

Overview

- » We analyzed 11 energy & power (E&P) IPOs in 2017.
 - Three (27%) mining companies.
 - One (9%) oil & gas exploration and development company.
 - Seven (64%) oil & gas services and midstream companies.
- » Four of 11 (36%) were MLPs.
- » One of 11 (9%) was an FPI, with its headquarters in Brazil.
- » The U.S. E&P issuers were headquartered in four states: Texas (six), Colorado (two), Alabama and Kentucky.

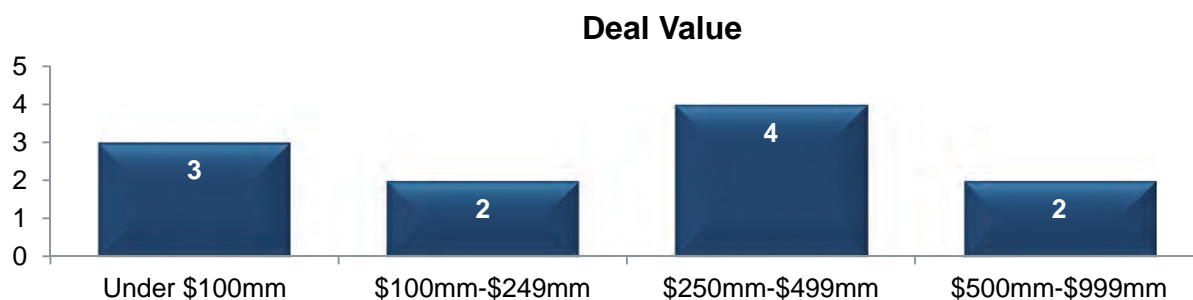
Deal Execution

- » One of 11 (9%) E&P IPOs priced above the range, compared to 24% for all other IPOs.

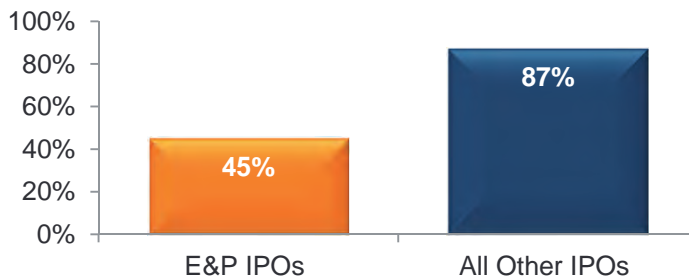


Deal Value & Over-Allotment*

- » Four of 11 (36%) E&P IPOs priced between \$250 million and \$499 million.



- » The over-allotment option was partially or fully exercised in five of 11 (45%) E&P IPOs, compared to 87% for all other IPOs.

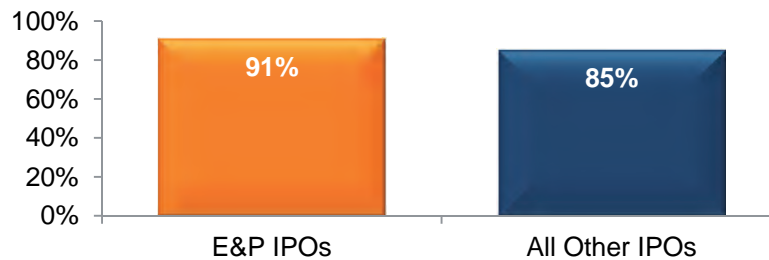


*Deal value consists of priced amount in base offering and excludes any exercise of the over-allotment option.

EGCs/Confidential Submission & Financial Statements

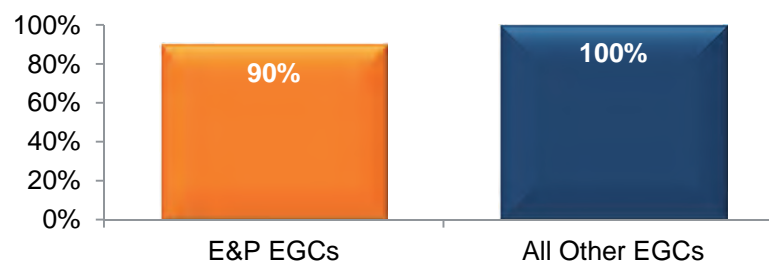
Overview

- » 10 of 11 (91%) E&P IPOs were EGCs, compared to 85% for all other IPOs.



Confidential Submission

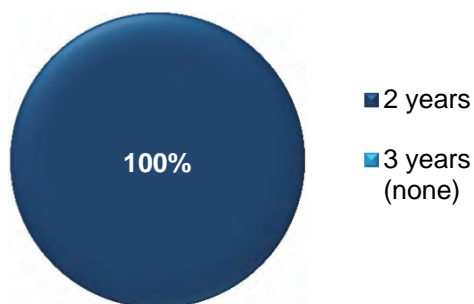
- » Nine of 10 (90%) E&P EGCs elected confidential submission, compared to 100% for all other EGCs.



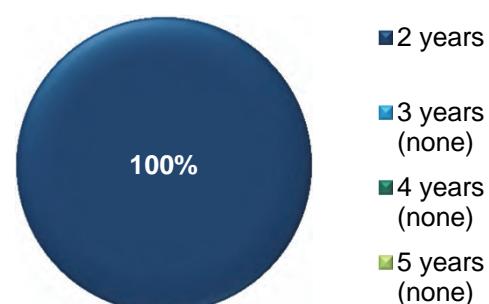
Years of Financial Statements

- » All E&P EGCs included two years of audited financial statements (compared to 65% for all other EGCs) and two years of selected financial data (compared to 49% for all other EGCs).*

Years of Audited Financial Statements



Years of Selected Financial Data

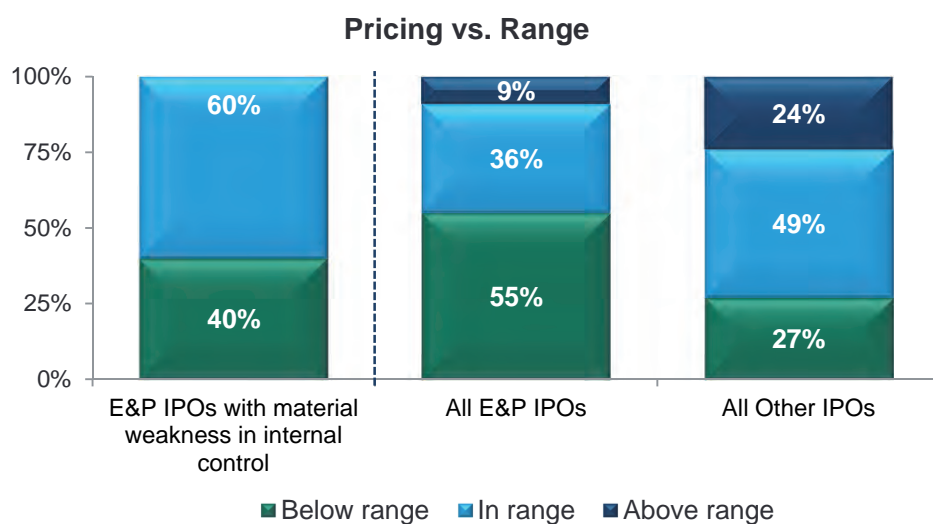


*Excludes one issuer that provided financials since inception, which period was less than two years.

Accounting/Internal Controls & Flash Results

Accounting/Internal Controls

- » Of the 11 E&P IPOs:
 - None had a going-concern qualification.
 - Five (45%) disclosed a material weakness in internal control over financial reporting.
 - None had restated financial statements.



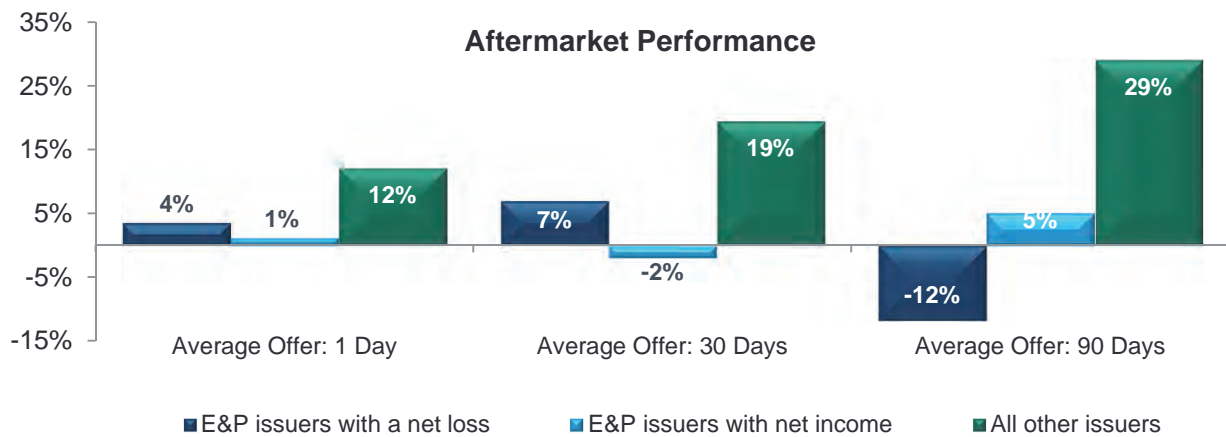
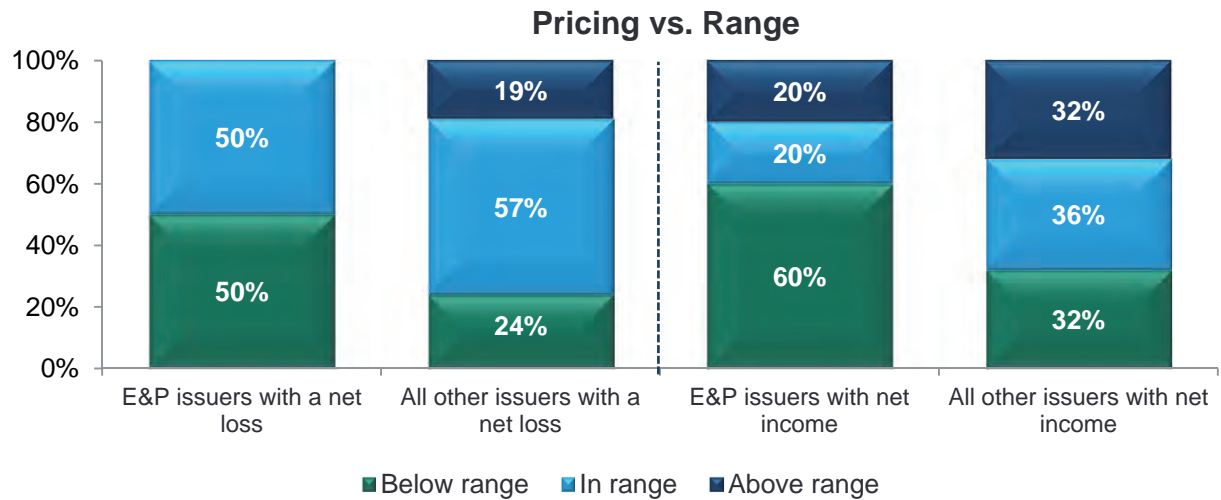
Flash Results

- » All E&P IPOs priced within 45 days of the end of the fourth quarter of 2016 and the first, second or third quarter of 2017.
 - Four of 11 (36%) showed flash results.

Net Income/Loss & EBITDA/Adjusted EBITDA

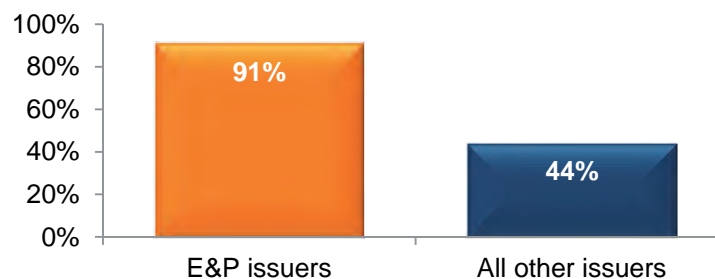
Net Income/Loss

» Six of 11 (55%) E&P issuers had a net loss, compared to 63% for all other issuers.



EBITDA/Adjusted EBITDA*

» 10 of 11 (91%) E&P issuers disclosed EBITDA and/or Adjusted EBITDA, compared to 44% for all other issuers.

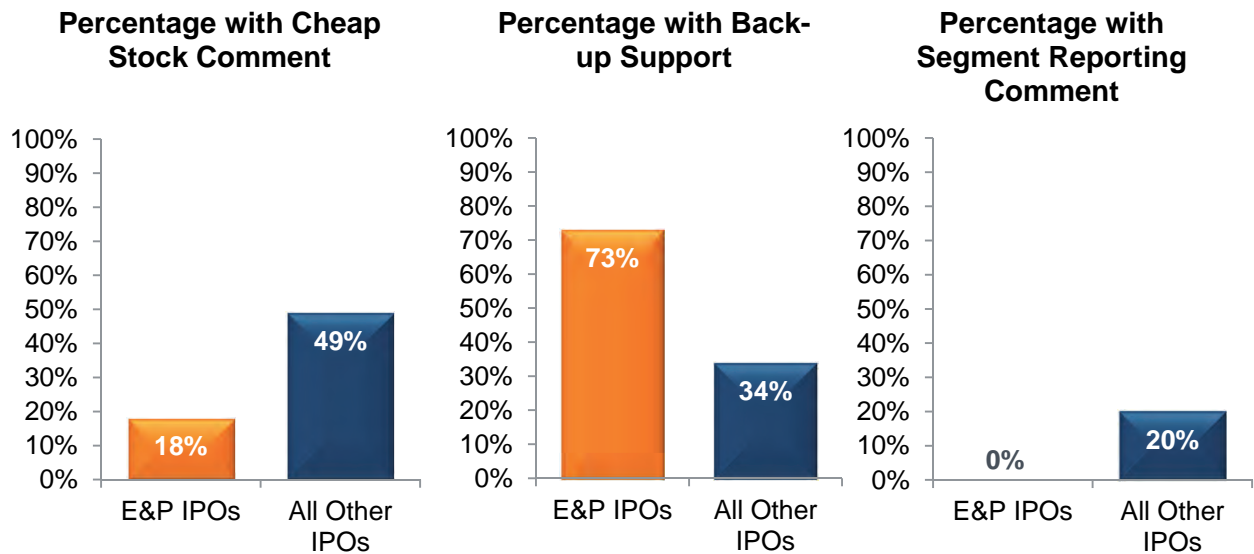
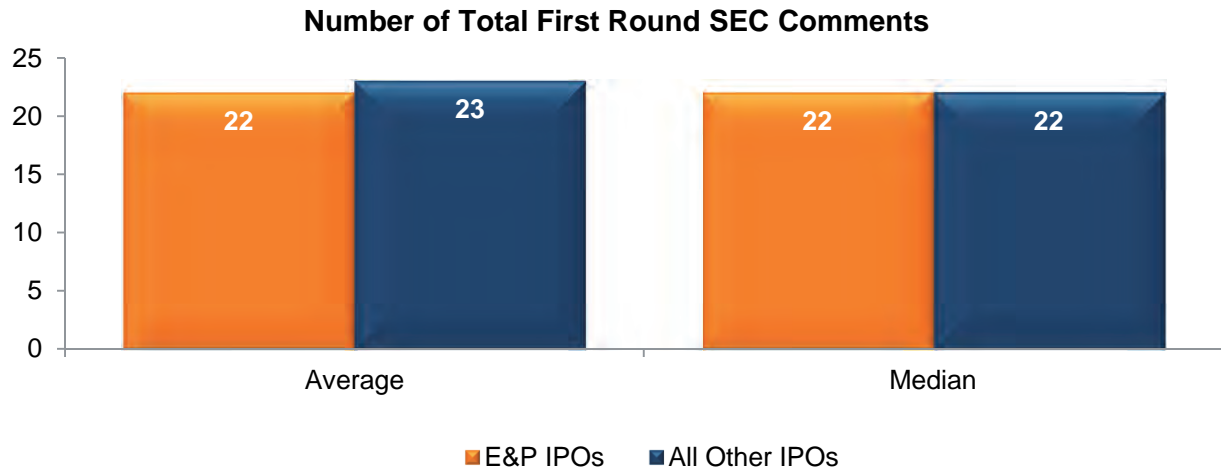


*Includes use of EBITDAX

SEC Comments

Total First Round SEC Comments*

» On average, the number of total first round SEC comments for E&P IPOs was slightly lower than for all other IPOs, though the median number of comments was the same.



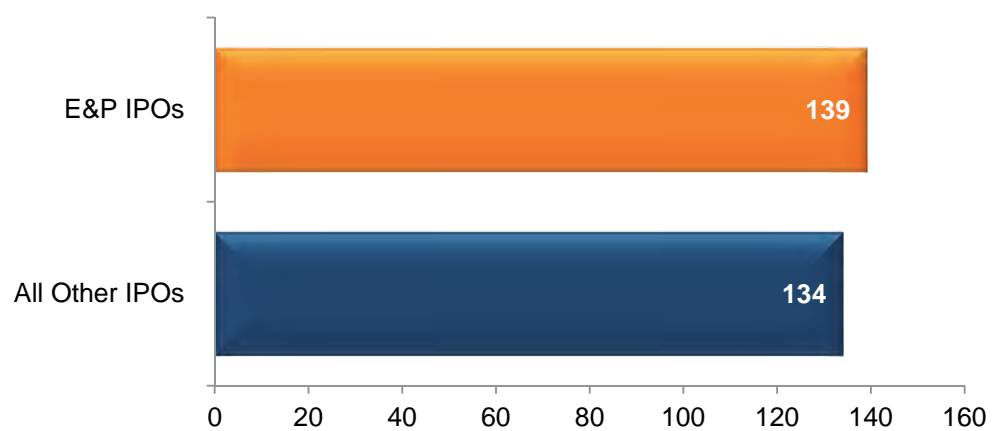
*Excludes prior SEC-reviewed issuers (none in E&P, four in all other IPOs).

Timing

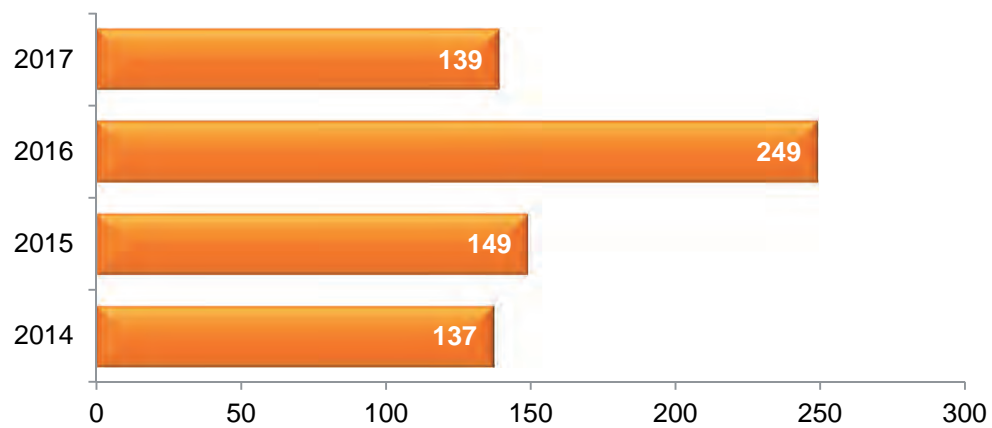
Timing*

- » The time period from first submission/filing to pricing for E&P IPOs was similar to the average for all other IPOs.

Average Number of Days From First Submission/Filing to Pricing



E&P Average Number of Days From First Submission/Filing to Pricing



*Excludes prior SEC-reviewed issuers (none in E&P, four and in all other IPOs) and IPOs with confidential submission to pricing greater than 18 months (one in E&P, eight in all other IPOs).

