

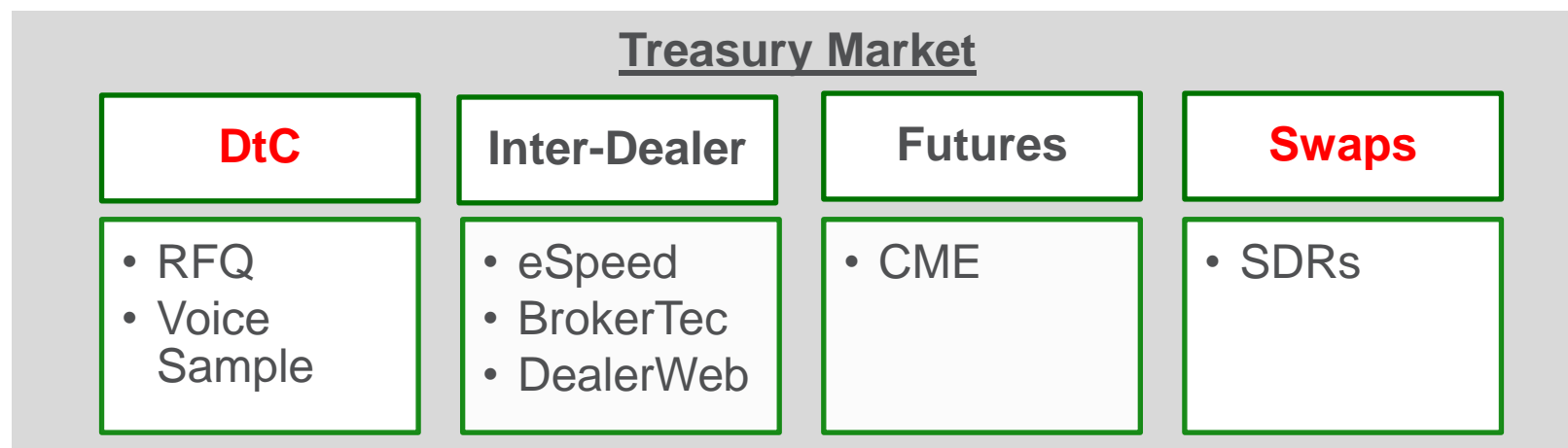
**A Preliminary Look at
Dealer-to-Customer Markets on
October 15, 2014**

THE EVOLVING STRUCTURE OF THE U.S. TREASURY MARKET

October 20-21, 2015

Treasury Market Structure

- Two important components of the Treasury market were not covered in the public report
 - Dealer-to-Customer (DtC) market
 - Interest rate swaps and swaptions
- Limited information available on DtC market activity
 - Request for Quote (RFQ) data (TradeWeb, Bloomberg)
 - Sample Voice data (Ad-hoc survey of select large dealers)
- Swaps/swaptions trades reported to swap data repositories (SDRs)
 - Participant level transaction & position data reported to CFTC

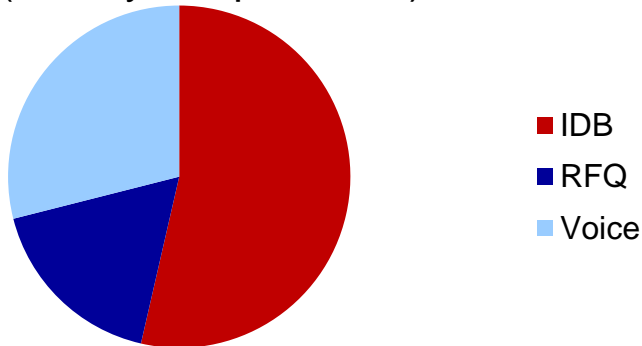


Evidence from Survey of Large Dealers

Average Trading Volume by Platform for Large Dealers

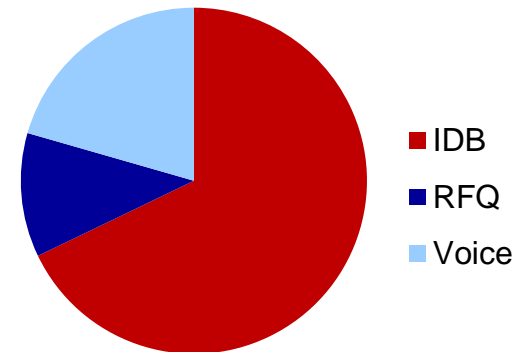
- Ad-hoc survey of select large dealers estimated to represent about half of DtC volume
- DtC represents a significant share of volume for large dealers
 - *Significant* variation in volume shares over time and across dealers
 - Voice trading volume significantly greater than RFQ on most days
 - DtC volume rose by ~50% on 10/15 while IDB volume rose by 210%
 - Voice trading as a share of DtC volume declined slightly on 10/15

Platform Share of Volume on
Control Days
(Survey Respondents)



Source: Ad-hoc survey of select large dealers
Note: Pie chart represents an average and is not representative of any one dealer

Platform Volume Share on
October 15
(Survey Respondents)

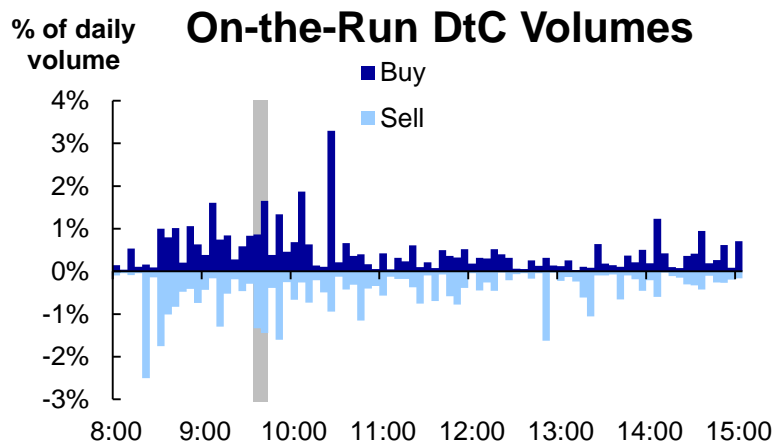


Source: Ad-hoc survey of select large dealers
Note: Pie chart represents an average and is not representative of any one dealer

