William Blair

Equity Capital Markets Update

Q3 2017 ECM Quarterly

September Surge in IPO Activity
Points to Fourth-Quarter Momentum

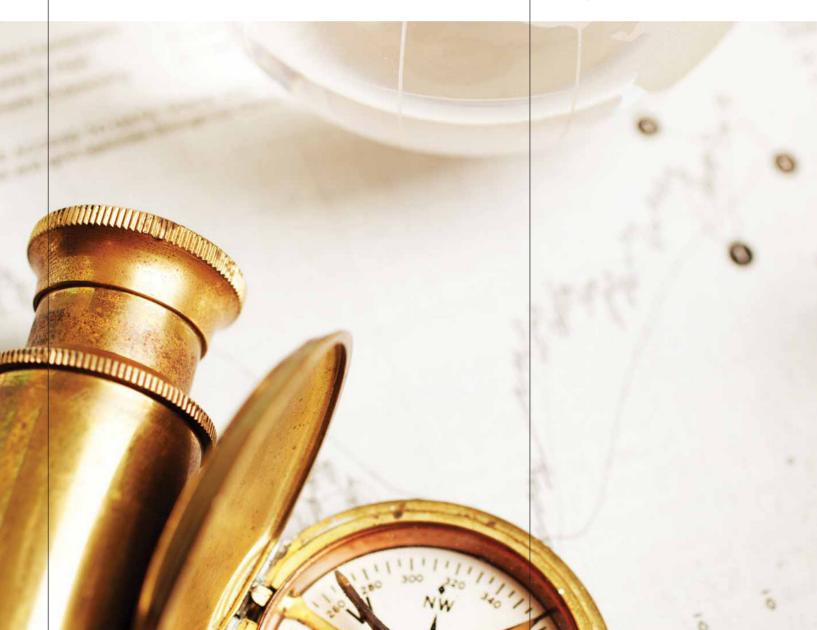
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IPO market slows despite continued strong aftermarket performance

Backlog grows with increased September filings

Follow-on activity sees modest increase

Fourth quarter poised for uptick in activity



September Surge in IPO Activity Points to Fourth-Quarter Momentum

Despite another quarter of rising equity prices and falling volatility, IPO volume slowed during most of the summer. A late-September surge in pricing and filing activity, however, points to increased momentum in the fourth quarter.

Equity markets continued to climb during the third quarter. Solid corporate earnings and positive economic data outweighed a litany of negative headlines, including a series of devastating hurricanes and escalating tensions between the United States and North Korea. The Dow Jones Industrial Average, S&P 500, Nasdaq, and Russell 2000 all delivered positive returns for the quarter, and all four indexes were at or near record highs when the closing bell rang on the final trading day of September. The third quarter marked the eighth straight quarter of positive returns for the Dow, the first such streak in two decades.

While equity markets marched upward in the quarter, volatility continued to edge lower. Despite increasing geopolitical uncertainty, the CBOE Volatility Index (VIX) closed the quarter at 9.51, 15% lower than the beginning of the quarter and 32% lower than the beginning of the year. Low volatility and rising stock prices, however, were not enough to prevent net outflows of \$46 billion from equity

funds during the quarter, as investors weighed geopolitical risk and the likelihood of further interest rate hikes by the U.S. Federal Reserve.

IPO Market Slows Despite Continued Strong Aftermarket Performance

Following an active first half of the year, IPO activity slowed in the third quarter, despite the favorable backdrop of rising equity prices and low volatility. During the third quarter, 26 IPOs priced generating proceeds of \$3.9 billion, down from 43 IPOs totaling \$9.6 billion in the second quarter. The third-quarter dollar value represented the lowest quarterly total since the first quarter of 2016. After a four-week period starting in mid-August during which no companies came to market, activity picked up in

mid-September. More than half of the third-quarter IPOs occurred after Labor Day.

Despite the overall slowdown, there were several notable IPOs involving high-growth companies in the third quarter. Television-streaming platform Roku priced at the high end of the filing range in its September 27 offering, and closed up 70% on the first day of trading and up 90% at the end of the quarter. Real estate listing website Redfin was one of only two IPOs that priced above the range in the third quarter. After Redfin's July 27 offering, the stock closed up 45% on the first day and up 70% through quarter-end. Pet health company PetIQ upsized its offering and then priced at the high end of the range on July 20. The shares closed up nearly

Volatility and IPO Filing Activity

After a brief increase in volatility in mid-August, following the terrorist attack in Barcelona, volatility resumed its downward trend. IPO pricing and filing activity surged in the last few weeks of September, setting the stage for increased activity in the fourth quarter.



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50% on the first day and finished the quarter up 70%.