IPO Fees and Expenses

IPO Fees and Expenses

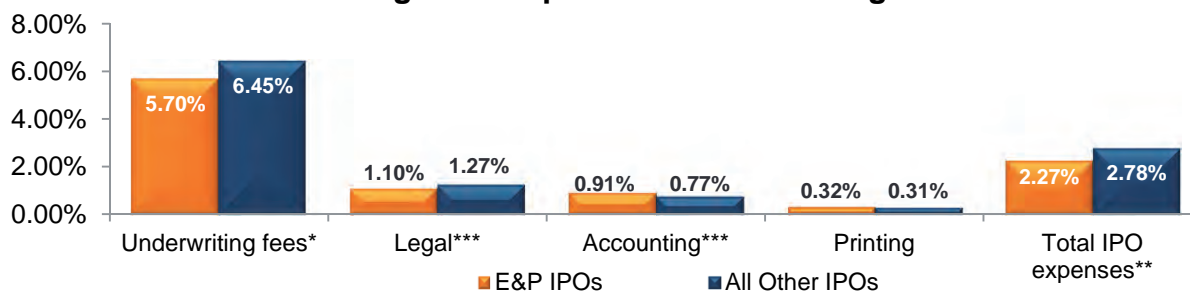
» Underwriting fees and total IPO expenses (excluding underwriting fees) for E&P IPOs are summarized below:

Fee Category:	Low	Average	Median	High
Underwriting Fees*	\$4,818,125	\$17,893,024	\$19,791,667	\$39,391,875
Total IPO Expenses**	\$1,500,000	\$5,349,271	\$4,500,000	\$11,500,000

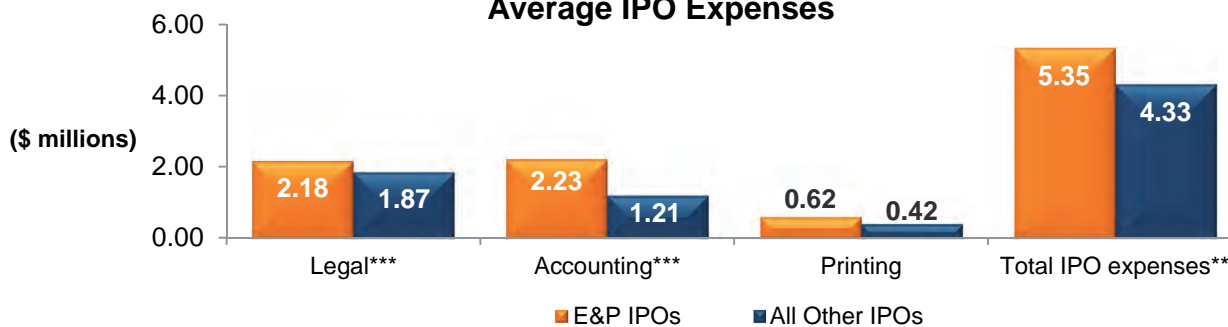
» Legal fees, accounting fees and printing costs for E&P IPOs are set forth below:

Fee Category:	Low	Average	Median	High
Legal	\$1,500,000	\$2,178,501	\$2,000,000	\$3,500,000
Accounting	\$200,000	\$2,226,374	\$1,410,000	\$6,250,000
Printing	\$148,000	\$622,091	\$600,000	\$1,892,000

Average IPO Expenses as a Percentage of Base Deal



Average IPO Expenses



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

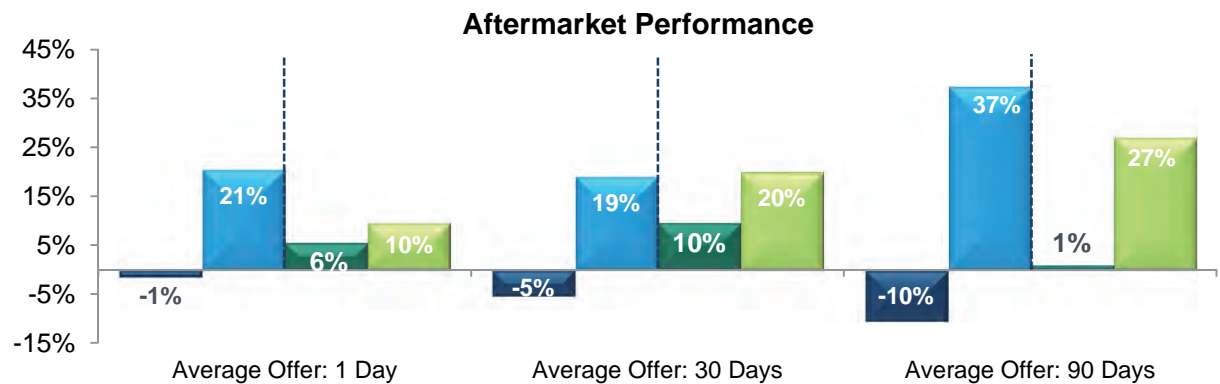
**Total IPO expenses excludes underwriting fees.

***Excludes one IPO with insufficient information in all other IPOs.

Deal Structure: Secondary Component, DSPs & Insiders Purchasing

Secondary Component

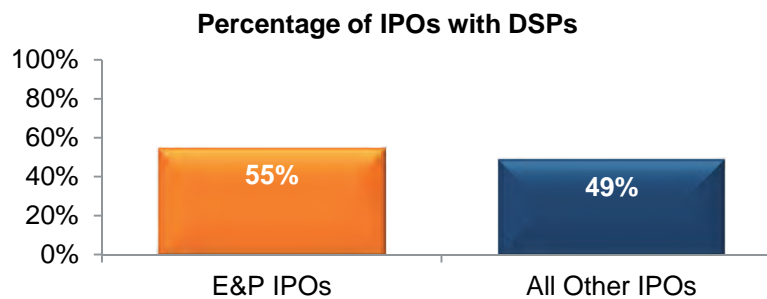
- » Five of 11 (45%) E&P IPOs had a secondary component, compared to 23% for all other IPOs.



- E&P IPOs with a secondary component
- All other IPOs with a secondary component
- E&P IPOs without a secondary component
- All other IPOs without a secondary component

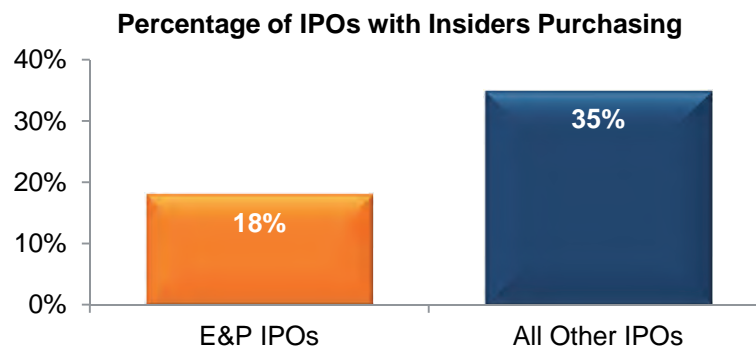
Directed Share Programs (DSP)

- » Six of 11 (55%) E&P IPOs included DSPs, compared to 49% for all other IPOs.



Insiders Purchasing*

- » Two of 11 (18%) E&P issuers disclosed insiders purchasing in the IPO, compared to 35% for all other IPOs.



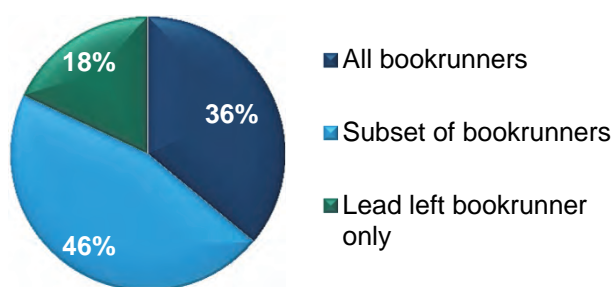
*Does not include purchases through a DSP.

Lock-Ups & Carve-Outs

Lock-Ups

- » Seven of 11 (64%) E&P IPOs disclosed the percentage or number of shares locked up and of these IPOs, on average, 98.8% of pre-IPO shares were locked up, compared to 98.6% for all other IPOs.*
- » One of 11 (9%) disclosed that “substantially all” pre-IPO shares were locked up.
- » Four of 11 (36%) E&P IPOs required all bookrunners to release the lock-up, five of 11 (46%) required a subset of bookrunners and two of 11 (18%) required only the lead left bookrunner.

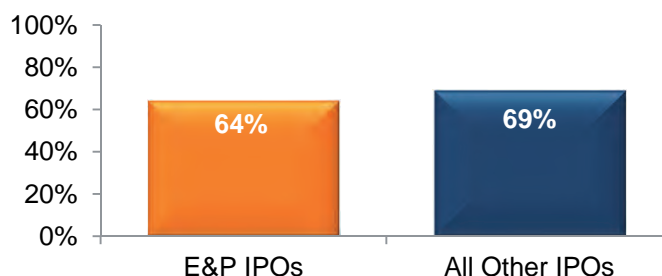
Lock-Up Release



Carve-Outs

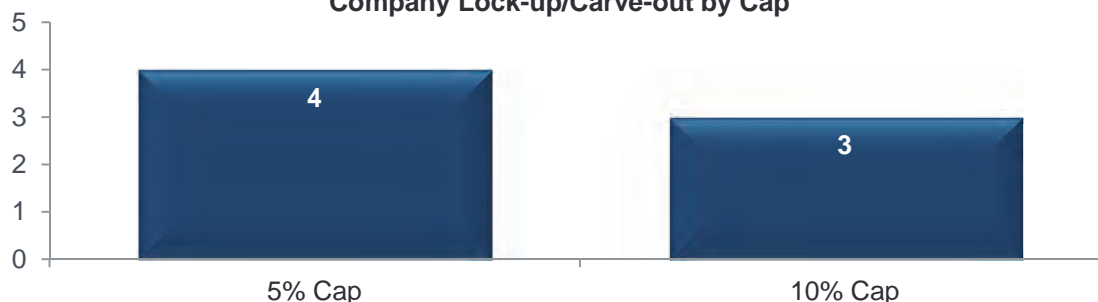
- » Seven of 11 (64%) E&P IPOs included a carve-out in the issuer lock-up for stock issuances in connection with acquisitions/joint ventures (JVs), commercial collaborations and similar transactions, compared to 69% for all other IPOs.

Percentage of IPOs with Carve-Out for Acquisitions/JV



- » All E&P IPOs with acquisition/JV carve-outs included a cap, reflected as a percentage of shares outstanding, on the number of shares that could be issued.

Company Lock-up/Carve-out by Cap



*Excludes seven IPOs with indeterminable information and two IPOs that were outliers.

Sponsor-Backed IPOs

Sponsor-Backed and Management/Termination Fees

- » Five of 11 (45%) E&P IPOs were sponsor-backed, compared to 35% for all other IPOs.
- » The average length of sponsor investment for E&P IPOs was 5.1 years.

Key Comparisons

	Sponsor-Backed	Non-Sponsor-Backed
Percentage of total IPOs	45%	55%
Percentage of IPOs that are EGCs	100%	83%
Average market capitalization at pricing	\$2.0bn	\$1.0bn
Percentage of IPOs eligible for the controlled company exemption*	75%	50%
Average number of total first round SEC comments	27	18
Average number of SEC comment letters	3	4
Average number of days from first submission/filing to pricing (excludes an IPO with submission to pricing over 18 months)	99	179
Average total IPO expenses (excluding underwriting fees)	\$4.8mm	\$5.8mm
Median total IPO expenses (excluding underwriting fees)	\$3.9mm	\$5.4mm
Percentage of IPOs with a secondary component	80%	17%
Percentage of IPOs disclosing EBITDA and/or Adjusted EBITDA	80%	100%
Percentage of IPOs with DSPs	40%	67%
Percentage of IPOs with insiders purchasing	0%	33%

*Excludes MLPs (given their unique governance structures) and FPIs (subject to home jurisdiction governance rules).



Financial Services

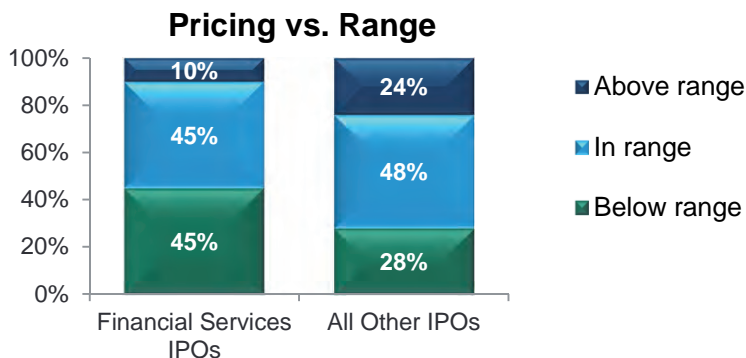
Financial Services Market Analysis

Overview

- » We analyzed 11 financial services IPOs in 2017.
 - Six (55%) bank holding companies.
 - Three (27%) alternative finance companies.
 - Two (18%) real estate companies.
- » One of 11 (9%) was an FPI, with its headquarters in China.
- » The U.S. financial services issuers were headquartered in seven states: Texas (three), New York (two), Florida, Illinois, Indiana, Kansas, and Michigan.

Deal Execution

- » Five of 11 (45%) financial services IPOs priced below the range, compared to 28% for all other IPOs.



Deal Value & Over-Allotment*

- » Most financial services IPOs priced under \$100 million.



- » The over-allotment option was partially or fully exercised in all financial services IPOs, compared to 79% for all other IPOs.

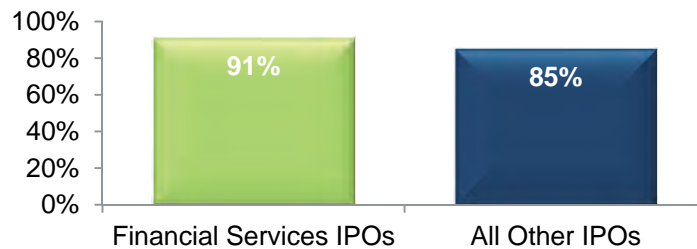


*Deal value consists of priced amount in base offering and excludes any exercise of the over-allotment option.

EGCs/Confidential Submission & Financial Statements

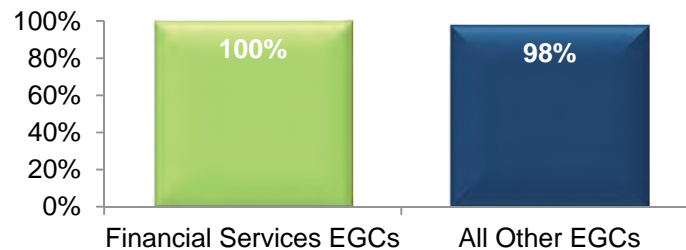
Overview

» 10 of 11 (91%) financial services IPOs were EGCs, compared to 85% for all other IPOs.



Confidential Submission

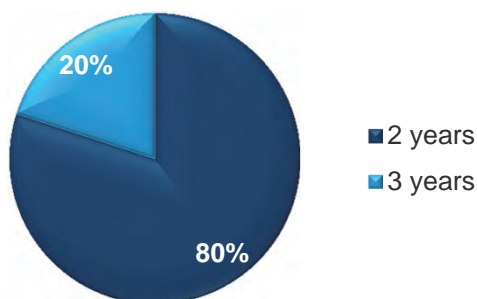
» All financial services EGC IPOs elected confidential submission, compared to 98% for all other EGCs.



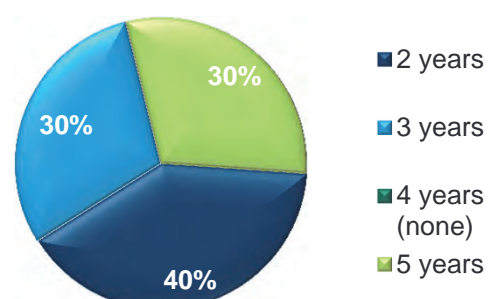
Years of Financial Statements

» 80% of financial services EGCs included two years of audited financial statements (compared to 68% for all other EGCs) and 40% included two years of selected financial data (compared to 59% for all other EGCs).*

Years of Audited Financial Statements



Years of Selected Financial Data



*Excludes one issuer that provided financials since inception, which period was less than two years.

Accounting/Internal Controls & Flash Results

Accounting/Internal Controls

- » Of the 11 financial services IPOs:
 - None had a going-concern qualification.
 - One (9%) disclosed a material weakness in internal control over financial reporting. This IPO priced below the range.
 - One (9%) had restated financial statements. This IPO priced in the range.

Flash Results

- » Six of 11 (55%) financial services IPOs priced within 45 days of the end of the fourth quarter of 2016 and the first, second or third quarter of 2017.
 - Four of these six (67%) showed flash results.

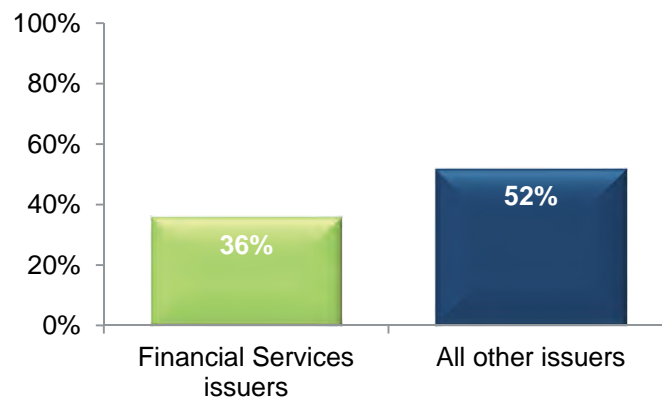
Net Income/Loss & EBITDA/Adjusted EBITDA

Net Income/Loss

- » Two of 11 (18%) financial services issuers had a net loss, compared to 68% for all other issuers with a net loss.

EBITDA/Adjusted EBITDA

- » Four of 11 (36%) financial services issuers disclosed EBITDA and/or Adjusted EBITDA, compared to 52% for all other issuers.

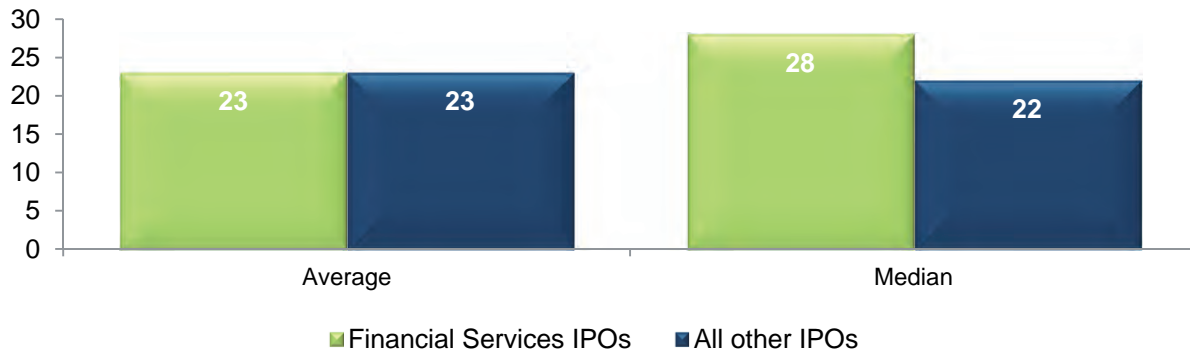


SEC Comments

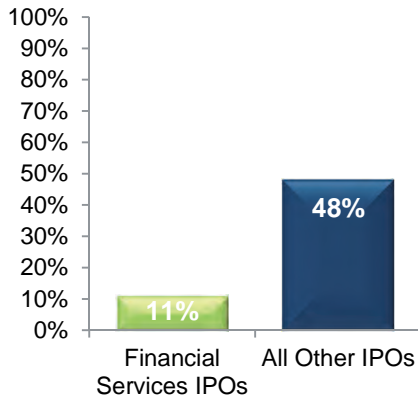
Total First Round SEC Comments

» On average, the number of total first round SEC comments for financial services IPOs was the same as all other IPOs.