Continuing a theme that has defined the IPO market for several years, small deals dominated third-quarter activity. The average deal size for the quarter was \$152 million, and only two companies, specialty chemicals producers Venator Materials and PQ Group, raised more than \$500 million in their debuts. These two companies together accounted for more than 25% of the total IPO proceeds in the third quarter. Since the beginning of 2015, there have been only eight \$1 billion-plus IPOs.

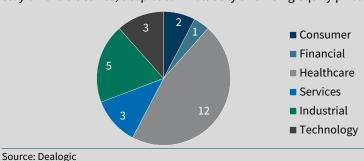
While volume was down, the pricing and performance of third-quarter IPOs was very favorable. The average firstday returns for third-quarter IPOs was 23%, and the average return through quarter-end was 52%, significantly outperforming the broader market.

IPO Backlog Grows with Surge of September Filings

If the growing backlog of companies that have filed S-1s is any indication, the uptick in pricing activity seen in the second half of September should continue into the fourth quarter. There were 41 new filings during the third quarter, with more than half of them coming in September. The 22 September filings marked the highest monthly figure in two years. Notable new filings in the third quarter include women's retailer Torrid and software provider Altair Engineering.

Third Quarter 2017 IPOs Priced by Sector

The healthcare sector, led by biotech companies, accounted for nearly half of the IPOs that priced in the third quarter. Many technology companies opted to stay on the sidelines, despite low volatility and rising equity prices.



The 365-day pipeline remains full, with 47 companies looking to raise a total of \$6.3 billion. Together, industrials (16 companies), technology (10 companies), and healthcare (9 companies) account for about 75% of the total backlog. The "shadow backlog" of companies rumored to be eyeing an IPO includes several high-profile names, such as Dropbox and ADT.

In early July, the SEC expanded the availability of confidential filings to companies of any size. Previously, only "emerging growth" companies, or companies with less than \$1 billion in revenue, could file an S-1 without disclosing it to the public immediately.

Follow-On Activity Sees Modest Increase

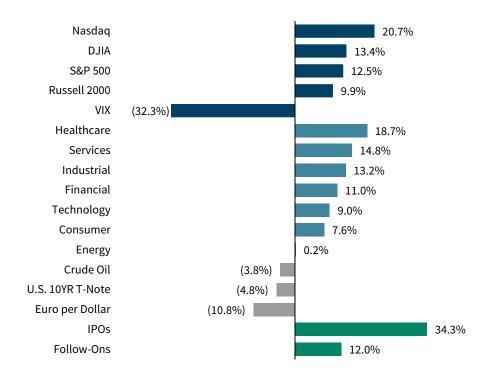
In the third quarter, 142 follow-on offerings priced, raising a total of \$35 billion. Both figures represent modest increases on a year-over-year basis. As usual, healthcare was the most active sector, accounting for 44% of the quarter's volume. About 85% of the quarter's follow-ons were shelf takedowns, continuing a trend that began to take hold in 2015.

Fourth Quarter Poised for Uptick in Activity

With equity markets at record highs and volatility near all-time lows, combined with the surge in pricing and filing activity in the last half of September, conditions are ripe for an uptick in IPO activity during the fourth quarter. Investors will be watching the Fed closely to see if the central bank pulls the trigger on another rate increase later this year, as is widely expected, and continues paring back its bond portfolio. Other factors that could influence equity capital markets activity in the fourth quarter are corporate earnings releases and the typical slowdown that occurs around the holiday season.

Index, Sector, and Asset Class Performance – 2017 YTD After another quarter of strong returns, all major equity indexes

After another quarter of strong returns, all major equity indexes finished the third quarter at or near all-time highs. The aftermarket performance of 2017's IPOs is significantly outpacing broader markets, and volatility continued to fall.



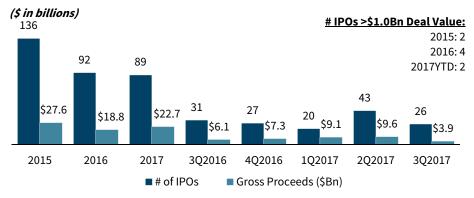
Source: Dealogic and FactSet; data through 9/30/17

ECM Quarterly Market Analysis

Each quarter we look behind the numbers to examine the trends and dynamics that are driving activity in equity capital markets.

IPO Volume by Year and Quarter

The \$3.9 billion raised by the 26 third-quarter IPOs represents the lowest quarterly amount since the first quarter of 2016. There have been only eight \$1 billion-plus IPOs since the beginning of 2015 and none in the third quarter of 2017.