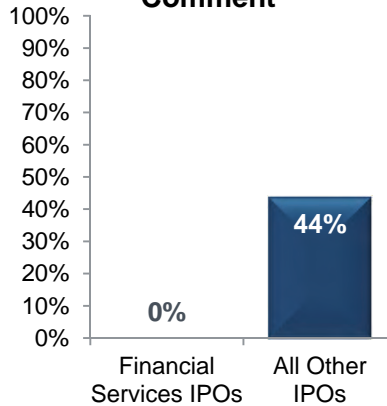
Number of Total First Round SEC Comments



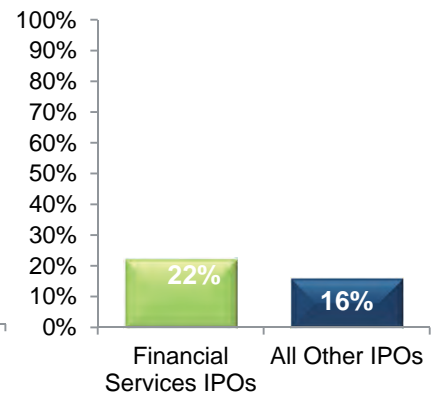
Percentage with Cheap Stock Comment



Percentage with Revenue Recognition Comment



Percentage with Segment Reporting Comment



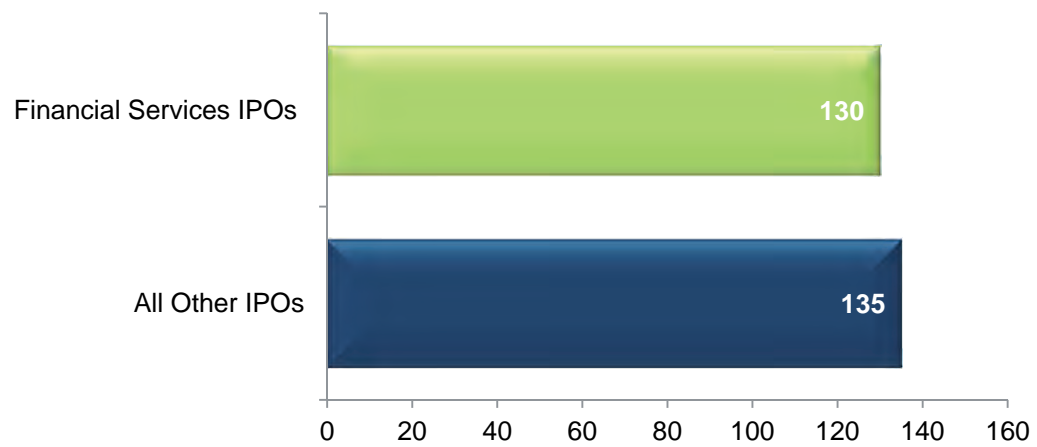
*Excludes prior SEC-reviewed issuers (two in financial services, two in all other IPOs).

Timing

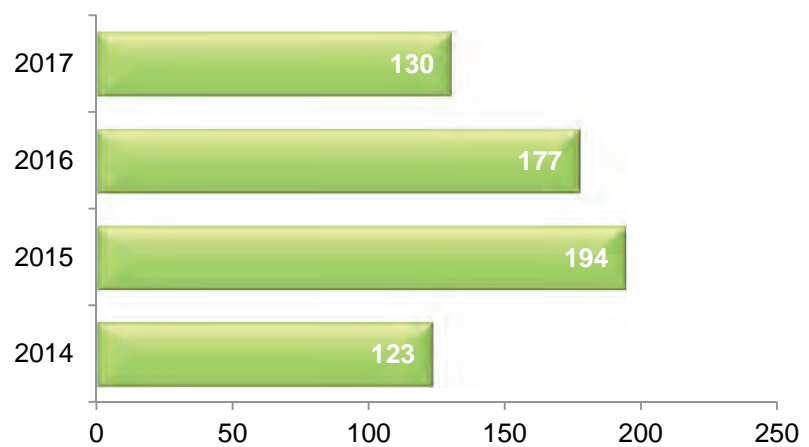
Timing*

- » The time period from first submission/filing to pricing for financial services IPOs was similar to the average for all other IPOs.

Average Number of Days From First Submission/Filing to Pricing



Financial Services Average Number of Days From First Submission/Filing to Pricing



*Excludes prior SEC-reviewed issuers (two in financial services, two in all other IPOs) and IPOs with confidential submission to pricing greater than 18 months (two in financial services, seven in all other IPOs).

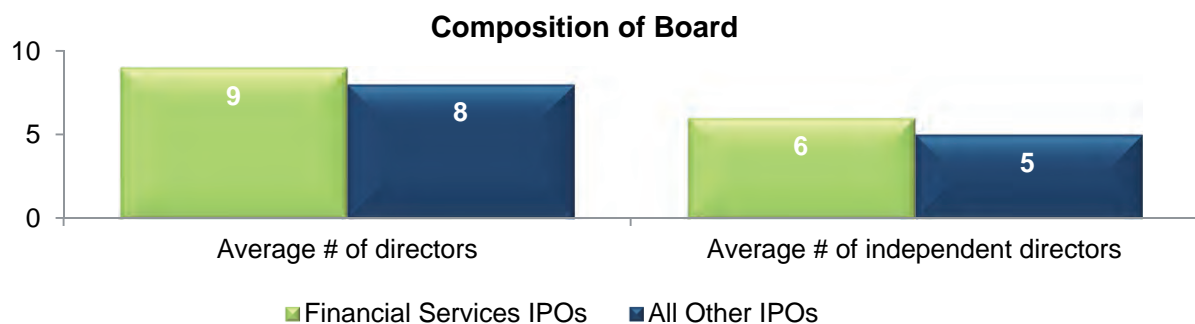
Corporate Governance: Key Items

Controlled Company Exemption*

- » Three of 10 (30%) financial services issuers were eligible for the controlled company exemption, compared to 44% for all other issuers.
 - One of these three (33%) issuers elected to take advantage of the exemption.

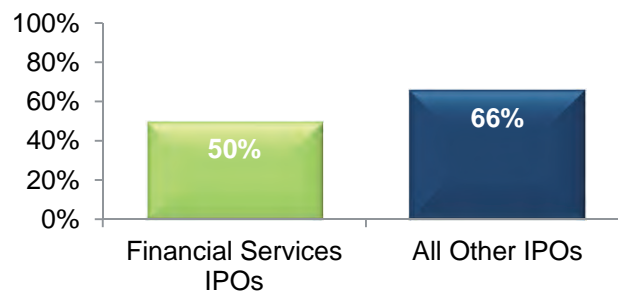
Director Independence*

- » Eight of 10 (80%) financial services issuers had a majority of independent directors on their boards, compared to 65% for all other issuers.
 - On average, these eight issuers had 73% board independence.



Separation of Chairman & CEO Roles*

- » Five of 10 (50%) financial services issuers separated their Chairman and CEO roles, compared to 66% for all other issuers.



Classes of Common Stock*

- » One of 10 (10%) financial services issuers had multiple classes of common stock, compared to 33% for all other issuers.

*Excludes FPIs (subject to home jurisdiction governance rules) (one in financial services, 17 in all other IPOs) and four MLPs in all other IPOs.

IPO Fees and Expenses

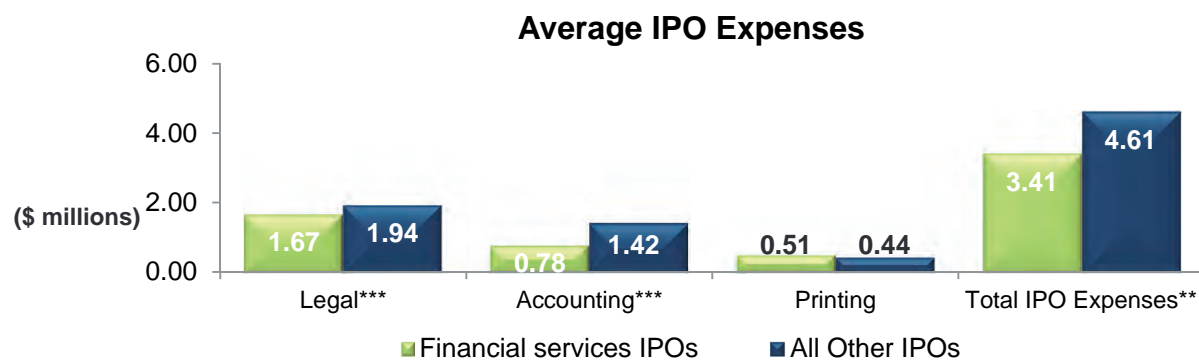
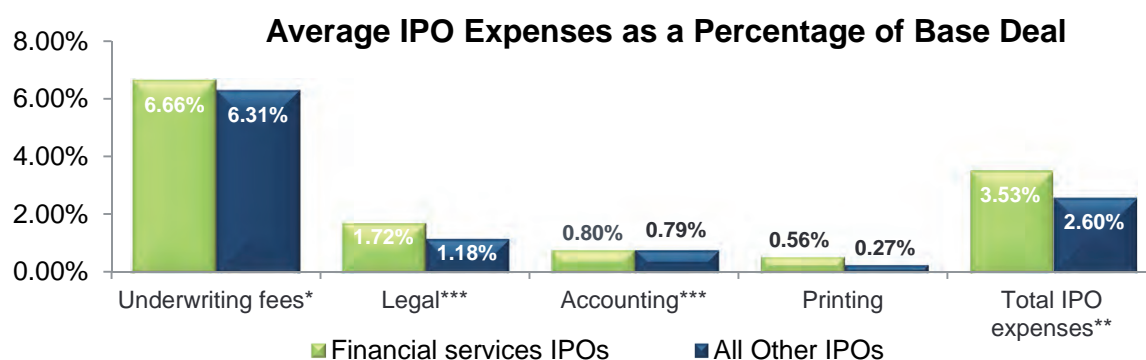
IPO Fees and Expenses

- » Underwriting fees and total IPO expenses (excluding underwriting fees) for financial services IPOs are summarized below:

Fee Category:	Low	Average	Median	High
Underwriting Fees*	\$3,780,000	\$7,105,110	\$6,368,675	\$15,400,000
Total IPO Expenses**	\$1,000,000	\$3,411,479	\$2,300,000	\$8,743,996

- » Legal fees, accounting fees and printing costs for financial services IPOs are set forth below:

Fee Category:	Low	Average	Median	High
Legal***	\$400,000	\$1,673,119	\$870,096	\$4,700,000
Accounting***	\$200,000	\$783,273	\$671,366	\$2,500,000
Printing	\$36,000	\$511,019	\$350,000	\$1,000,000



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

**Total IPO expenses excludes underwriting fees.

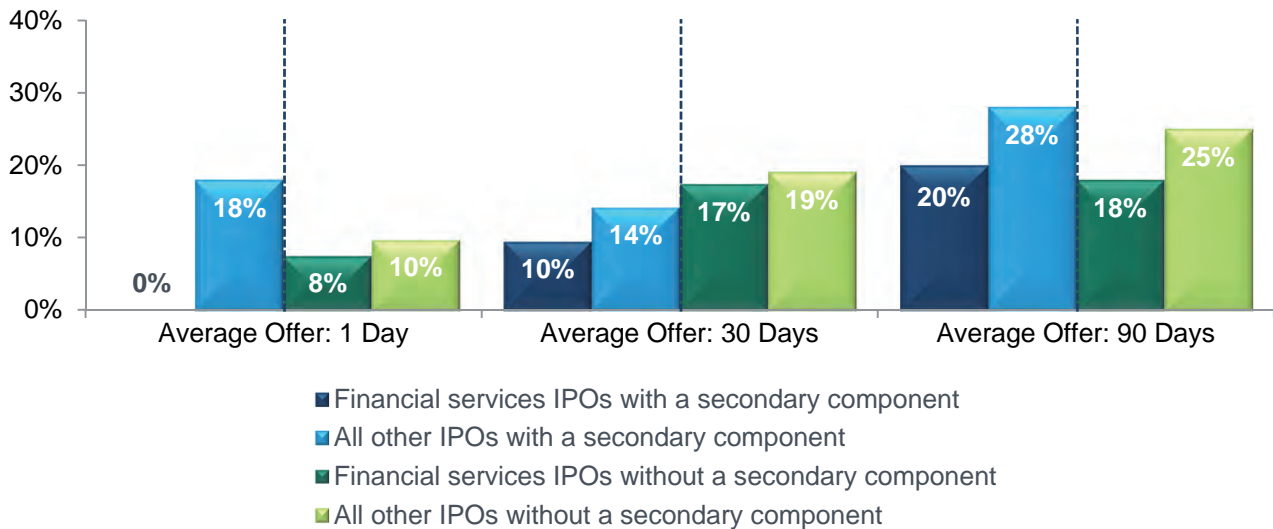
***Excludes one IPO in financial services with insufficient information.

Deal Structure: Secondary Component, DSPs and Insiders Purchasing

Secondary Component

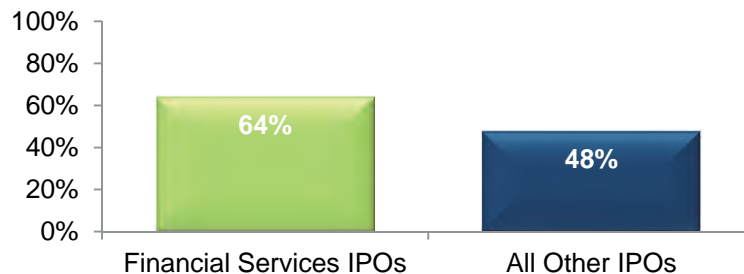
» Three of 11 (27%) financial services IPOs had a secondary component, compared to 25% for all other IPOs.

Aftermarket Performance



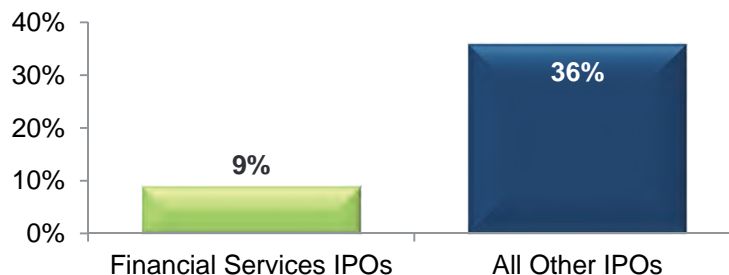
Directed Share Programs (DSPs)

» Seven of 11 (64%) financial services IPOs included DSPs, compared to 48% for all other IPOs.



Insiders Purchasing*

» One of 11 (9%) financial services issuers disclosed insiders purchasing in the IPO, compared to 36% for all other IPOs.



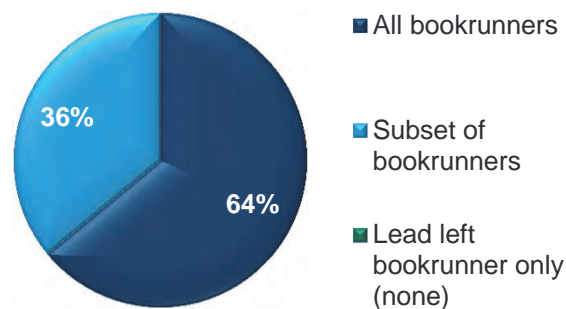
*Does not include purchases through a DSP.

Lock-Ups & Carve-Outs

Lock-Ups

- » Seven of 11 (82%) financial services IPOs disclosed the percentage or number of shares locked up and of these IPOs, on average, 96.6% of pre-IPO shares were locked up, compared to 99.0% for all other IPOs.*
- » Two of 11 (18%) disclosed that “substantially all” pre-IPO shares were locked up.
- » Seven of 11 (64%) financial services IPOs required all bookrunners to release the lock-up, four of 11 (36%) required a subset of bookrunners and none required only the lead left bookrunner.

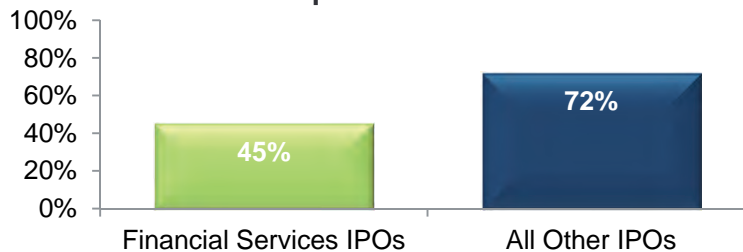
Lock-up Release



Carve-Outs

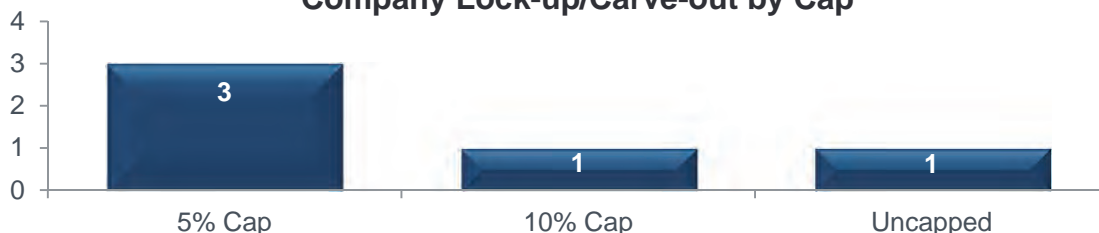
- » Five of 11 (45%) financial services IPOs included a carve-out in the issuer lock-up for stock issuances in connection with acquisitions/joint ventures (JVs), commercial collaborations and similar transactions, compared to 72% for all other IPOs.

Percentage of IPOs with Carve-out for Acquisitions/JVs



- » Of the five financial services IPOs with acquisition/JV carve-outs, four included a cap, reflected as a percentage of shares outstanding, on the number of shares that could be issued.

Company Lock-up/Carve-out by Cap



*Excludes seven IPOs with indeterminable information and two IPOs that were outliers.

Sponsor-Backed IPOs

Sponsor-Backed and Management/Termination Fees*

- » Two of 11 (18%) financial services IPOs were sponsor-backed, compared to 39% for all other IPOs.

Key Comparisons

	Sponsor-Backed	Non-Sponsor-Backed
Percentage of total IPOs	18%	82%
Percentage of IPOs that are EGCs	100%	89%
Average market capitalization at pricing	\$440mm	\$707mm
Percentage of IPOs eligible for the controlled company exemption*	0%	38%
Average number of total first round SEC comments**	32	21
Average number of SEC comment letters	5	3
Average number of days from first submission/filing to pricing** (excludes an IPO with submission to pricing over 18 months)	147	127
Average total IPO expenses (excluding underwriting fees)	\$5.2mm	\$3.0mm
Median total IPO expenses (excluding underwriting fees)	\$5.2mm	\$1.8mm
Percentage of IPOs with a secondary component	0%	33%
Percentage of IPOs disclosing EBITDA and/or Adjusted EBITDA	100%	22%
Percentage of IPOs with DSPs	100%	56%
Percentage of IPOs with insiders purchasing	50%	0%

*Excludes FPIs (subject to home jurisdiction governance rules) and FPIs (subject to home jurisdiction governance rules).

**Excludes two prior SEC-reviewed issuers.

Industrials

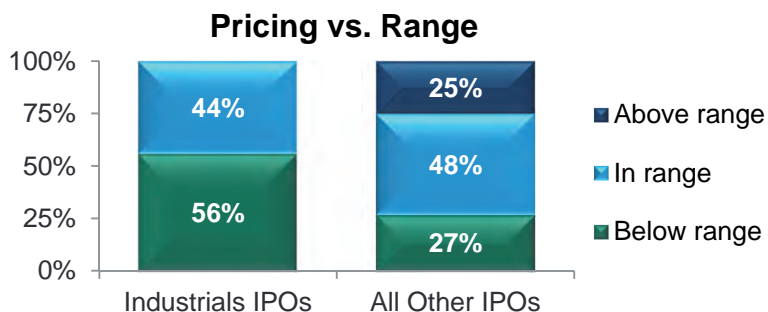
Industrials Market Analysis

Overview

- » We analyzed nine industrials IPOs in 2017.
 - Four (45%) homebuilders/building products
 - Two (22%) chemicals.
 - One (11%) machinery.
 - One (11%) metals.
 - One (11%) transportation.
- » Three of the nine (33%) were FPIs with headquarters in Argentina, Brazil, and Ireland.
- » The U.S. industrials issuers were headquartered in five states: California (two), Minnesota, North Carolina, Pennsylvania and Wisconsin.

Deal Execution

- » No industrials IPOs priced above the range, compared to 25% for all other IPOs.

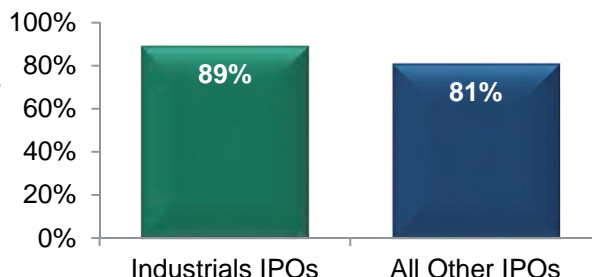


Deal Value & Over-Allotment*

- » More than half of the industrials IPOs had deal values at or above \$250 million.



- » The over-allotment option was partially or fully exercised in eight of nine (89%) industrials IPOs, compared to 81% for all other IPOs.

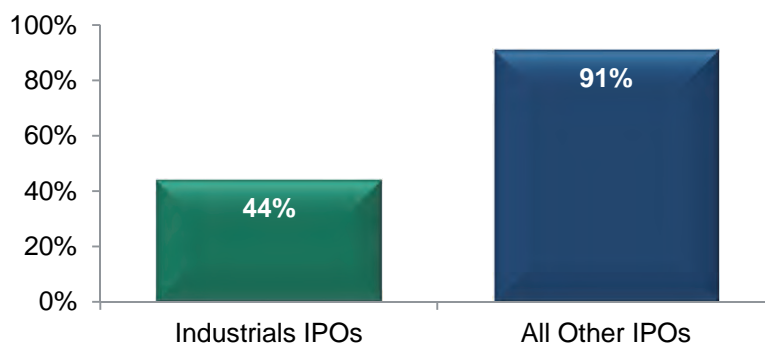


*Deal value consists of priced amount in base offering and excludes any exercise of the over-allotment option.

EGCs/Confidential Submission & Financial Statements

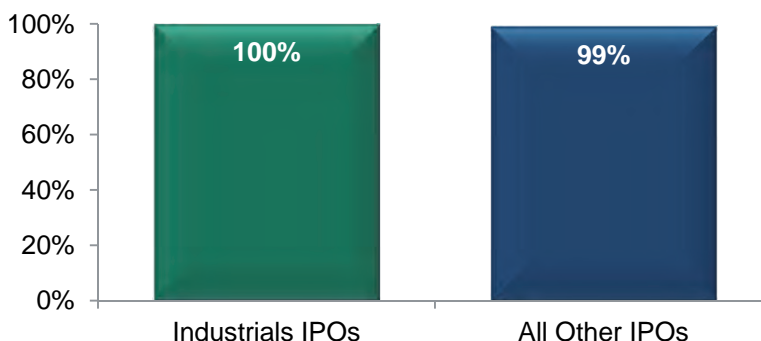
Overview

- » Four of nine (44%) industrials IPOs were EGCs, compared to 91% for all other IPOs.
 - All industrials EGCs elected confidential submission, compared to 99% for all other EGCs.



Confidential Submission

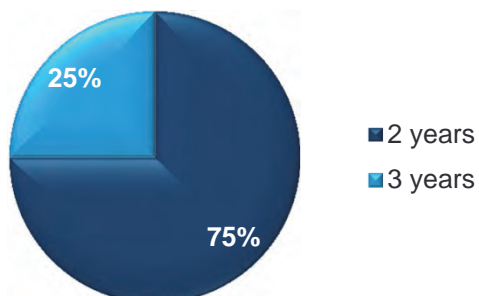
- » All industrial EGCs elected confidential submission, compared to 99% for all other EGCs.



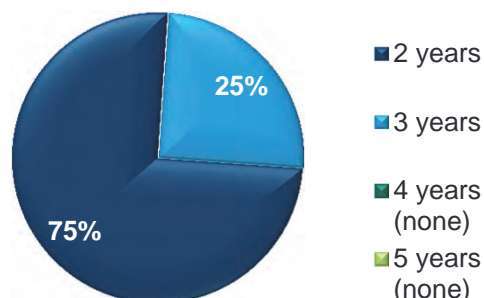
Years of Financial Statements

- » 75% of industrials EGCs included two years of audited financial statements (compared to 70% for all other EGCs) and 75% included two years of selected financial data (compared to 55% for all other EGCs).*

Years of Audited Financial Statements



Years of Selected Financial Data



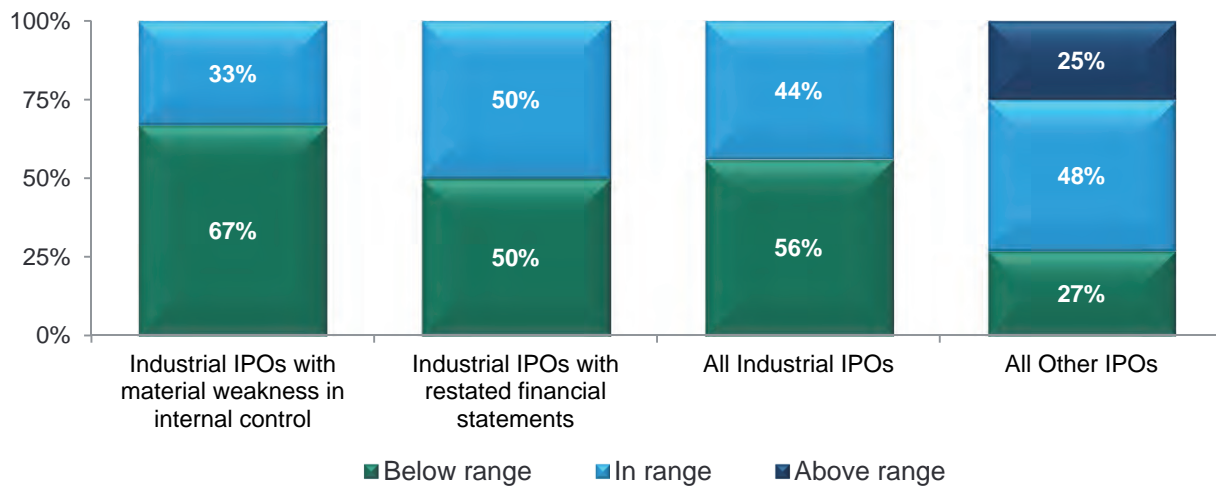
*Excludes one issuer that provided financials since inception, which period was less than two years.

Accounting/Internal Controls & Flash Results

Accounting/Internal Controls

- » Of the nine industrials IPOs:
 - One (11%) had a going-concern qualification. This IPO priced below the range.
 - Three (33%) disclosed a material weakness in internal control over financial reporting.
 - Two (22%) had restated financial statements.

Pricing vs. Range



Flash Results

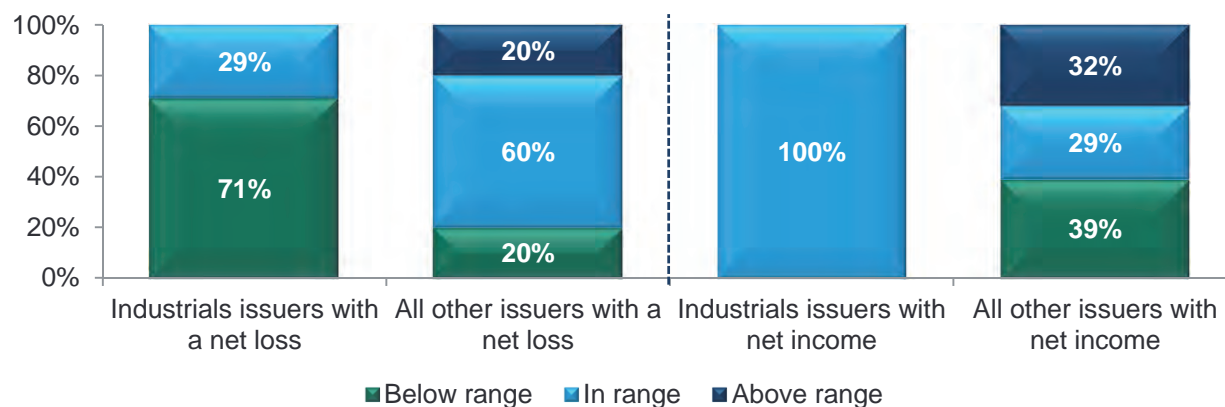
- » Seven of nine (78%) industrials IPO priced within 45 days of the end of the fourth quarter of 2016 and the first, second or third quarter of 2017.
 - Two of these seven (29%) showed flash results.

Net Income/Loss & EBITDA/Adjusted EBITDA

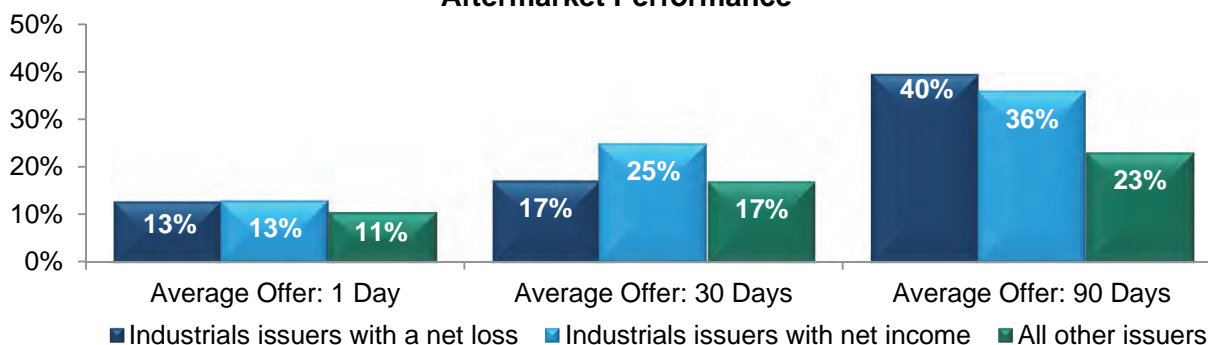
Net Income/Loss

» Seven of nine (78%) industrials issuers had net loss, compared to 60% for all other issuers.

Pricing vs. Range

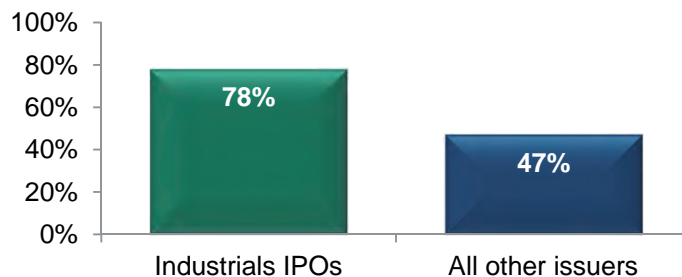


Aftermarket Performance



EBITDA/Adjusted EBITDA

» Seven of nine (78%) industrials issuers disclosed EBITDA and/or Adjusted EBITDA, compared to 47% for all other issuers.

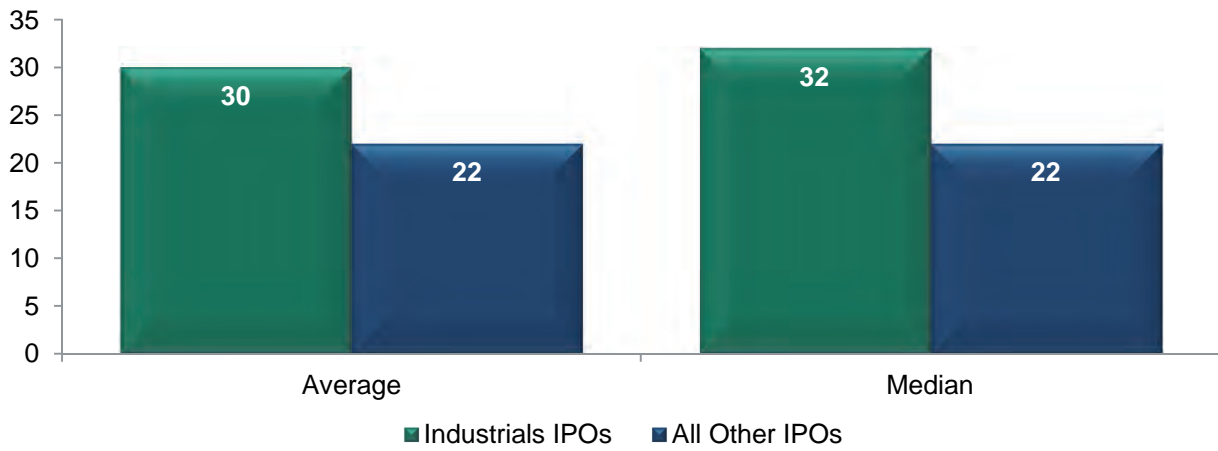


SEC Comments

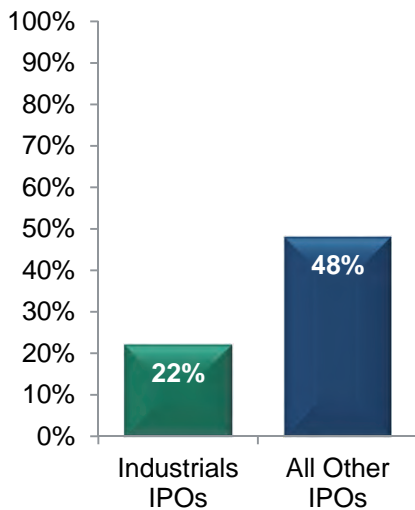
Total First Round SEC Comments*

» On average, the number of total first round SEC comments for industrials IPOs was higher than for all other IPOs.

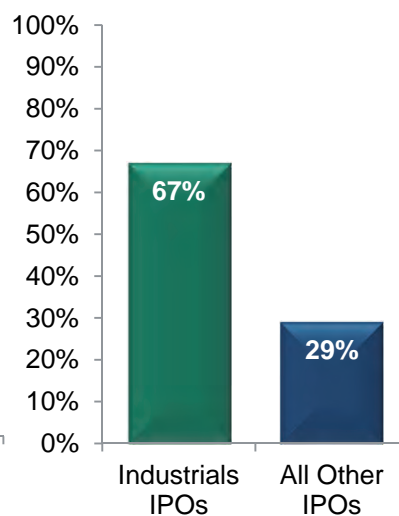
Number of Total First Round SEC Comments



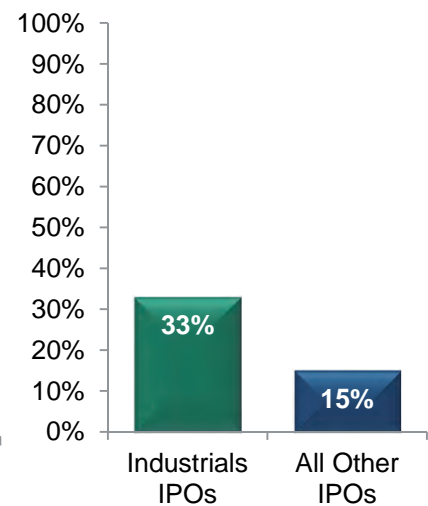
Percentage with Cheap Stock Comment



Percentage with Non-GAAP Financials



Percentage with Segment Reporting Comment



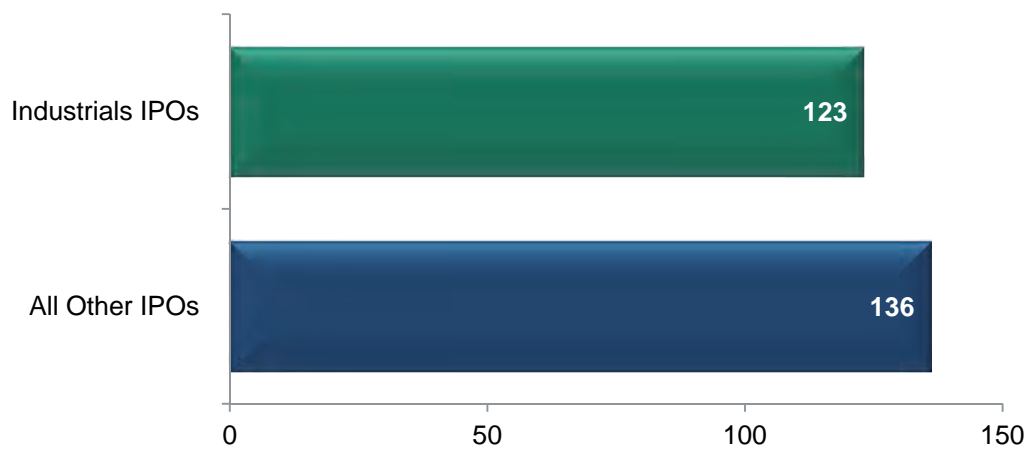
*Excludes prior SEC-reviewed issuers (none in industrials, four in all other IPOs).

Timing

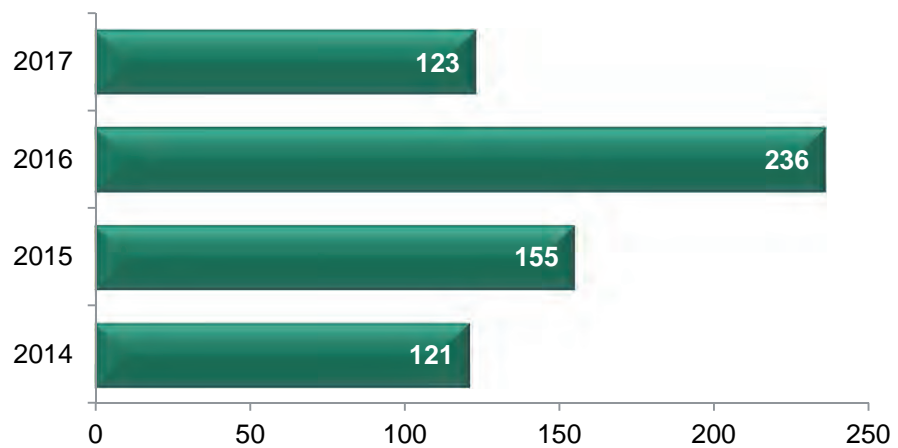
Timing*

- » The time period from first submission/filing to pricing for industrials IPOs was shorter than the average for all other IPOs.

Average Number of Days From First Submission/Filing to Pricing



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



*Excludes prior SEC-reviewed issuers (none in industrials, four in all other IPOs) and IPOs with confidential submission to pricing greater than 18 months (one in industrials, eight in all other IPOs).