Source: Dealogic and Factset
Note: All IPO and follow-on data excludes offerings for yield products
(BDCs, CLEFs, MLPs, SPACs and REITs)

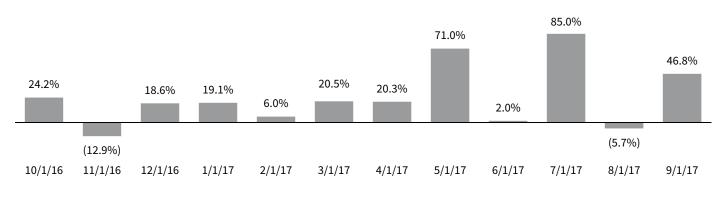
IPO Overview - Third Quarter 2017

Only two third-quarter IPOs raised more than \$500 million, both of which were specialty chemicals producers. On average, the third-quarter IPOs delivered first-day returns of 23% and aftermarket performance of 52% through the end of the quarter. More than 75% of the third-quarter IPOs priced in or above the filing range.

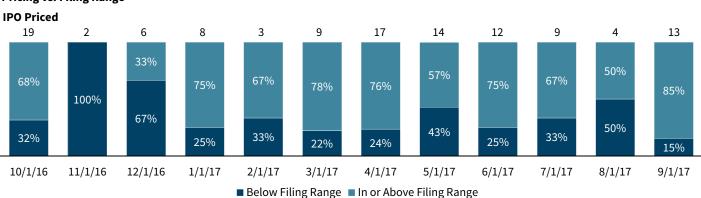
Largest IPOs - 3Q-2017 (\$ in millions)

Pricing Date	Issuer	Deal Value	Market Value	Sector
8/2/17	Venator Materials plc	\$522.1	\$2,125.4	Industrial
9/28/17	PQ Group Holdings Inc	\$507.5	\$2,248.9	Industrial
9/19/17	BEST Inc	\$450.0	\$147.6	Services
9/19/17	Despegar.com Corp	\$381.8	\$1,796.5	Technology
9/27/17	Roku Inc	\$252.3	\$1,345.4	Technology
7/27/17	Redfin Corp	\$159.2	\$1,213.8	Services
9/20/17	Zai Lab Ltd	\$150.0	\$887.5	Healthcare
9/26/17	RYB Education Inc	\$144.3	\$530.3	Services
7/13/17	Akcea Therapeutics Inc	\$143.8	\$471.5	Healthcare
8/1/17	Clementia Pharmaceuticals Inc	\$137.9	\$475.8	Healthcare

Aftermarket Performance







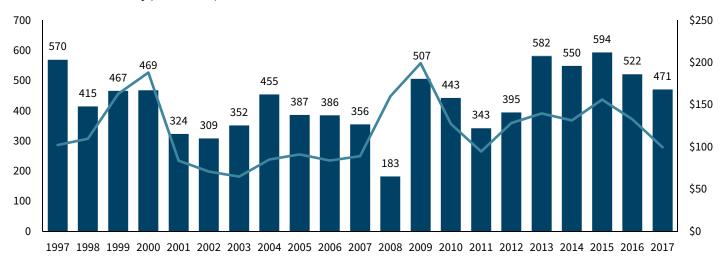
Source: Dealogic

MARKET UPDATE AND ANALYSIS

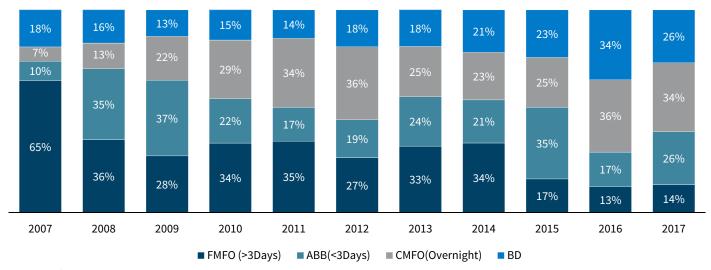
Follow-On Offering Overview - 2017 Year-to-Date

The third quarter saw 142 follow-ons price, raising a total of \$35 billion. Both figures represent slight increases on a year-over-year basis. Healthcare was the most active sector, accounting for 44% of the follow-on activity in the third quarter.

Annual Follow-On Activity (\$\sin \text{billions})



Follow-Ons Priced by Marketing Type



Source: Dealogic

Drawing on our deep sector expertise and the strength of our relationships, William Blair has built a leading equity capital markets franchise. Business owners and financial sponsors turn to us for outstanding execution for their capital raising objectives.

Recent transactions include:









Bookrun/Lead-Managed





William Blair By the Numbers*

199

equity offerings

\$44.8

billion raised

21%

IPO market share

of ECM activity is bookrun

^{*} Equity Capital Markets activity for the period January 1, 2015 through September 30, 2017.

WILLIAM BLAIR EQUITY CAPITAL MARKETS INVESTMENT BANKING FRANCHISE

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- Service intensity
- Coverage intensity
- First firm relationships
- Access to research analysts
- Knowledge of companies & industries
- Tailored research calls and services

No. 2 rankings

• Top 10 Relationships

No. 3 rankings

- Equity sales capability
- Quality of equity analyst service

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Equity Capital Markets

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^{*} As of December 31, 2016

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