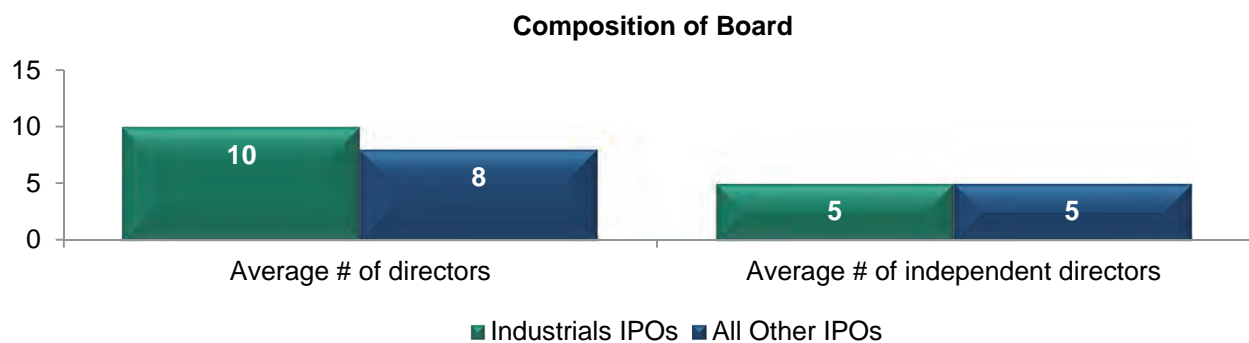
Corporate Governance: Key Items

Controlled Company Exemption*

- » Four of six (67%) industrials issuers were eligible for the controlled company exemption, compared to 40% for all other issuers.
 - All four elected to take advantage of the exemption.

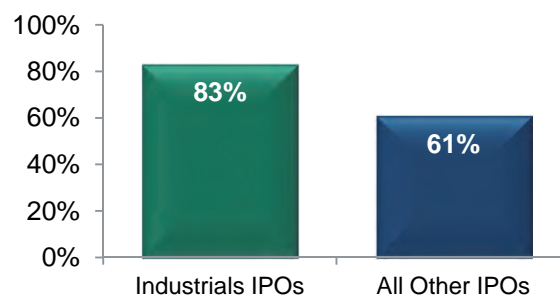
Director Independence*

- » Two of six (33%) industrials issuers had a majority of independent directors on their boards, compared to 71% for all other issuers.
 - On average, these two had 69% board independence.



Separation of Chairman & CEO*

- » Five of six (83%) industrials issuers separated their Chairman and CEO roles, compared to 61% for all other issuers.



Classes of Common Stock*

- » One of six (17%) industrials issuers had multiple classes of common stock, compared to 31% for all other issuers.

*Excludes FPIs (subject to home jurisdiction governance rules) (three in industrials, 15 in all other IPOs).

IPO Fees and Expenses

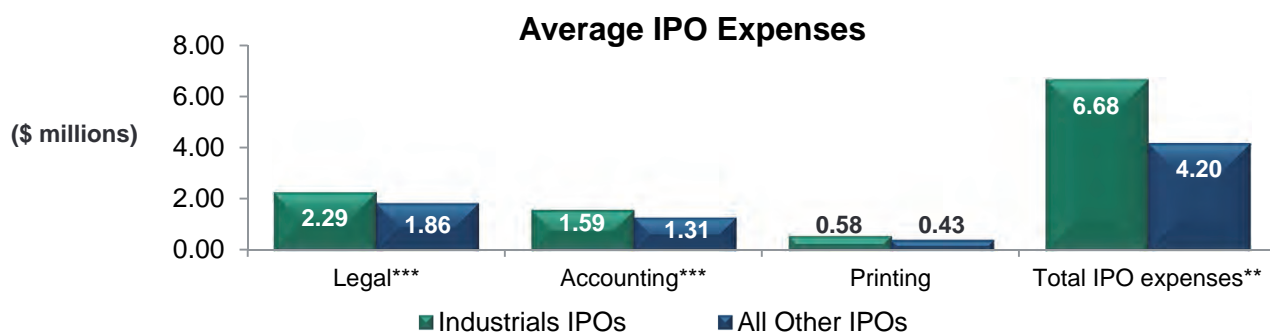
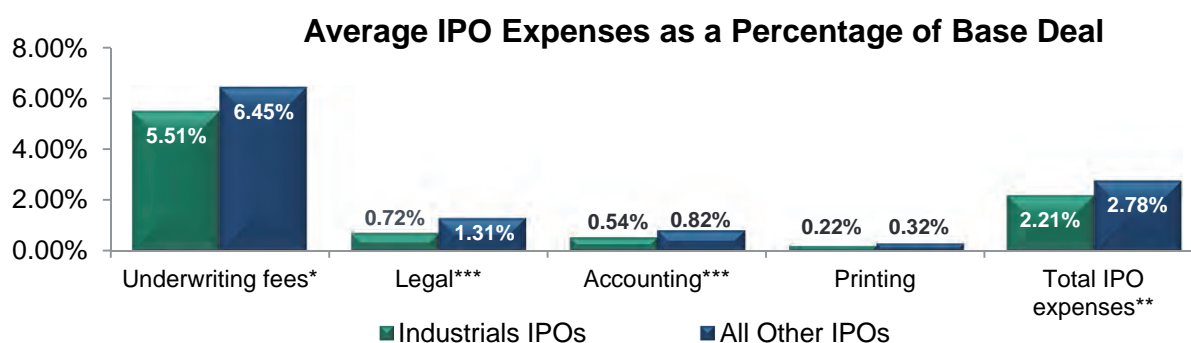
IPO Fees and Expenses

» Underwriting fees and total other IPO expenses (excluding underwriting fees) for industrials IPOs are summarized below:

Fee Category	Low	Average	Median	High
Underwriting Fees*	\$2,520,000	\$26,330,500	\$20,279,346	\$61,267,400
Total IPO Expenses**	\$2,134,360	\$6,680,048	\$7,062,351	\$14,074,571

» Legal fees, accounting fees and printing costs for industrials IPOs are set forth below:

Fee Category	Low	Average	Median	High
Legal	\$1,007,500	\$2,287,700	\$1,800,000	\$4,000,000
Accounting	\$522,759	\$1,593,973	\$1,500,000	\$4,000,000
Printing	\$200,000	\$582,222	\$500,000	\$1,600,000



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

**Total IPO expenses excludes underwriting fees.

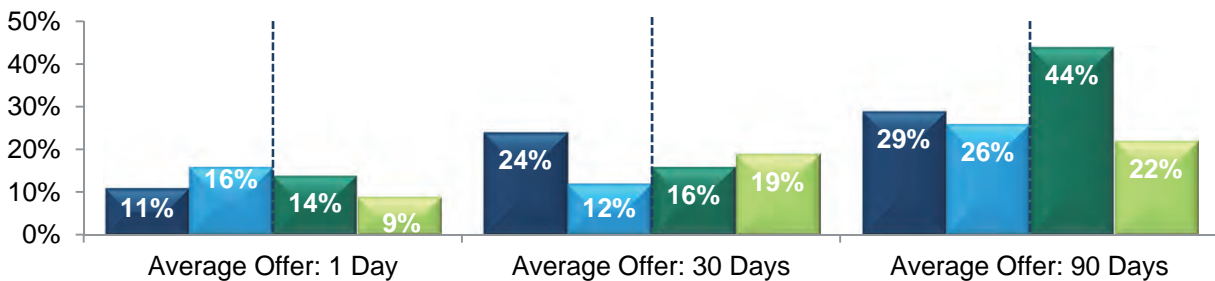
***Excludes one IPO with insufficient information in all other IPOs.

Deal Structure: Secondary Component, DSPs & Insiders Purchasing

Secondary Component

» Three of nine (33%) industrials IPOs had a secondary component, compared to 25% for all other IPOs.

Aftermarket Performance

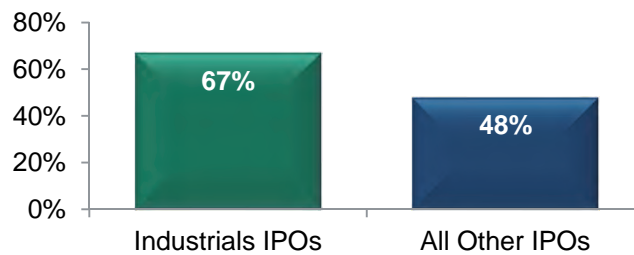


- Industrials IPOs with a secondary component
- All other IPOs with a secondary component
- Industrials IPOs without a secondary component
- All other IPOs without a secondary component

Directed Share Programs (DSPs)

» Six of nine (67%) industrials IPOs included DSPs, compared to 48% for all other IPOs.

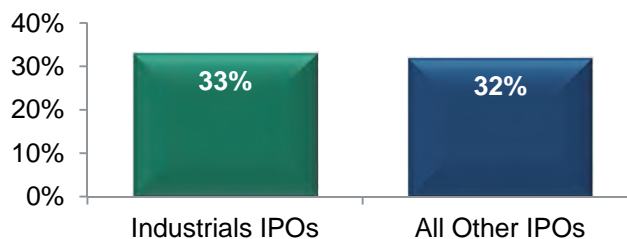
Percentage of IPOs with DSPs



Insiders Purchasing*

- » Three of nine (33%) industrials issuers disclosed insiders purchasing in the IPO, compared to 32% for all other IPOs.
- » In these three, insiders purchased an average of 21% of the shares sold in the IPO, compared to an average of 22% for all other IPOs.

Percentage of IPOs with Insiders Purchasing



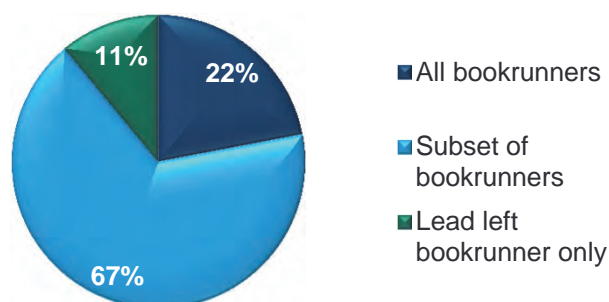
*Does not include purchases through a DSP.

Lock-Ups & Carve-Outs

Lock-Ups

- » Six of nine (67%) industrial IPOs disclosed the percentage or number of shares locked up and of these IPOs, on average, 97.5% of pre-IPO shares were locked up, compared to 98.8% for all other IPOs.*
- » Two of nine (22%) disclosed that “substantially all” pre-IPO shares were locked up.
- » Two of nine (22%) required all bookrunners to release the lock-up, six of nine (67%) required a subset of bookrunners and one of nine (11%) required only the lead left bookrunner.

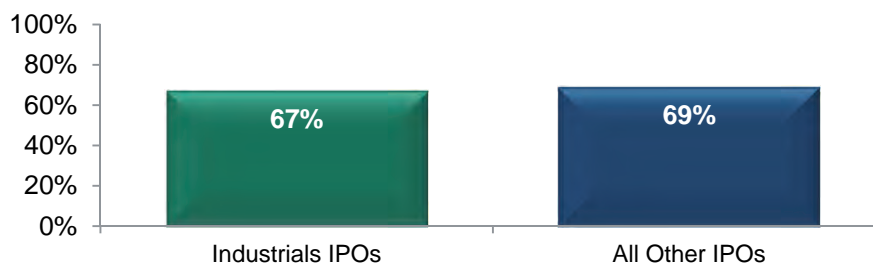
Lock-Up Release



Carve-Outs

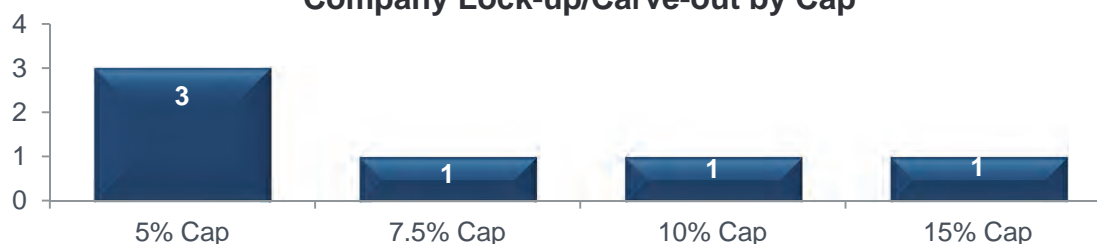
- » Six of nine (67%) industrials IPOs included a carve-out in the issuer lock-up for stock issuances in connection with acquisitions/joint ventures (JVs), commercial collaborations and similar transactions, compared to 69% for all other IPOs.

Percentage of IPOs with Carve-Out for Acquisitions/JVs



- » All industrial IPOs with acquisition/JV carve-outs included a cap, reflected as a percentage of shares outstanding, on the number of shares that could be issued.

Company Lock-up/Carve-out by Cap



*Excludes seven IPOs with indeterminable information and two IPOs that were outliers.

Sponsor-Backed IPOs

Sponsor-Backed and Management/Termination Fees

- » Five of nine (56%) industrials IPOs were sponsor-backed, compared to 34% for all other IPOs.
 - One of these five (20%) issuers paid management or termination fees to the sponsor group in connection with the IPO, compared to 4% for all other IPOs.
- » The average length of sponsor investment for industrials IPOs was 4.4 years.

Key Comparisons

	Sponsor-Backed	Non-Sponsor-Backed
Percentage of total IPOs	56%	44%
Percentage of IPOs that are EGCs	20%	75%
Average market capitalization at pricing	\$2.3bn	\$2.0bn
Percentage of IPOs eligible for the controlled company exemption*	75%	50%
Average number of total first round SEC comments	31	29
Average number of SEC comment letters	4	4
Average number of days from first submission/filing to pricing (excludes an IPO with submission to pricing over 18 months)	136	101
Average total IPO expenses (excluding underwriting fees)	\$6.6mm	\$6.8mm
Median total IPO expenses (excluding underwriting fees)	\$7.1mm	\$5.5mm
Percentage of IPOs with a secondary component	40%	25%
Percentage of IPOs disclosing EBITDA and/or Adjusted EBITDA	100%	50%
Percentage of IPOs with DSPs	40%	100%
Percentage of IPOs with insiders purchasing	40%	100%

*Excludes FPIs (subject to home jurisdiction governance rules) and FPIs (subject to home jurisdiction governance rules).

Consumer/ Retail

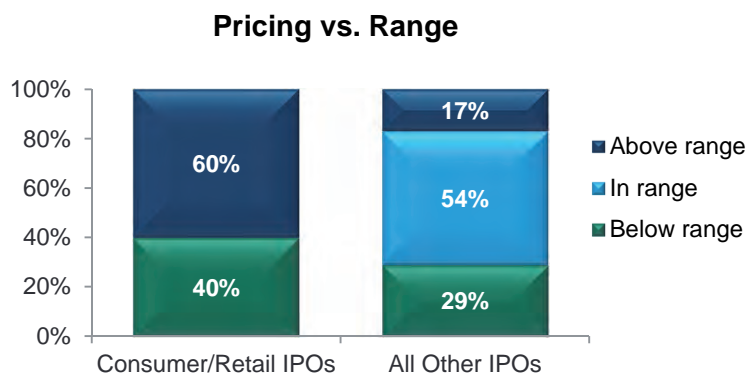
Consumer/Retail Market Analysis

Overview

- » We analyzed 10 consumer/retail IPOs in 2017.
 - One (10%) consumer products.
 - Five (50%) professional services.
 - Four (40%) retail.
- » Four of 10 (40%) were FPIs with headquarters in China (three) and Canada.
- » The U.S. consumer/retail issuers were headquartered in five states: California, Georgia (two), Maryland, Massachusetts and Washington.

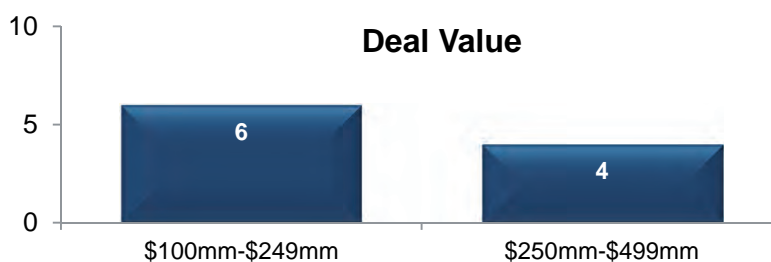
Deal Execution

- » Six of 10 (60%) consumer/retail IPOs priced above the range, compared to 17% for all other IPOs.



Deal Value & Over-Allotment*

- » All consumer/retail IPOs priced between \$100 million and \$500 million.



- » The over-allotment option was partially or fully exercised in eight of 10 (80%) consumer/retail IPOs, compared to 82% for all other IPOs.

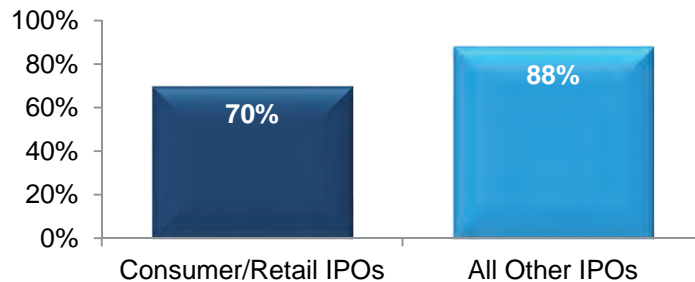


*Deal value consists of priced amount in base offering and excludes any exercise of the over-allotment option.

EGCs/Confidential Submission & Financial Statements

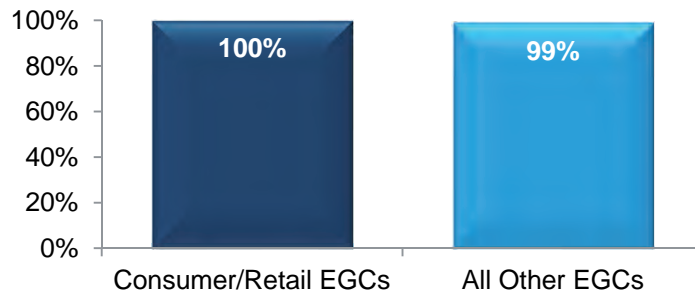
Overview

- » Seven of 10 (70%) consumer/retail IPOs were EGCs, compared to 88% for all other IPOs.



Confidential Submission

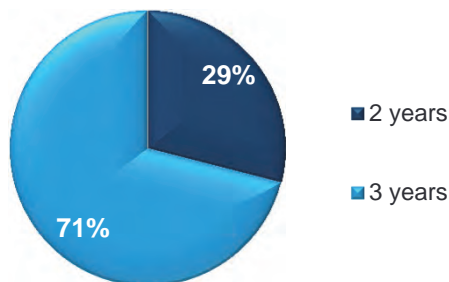
- » All seven consumer/retail EGCs elected confidential submission, compared to 99% for all other IPOs.



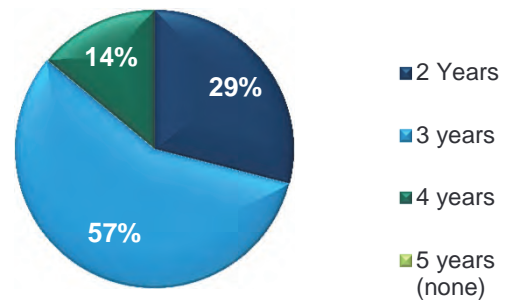
Years of Financial Statements

- » 29% of consumer/retail EGCs included two years of audited financial statements (compared to 74% for all other EGCs) and 29% included two years of selected financial data (compared to 59% for all other EGCs).*

Years of Audited Financial Statements



Years of Selected Financial Data



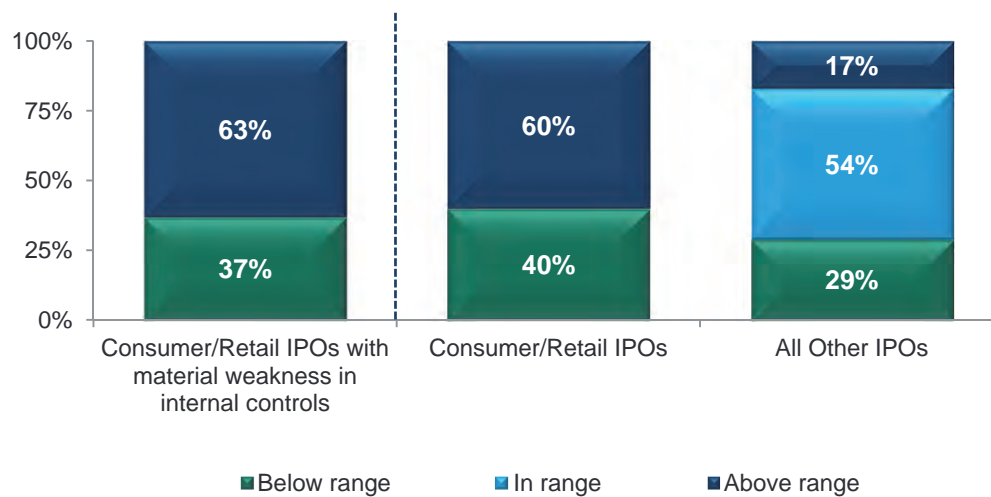
*Excludes one issuer that provided financials since inception, which period was less than two years.

Accounting/Internal Controls & Flash Results

Accounting/Internal Controls

- » Of the 10 consumer/retail IPOs:
 - None had a going-concern qualification.
 - Eight (80%) disclosed a material weakness in internal control over financial reporting.
 - None had restated financial statements.

Pricing vs. Range



Flash Results

- » Six of 10 (60%) consumer/retail IPOs priced within 45 days of the end of the fourth quarter of 2016 and the first, second or third quarter of 2017.
 - Five of these six (83%) showed flash results.

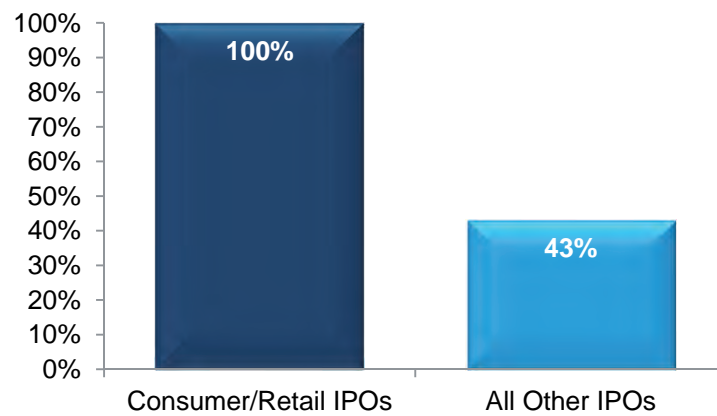
Net Income/Loss & EBITDA/Adjusted EBITDA

Net Income/Loss

- » One of 10 (10%) consumer/retail issuers had a net loss, compared to 68% for all other IPOs.

EBITDA/Adjusted EBITDA

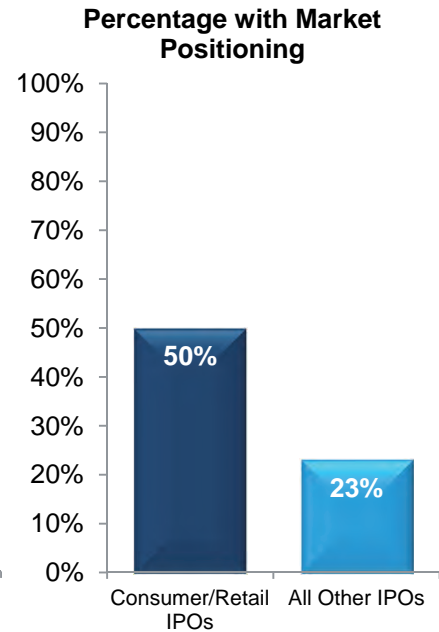
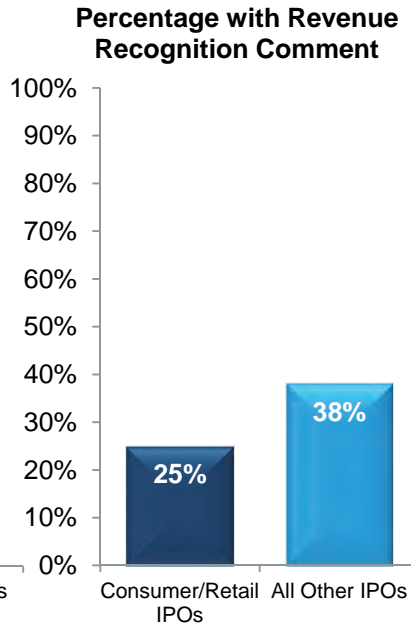
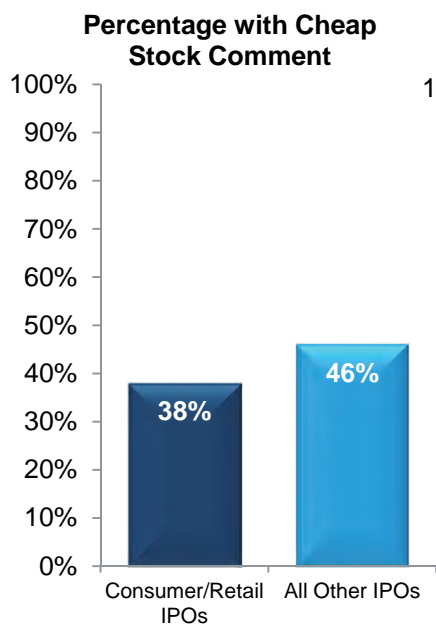
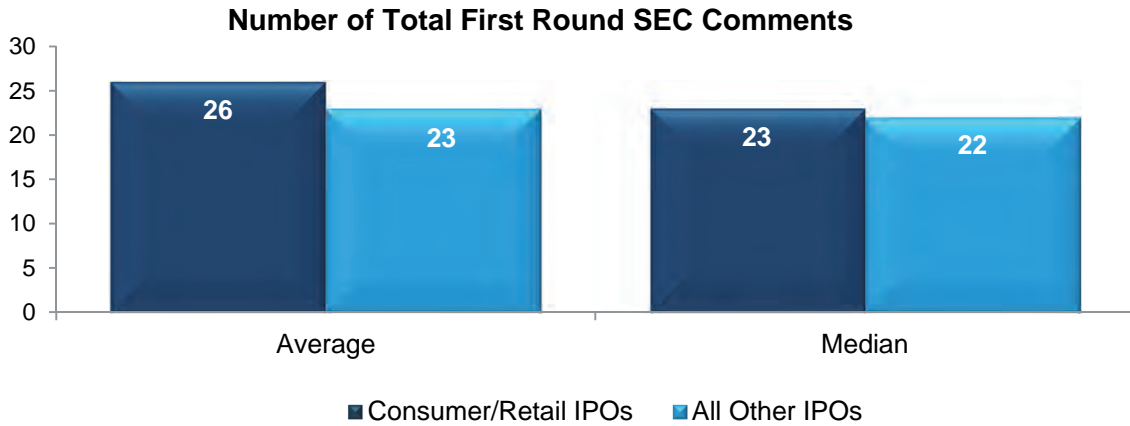
- » All consumer/retail issuers disclosed EBITDA and/or Adjusted EBITDA, compared to 43% for all other IPOs.



SEC Comments

Total First Round SEC Comments*

» On average, the number of total first round SEC comments for consumer/retail IPOs were slightly higher than for all other IPOs.



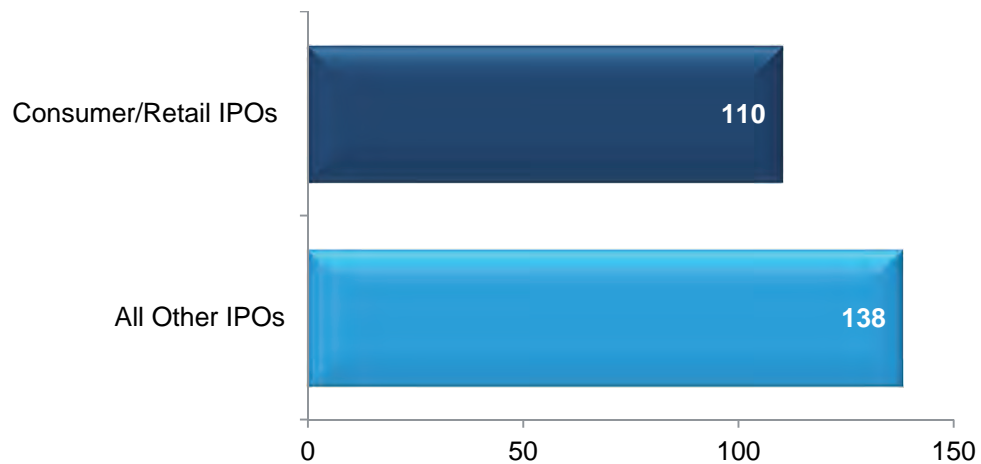
*Excludes prior SEC-reviewed issuers (two in consumer/retail, two in all other IPOs).

Timing

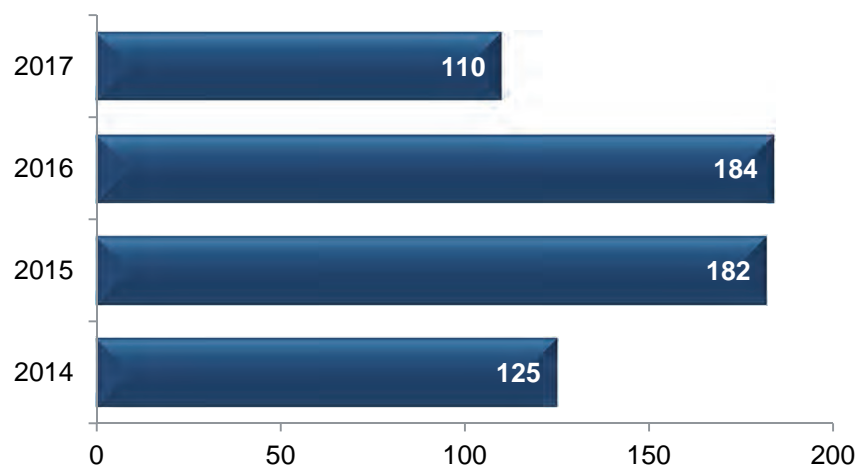
Timing*

- » The time period from first submission/filing to pricing for consumer/retail IPOs was shorter than the average for all other IPOs.

Average Number of Days From First Submission/Filing to Pricing



Consumer/Retail IPOs Average Number of Days From First Submission/Filing to Pricing



*Excludes prior SEC-reviewed issuers (two in consumer/retail, two in all other IPOs) and IPOs with confidential submission to pricing greater than 18 months (none in consumer/retail, nine in all other IPOs).

Corporate Governance: Key Items

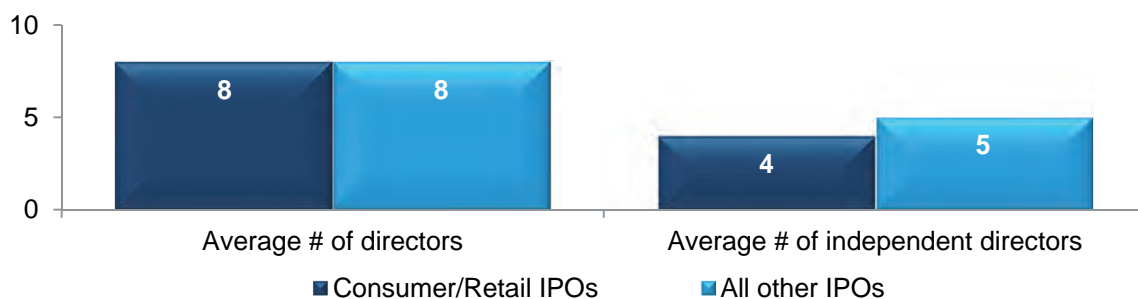
Controlled Company Exemption*

- » All consumer/retail issuers were eligible for the controlled company exemption, compared to 36% for all other IPOs.
 - Five of these six (83%) elected to take advantage of the exemption.

Director Independence*

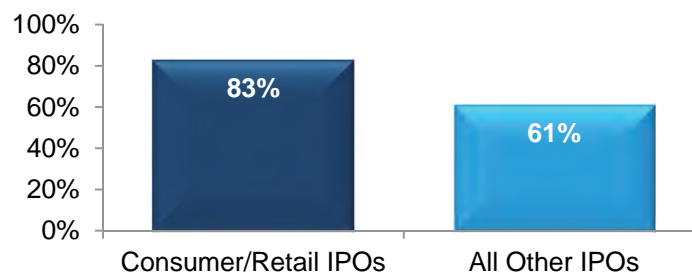
- » One of six (17%) consumer/retail issuers had a majority of independent directors on their boards, compared to 72% for all other IPOs.
 - On average, 82% of the board was independent.

Composition of Board



Separation of Chairman & CEO Roles*

- » Five of six (83%) consumer/retail issuers separated their Chairman and CEO roles, compared to 61% for all other IPOs.



Classes of Common Stock*

- » Three of six (50%) consumer/retail issuers had multiple classes of common stock, compared to 28% for all other IPOs.

*Excludes FPIs (subject to home jurisdiction governance rules) (four in consumer/retail and 14 in all other IPOs) and four MLPs in all other IPOs.

IPO Fees and Expenses

IPO Fees and Expenses

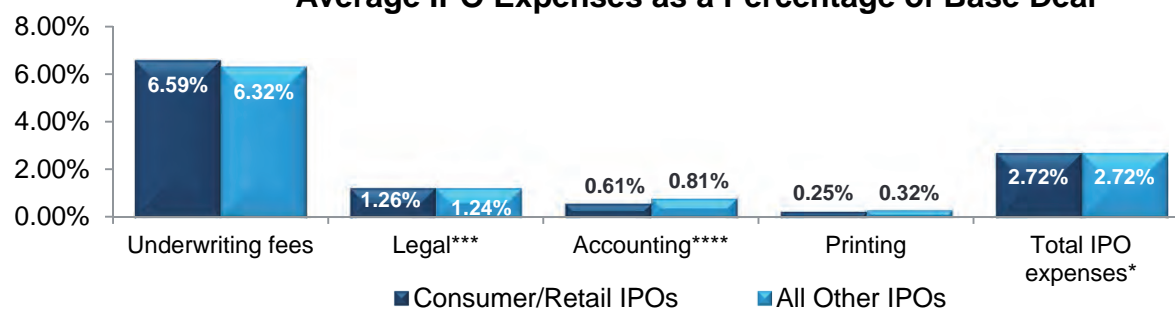
- » Underwriting fees and total other IPO expenses (excluding underwriting fees) for consumer/retail IPOs are summarized below:

Fee Category:	Low	Average	Median	High
Underwriting Fees*	\$ 8,562,499	\$14,921,546	\$12,067,773	24,500,000
Total IPO Expenses**	2,726,368	\$5,476,248	\$5,350,000	9,000,000

- » Legal fees, accounting fees, and printing costs for consumer/retail IPOs are set forth below:

Fee Category:	Low	Average	Median	High
Legal***	\$1,093,000	\$2,510,300	\$2,687,500	\$3,500,000
Accounting	\$600,000	\$1,214,300	\$903,000	\$2,550,000
Printing	\$115,000	\$477,354	\$300,000	\$1,600,000

Average IPO Expenses as a Percentage of Base Deal



Average IPO Expenses



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

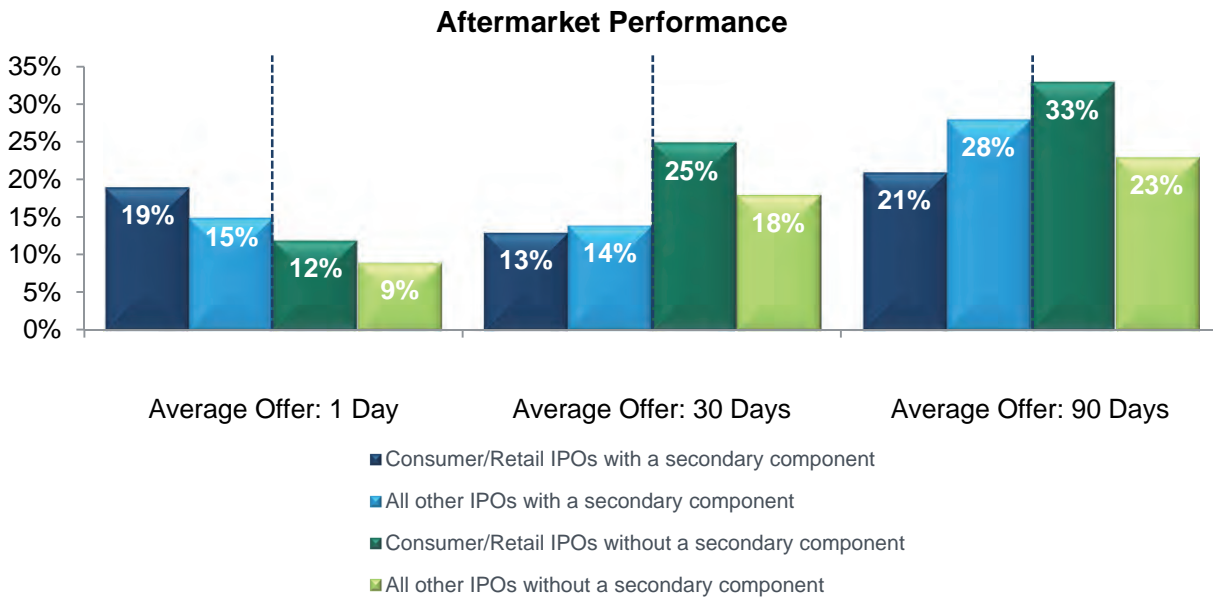
**Total IPO expenses excludes underwriting fees.

***Excludes one IPO with insufficient information in all other IPOs.

Deal Structure: Secondary Component, DSPs & Insiders Purchasing

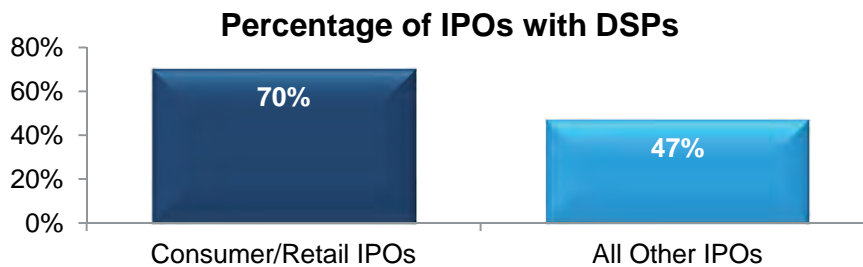
Secondary Component

» Five of 10 (50%) consumer/retail IPOs had a secondary component, compared to 22% for all other IPOs.



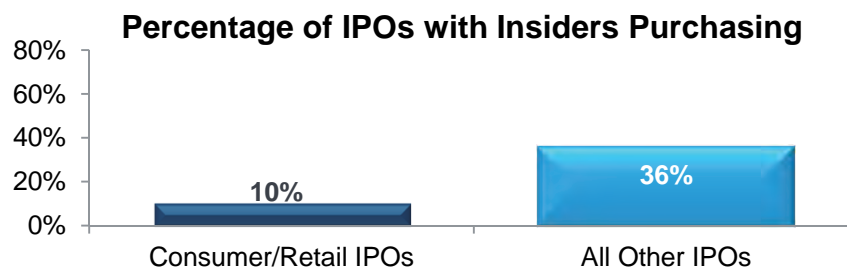
Directed Share Programs (DSPs)

» Seven of 10 (70%) consumer/retail IPOs included DSPs, compared to 47% for all other IPOs.



Insiders Purchasing*

» One of 10 (10%) consumer/retail issuers disclosed insiders purchasing in the IPO, compared to 36% for all other IPOs.



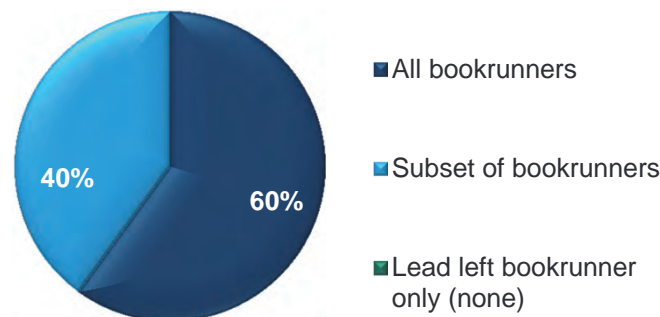
*Does not include purchases through a DSP.

Lock-Ups & Carve-Outs

Lock-Ups

- » Five of 10 (50%) consumer/retail IPOs disclosed the percentage or number of shares locked up and of these IPOs, on average, 100% of pre-IPO shares were locked up, compared to 98.4% for all other IPOs.*
- » Three of 10 (30%) consumer/retail IPOs disclosed that “substantially all” pre-IPO shares were locked up.
- » Six of 10 (60%) consumer/retail IPOs required all bookrunners to release the lock-up, four of 10 (40%) required a subset of bookrunners and none required only the lead left bookrunner.

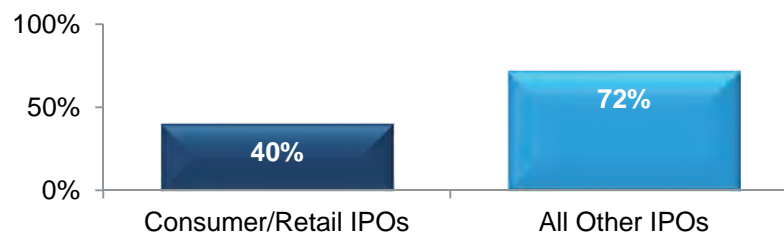
Lock-Up Release



Carve-Outs

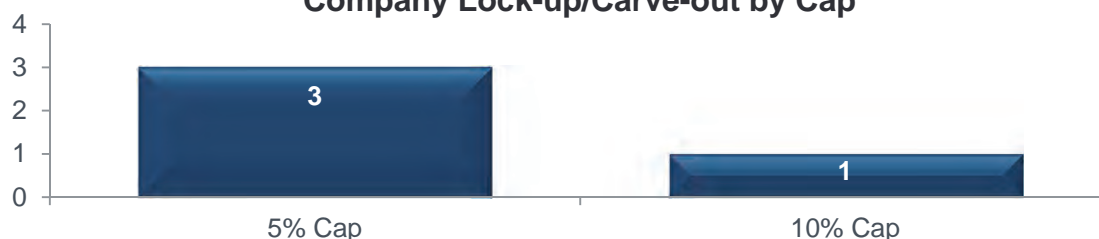
- » Four of 10 (40%) consumer/retail IPOs included a carve-out in the issuer lock-up for stock issuances in connection with acquisitions/joint ventures (JVs), commercial collaborations and similar transactions, compared to 72% for all other IPOs.

Percentage of IPOs with Carve-out for Acquisitions/JVs



- » All consumer/retail IPOs with acquisition/JV carve-outs included a cap, reflected as a percentage of shares outstanding, on the number of shares that could be issued.

Company Lock-up/Carve-out by Cap



*Excludes seven IPOs with indeterminable information and two IPOs that were outliers.

Sponsor-Backed IPOs

Sponsor-Backed and Management/Termination Fees

- » Nine of 10 (90%) consumer/retail IPOs were sponsor-backed, compared to 29% for all other IPOs.
 - One of these nine (11%) issuers paid management or termination fees to the sponsor group in connection with the IPO, compared to 5% for all other IPOs.

- » The average length of sponsor investment for consumer/retail IPOs was 4.3 years.

	Sponsor-Backed	Non-Sponsor-Backed
Percentage of total IPOs	90%	10%
Percentage of IPOs that are EGCs	67%	100%
Average market capitalization at pricing	\$1.2bn	\$1.2bn
Percentage of IPOs eligible for the controlled company exemption*	100%	0%
Average number of total first round SEC comments**	26	27
Average number of SEC comment letters**	3	3
Average number of days from first submission/filing to pricing (excludes an IPO with submission to pricing over 18 months)	112	96
Average total IPO expenses (excluding underwriting fees)	\$5.8mm	\$2.7mm
Median total IPO expenses (excluding underwriting fees)	\$5.5mm	\$2.7mm
Percentage of IPOs with a secondary component	56%	0%
Percentage of IPOs disclosing EBITDA and/or Adjusted EBITDA	100%	100%
Percentage of IPOs with DSPs	67%	100%
Percentage of IPOs with insiders purchasing	11%	0%

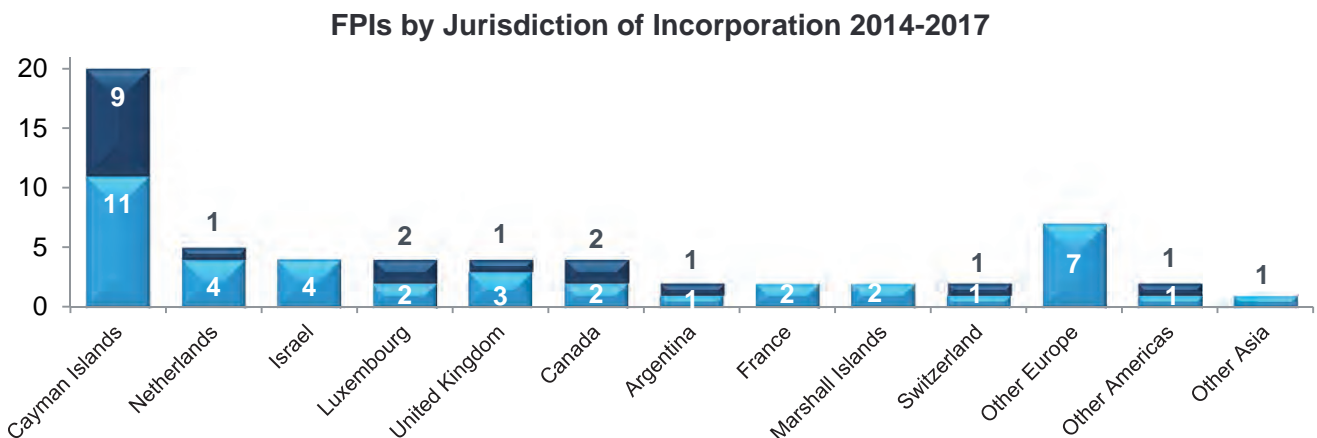
*Excludes MLPs (given their unique governance structures) and FPIs (subject to home jurisdiction governance rules).

**Excludes two prior SEC-reviewed issuers.

FPI Market Analysis

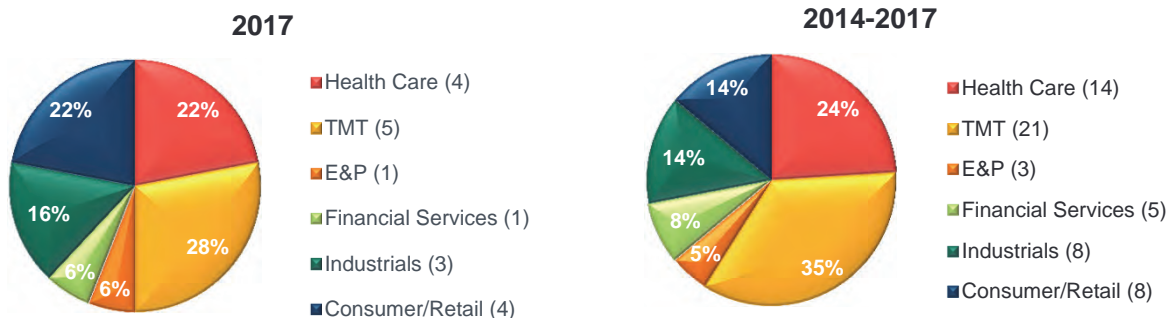
Overview

- » There are 59 FPI IPOs in our database that priced from 2014 to 2017.
- » We analyzed 18 FPI IPOs in 2017, representing 21% of our overall study.
- » The 18 FPI issuers were headquartered in nine jurisdictions and incorporated in nine jurisdictions.
- » In 2017, the most common headquarters location was China (7), and the most common jurisdictions of incorporation were Cayman Islands (9) and Luxembourg (2).



Sectors Represented

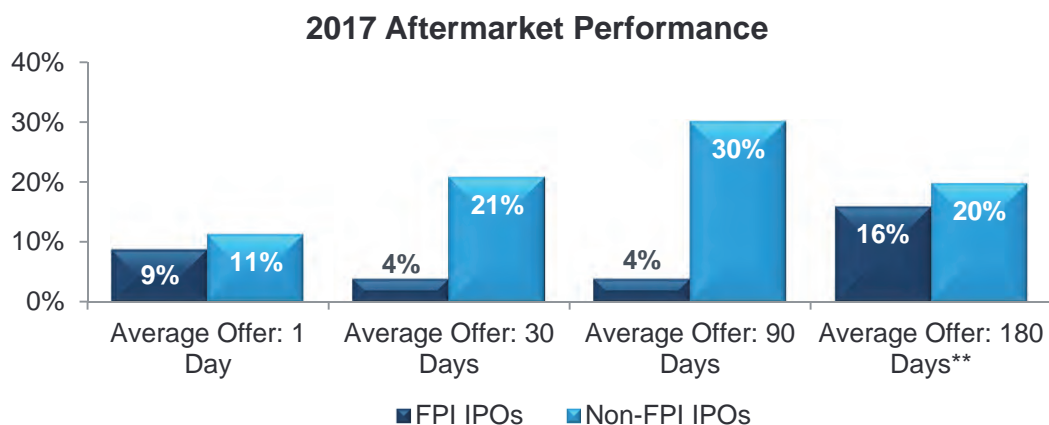
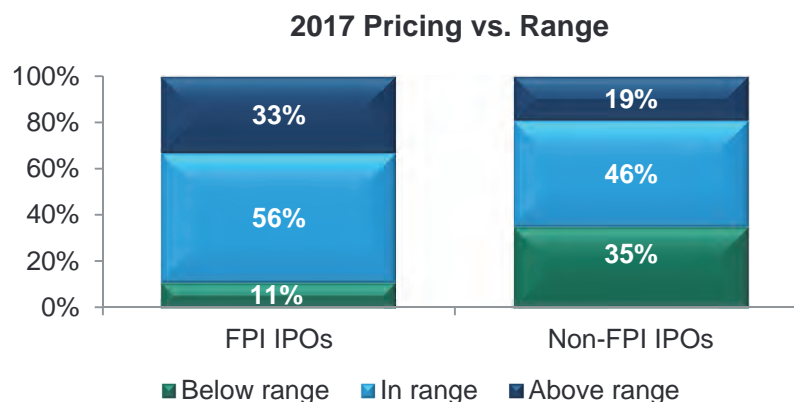
- » TMT, health care and consumer/retail accounted for most of the FPIs in our study.



FPI Market Analysis

Deal Value & Over-Allotment

- » The average base deal value for FPI IPOs was \$342.0 million in 2017, as compared to \$270.0 million for non-FPI IPOs and \$235.4 million for FPI IPOs in 2016.*
- » The over-allotment option was partially or fully exercised in 15 of 18 (83%) FPI IPOs, compared to 81% for non-FPI IPOs.



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

**Only includes deals priced before October 1, 2017.

FPI Market Analysis

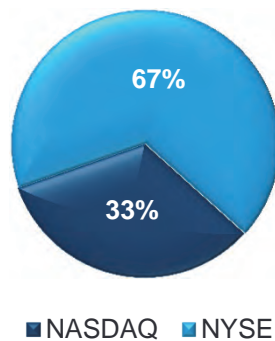
Types of Securities Offered

- » 10 of 18 (56%) FPI issuers offered American depository receipts (ADRs); eight of 18 (44%) FPI issuers offered ordinary shares or common stock.
- » Issuers offering ADRs included those incorporated in Argentina, Brazil, Cayman Islands (seven), and the United Kingdom.
- » Issuers offering ordinary shares included those incorporated in Canada (two), Cayman Islands (two), Luxembourg (two), Switzerland and the Netherlands.

Exchange

- » Four of 18 (22%) FPIs dual listed their shares (two NYSE/Toronto), NYSE/Argentina and NYSE/Brazil) in 2017, as compared to two (NYSE/Tokyo and NYSE/Buenos Aires) in 2016, one (NYSE/Toronto) in 2015 and none in 2014.
- » 12 of 18 (67%) FPIs listed on NYSE, compared to 47% for non-FPI IPOs.

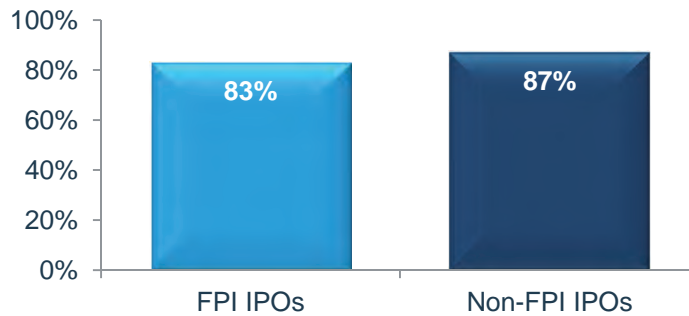
FPI Exchange Listing



EGCs/Confidential Submission & Financial Statements

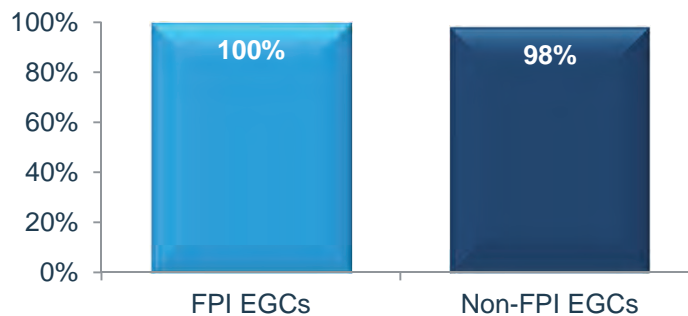
Overview

» 15 of 18 (83%) FPIs were EGCs, compared to 87% for non-FPI IPOs.



Confidential Submission

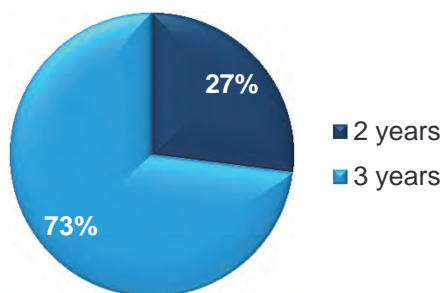
» All FPI EGCs confidentially submitted, compared to 98% for non-FPI EGCs.



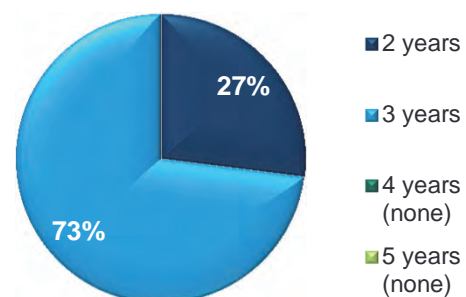
Years of Financial Statements

» 27% of FPI EGCs included two years of audited financial statements (compared to 81% for non-FPI EGCs) and 27% included two years of selected financial data (compared to 64% for non-FPI EGCs)*.

Years of Audited Financial Statements



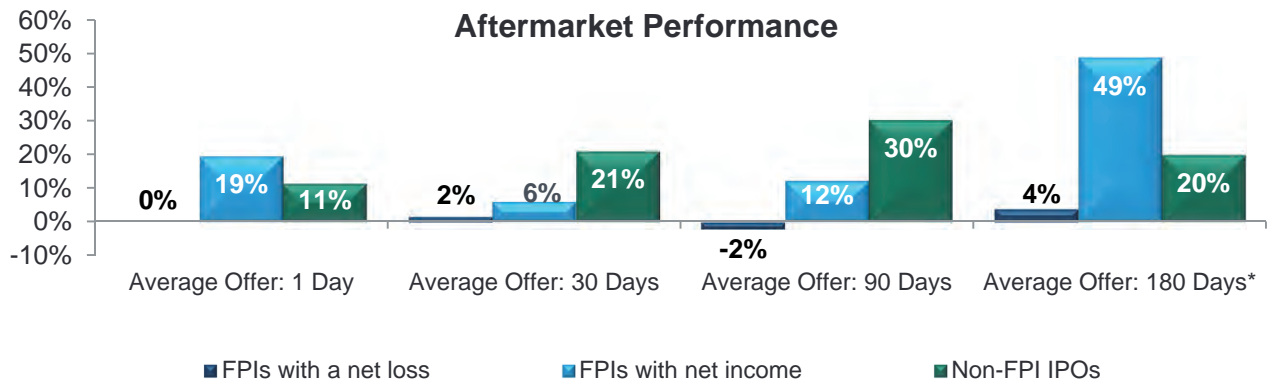
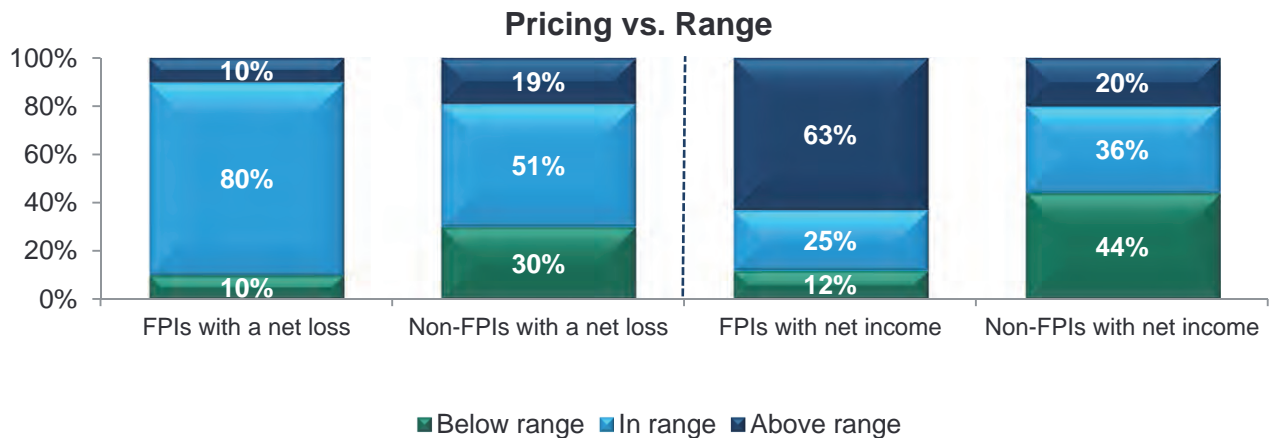
Years of Selected Financial Data



Revenue, Net Income/Loss & EBITDA/Adjusted EBITDA

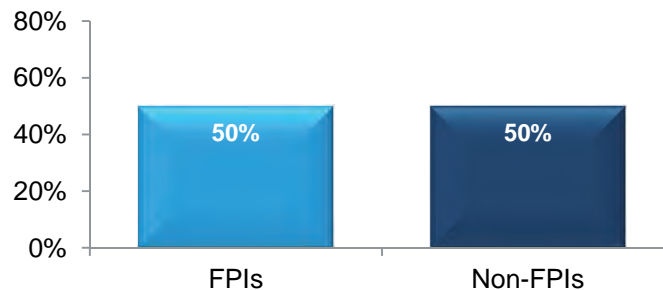
Revenue and Net Income/Loss

- » Four of 18 (22%) FPI IPOs were by pre-revenue issuers, compared to 12% for non-FPIs.
- » 10 of 18 (56%) FPIs had a net loss, compared to 63% for non-FPIs.



EBITDA/Adjusted EBITDA

- » Nine of 18 (50%) FPIs disclosed EBITDA and/or Adjusted EBITDA, the same as non-FPIs.



*Only includes deals priced before October 1, 2017

IPO Fees and Expenses

IPO Fees and Expenses*

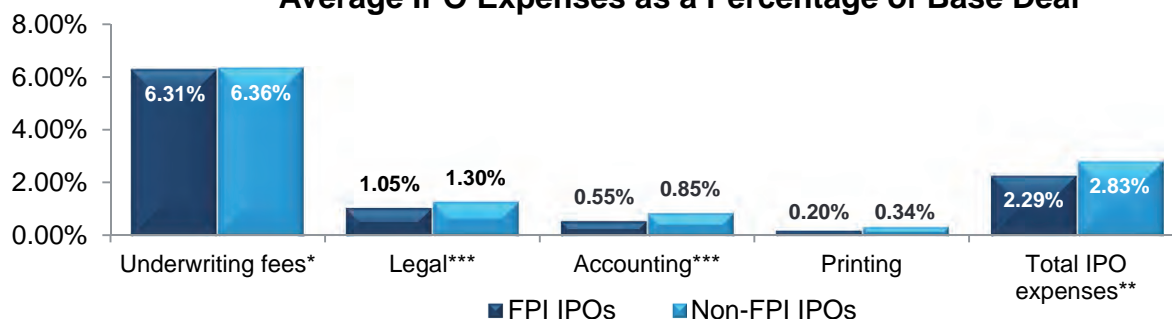
» Underwriting fees and total IPO expenses (excluding underwriting fees) for FPI IPOs are summarized below:

Fee Category:	Low	Average	Median	High
Underwriting Fees*	\$4,200,000	\$19,779,803	\$11,095,000	\$61,267,400
Total IPO Expenses**	\$2,290,963	\$4,709,104	\$4,097,138	\$14,074,571

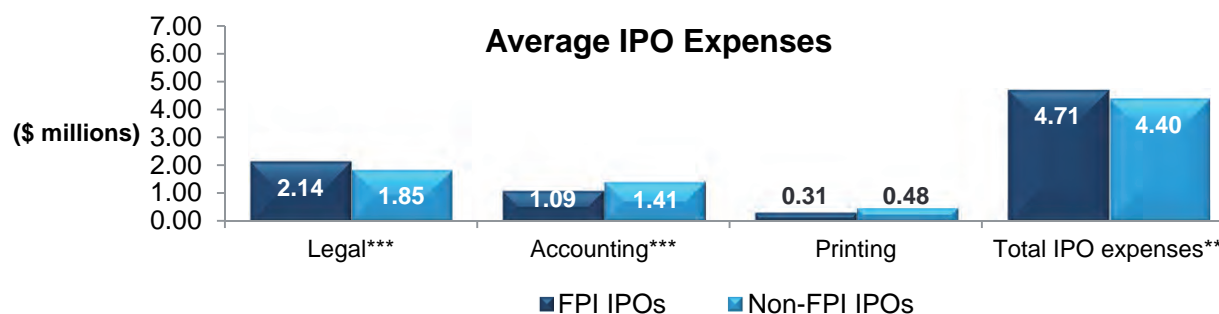
» Legal fees, accounting fees and printing costs for FPI IPOs are summarized below:

Fee Category:	Low	Average	Median	High
Legal	\$1,093,000	\$2,144,288	\$1,683,596	\$4,447,470
Accounting	\$275,000	\$1,093,310	\$903,000	\$4,000,000
Printing	\$60,000	\$308,808	\$250,000	\$1,000,000

Average IPO Expenses as a Percentage of Base Deal



Average IPO Expenses



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

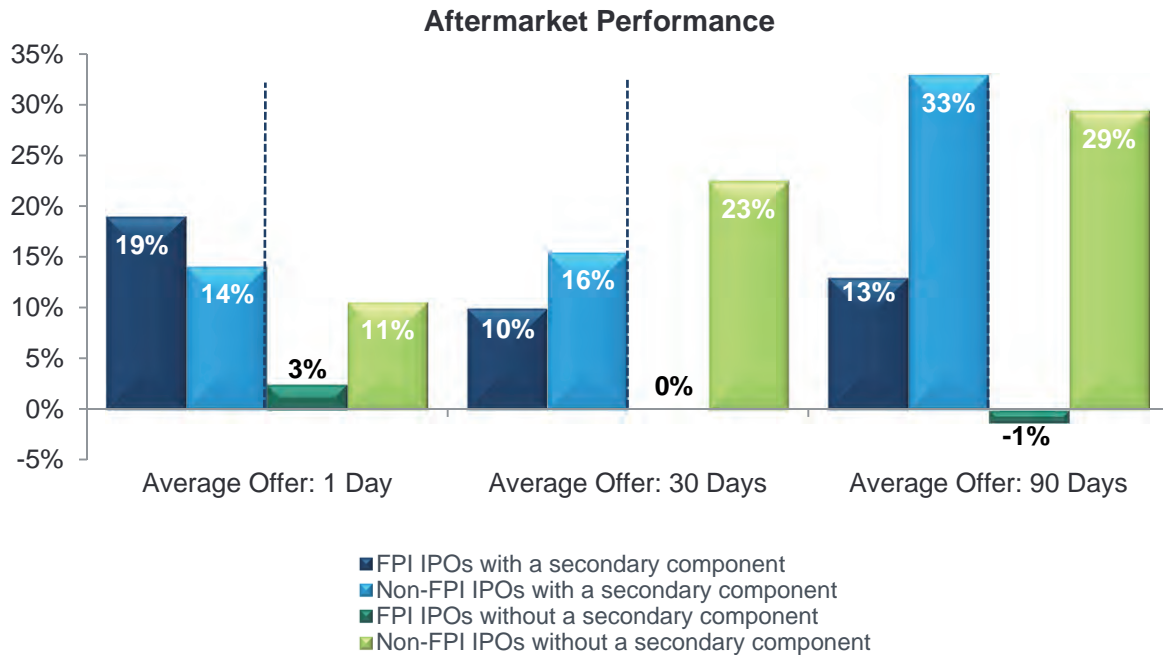
**Total IPO expenses excludes underwriting fees.

***Excludes one IPO with insufficient information in all other IPOs

Deal Structure: Secondary Component & Management Sales

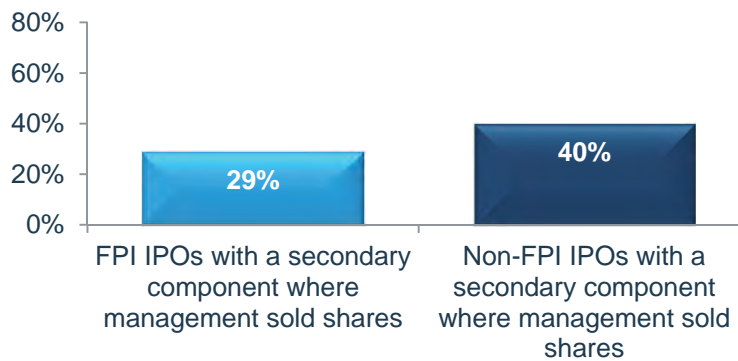
Secondary Component

» Seven of 18 (39%) FPI IPOs had a secondary component, compared to 22% for non-FPI IPOs.



Management Sales

» Management sold shares in the base offering in two of seven (29%) FPI IPOs with a secondary component, compared to 40% for non-FPI secondary IPOs.



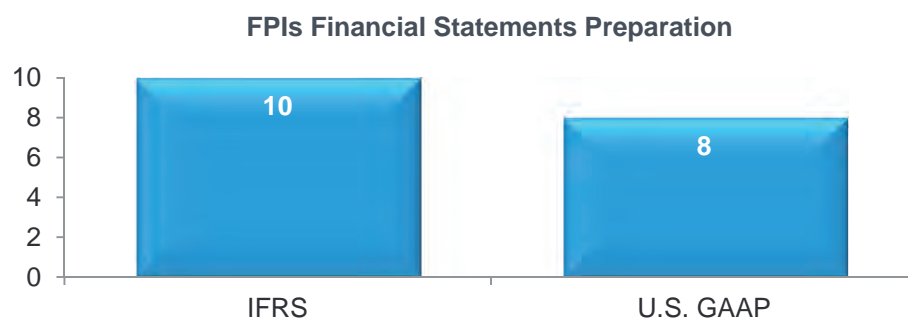
FPI Accommodations

Confidential Submission

- » Certain FPIs that file using Form F-1 can submit confidentially, even if not EGCs.
- » All 15 FPI EGC IPOs submitted confidentially.
- » Two of three (67%) non-EGC FPI IPOs submitted confidentially under FPI accommodations.
- » The third remaining FPI was not eligible to submit confidentially at the time of its first filing (prior to July 2017, when the SEC extended the ability to submit confidentially to non-EGCs generally) because it was not listed or concurrently listing on a foreign exchange.

IFRS vs. U.S. GAAP

- » FPIs are permitted to include financial statements prepared in accordance with IFRS.
 - 10 of 18 (56%) used IFRS.
 - Eight of 18 (44%) used U.S. GAAP.

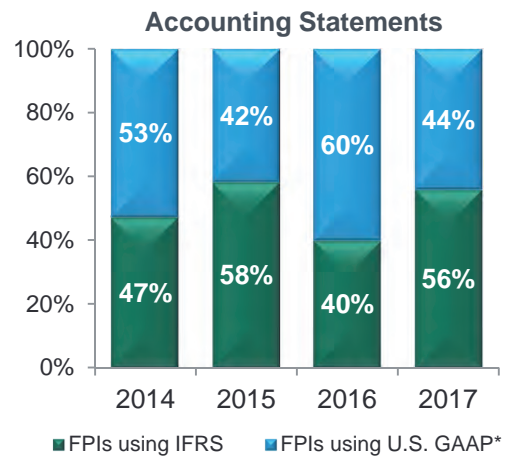
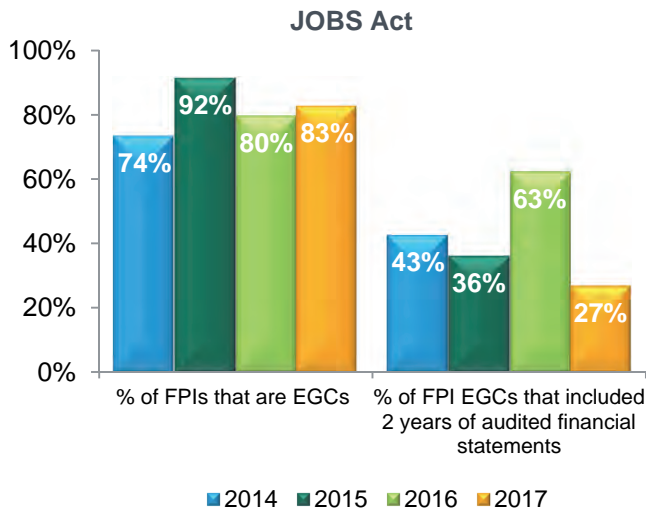
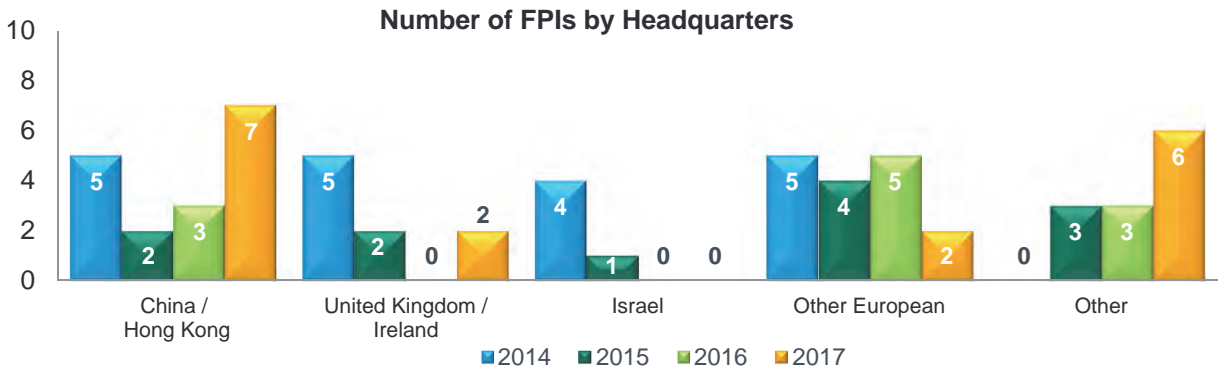
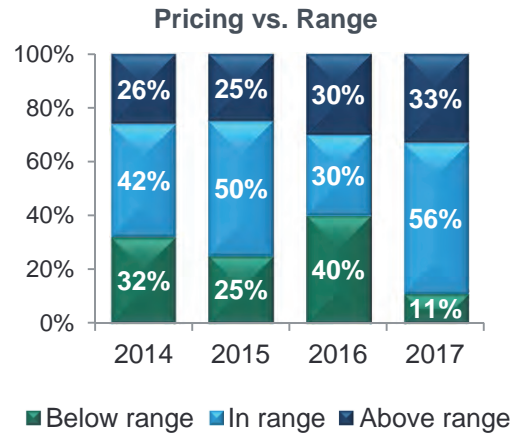
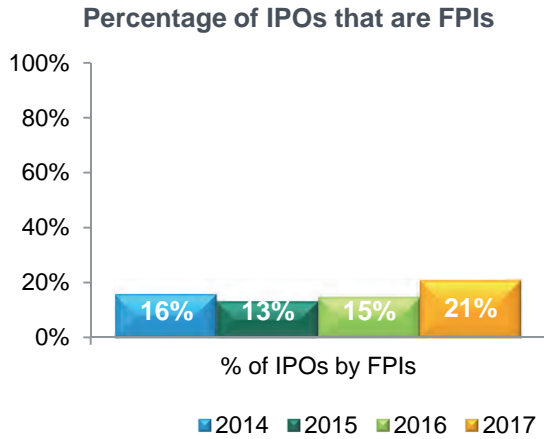


Quarterly Financial Statements

- » FPIs are not required to include quarterly financial statements.
 - Three of 18 (17%) FPIs priced their IPOs close enough to the year-end that a quarterly financial presentation would not have been relevant.
 - 10 of the remaining 15 (75%) included quarterly financial statements even though not required under FPI rules.

FPIs Trend Analysis

FPIs

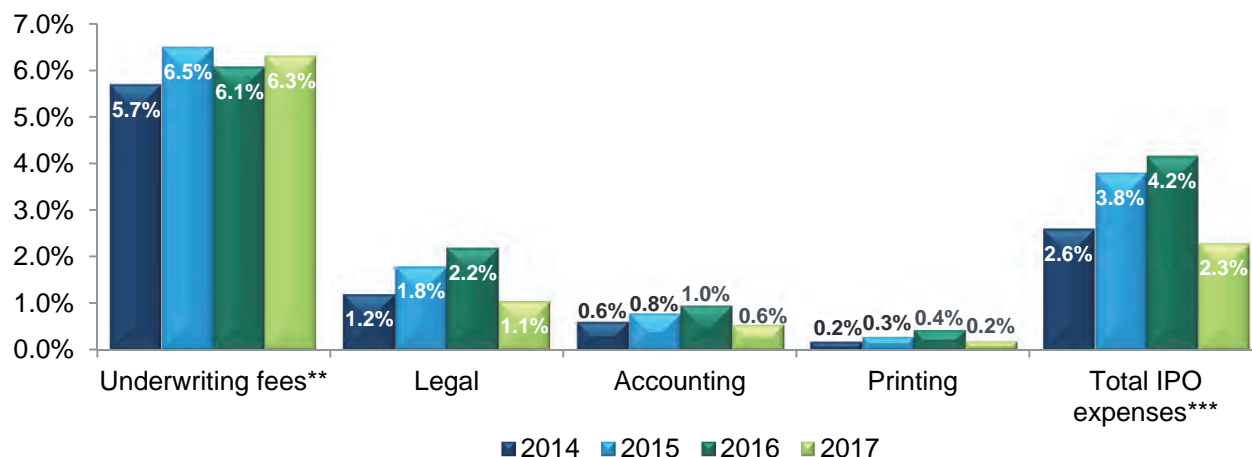


*In 2016, includes an FPI that used local GAAP reconciled to U.S. GAAP.

FPIs Trend Analysis

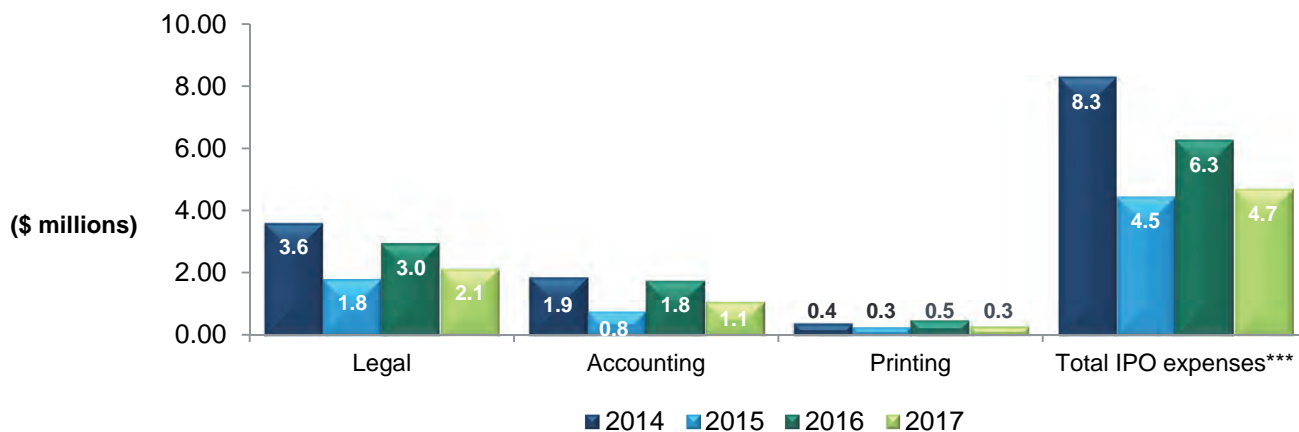
Expenses*

Average FPI Expenses as a Percentage of Base Deal



Median (\$mm)	6.0%	7.0%	7.0%	7.0%	0.9%	1.9%	2.0%	1.1%	0.3%	0.8%	1.1%	0.4%	0.2%	0.3%	0.3%	0.1%	2.0%	3.7%	4.0%	2.2%
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FPI Average IPO Expenses



Median (\$mm)	\$2.2	\$2.0	\$2.1	\$1.7	\$0.9	\$0.7	\$1.1	\$0.9	\$0.3	\$0.3	\$0.3	\$0.3	\$5.5	\$4.1	\$4.2	\$4.1
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*Excludes IPOs with insufficient information.

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

***Total IPO expenses excludes underwriting fees.

Thank You

A very special thanks to Anthony McIntyre, our Global Capital Markets Manager, James Duong, Senior Corporate Finance Analyst, and Marcello Padula, Corporate Finance Analyst for their contributions to the 2018 IPO Study.

We would also like to thank the following capital markets associates and staff for their contributions to the study:

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