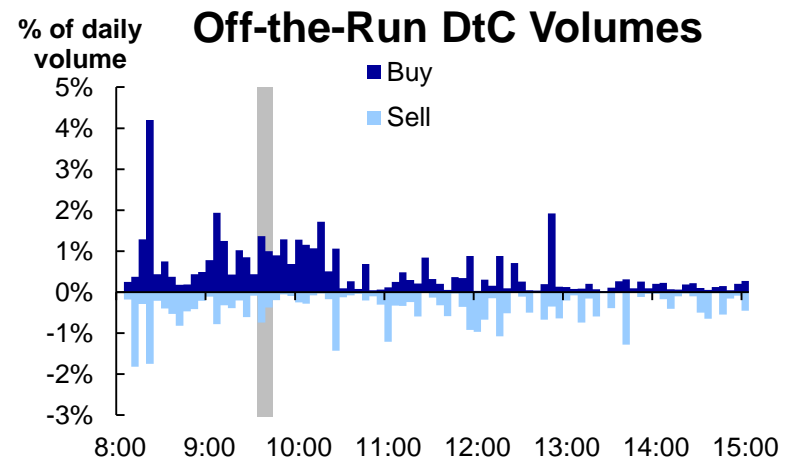


Approximate Intraday DtC Trading Volumes on 10/15

- DtC trading volumes were modest relative to IDB volumes and reasonably balanced during the event window
 - No evidence of single large trade or sequence of large trades leading up to or during event window
 - Intra-day pattern represents an estimate as voice data limited to survey respondents



Source: Cash RFQ Platforms, Ad-hoc survey of select large dealers
Note: 5-minute intraday buckets, 8:00 – 15:00 ET; Event window grey shaded



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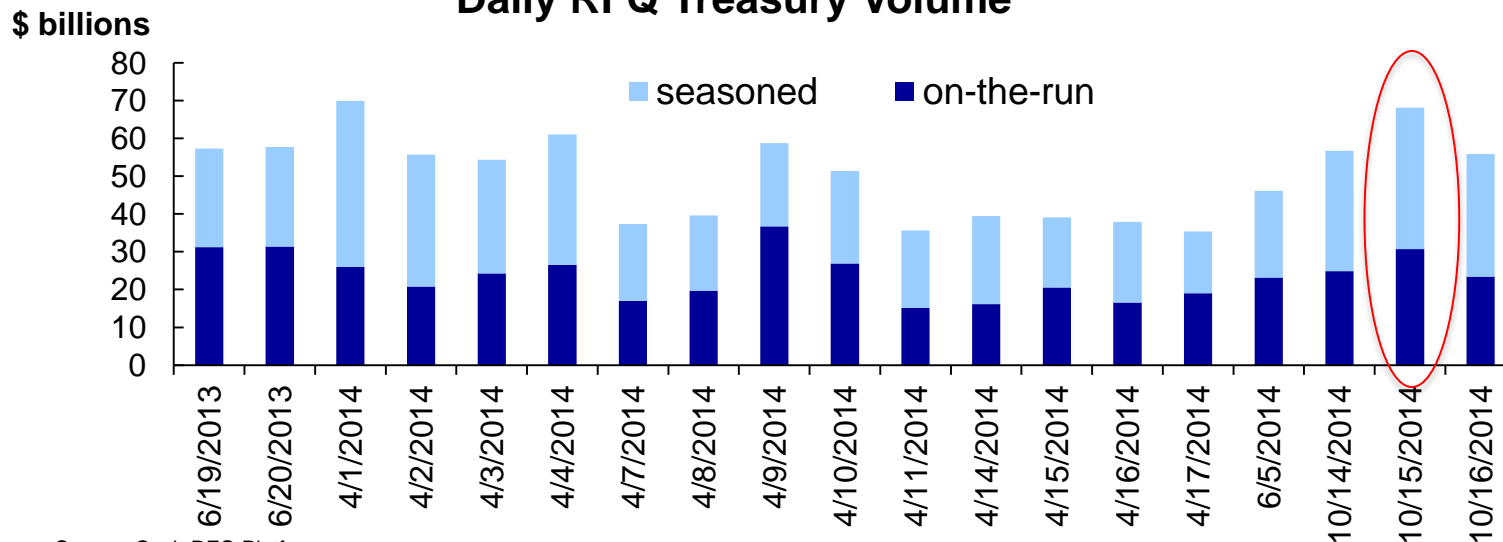
RFQ Trading Statistics

- RFQ data analyzed from TradeWeb and Bloomberg represents the vast majority of US Treasury RFQ volume
 - 10/15 not an outlier in terms of RFQ volume

RFQ Platforms Volume Statistics

		On-the-run	Off-the-run
Control	# of Trades	3,120	4,192
Days	Avg Daily Trade Volume (\$ millions)	21,951	25,403
(April 2-17)	Average Trade Size (\$ millions)	7.0	6.1
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15-Oct	# of Trades	5,059	5,770
	Trade Volume	30,736	37,420
	Average Trade Size	6.1	6.5

Daily RFQ Treasury Volume



Source: Cash RFQ Platforms



RFQ Platform Volume by Firm Type

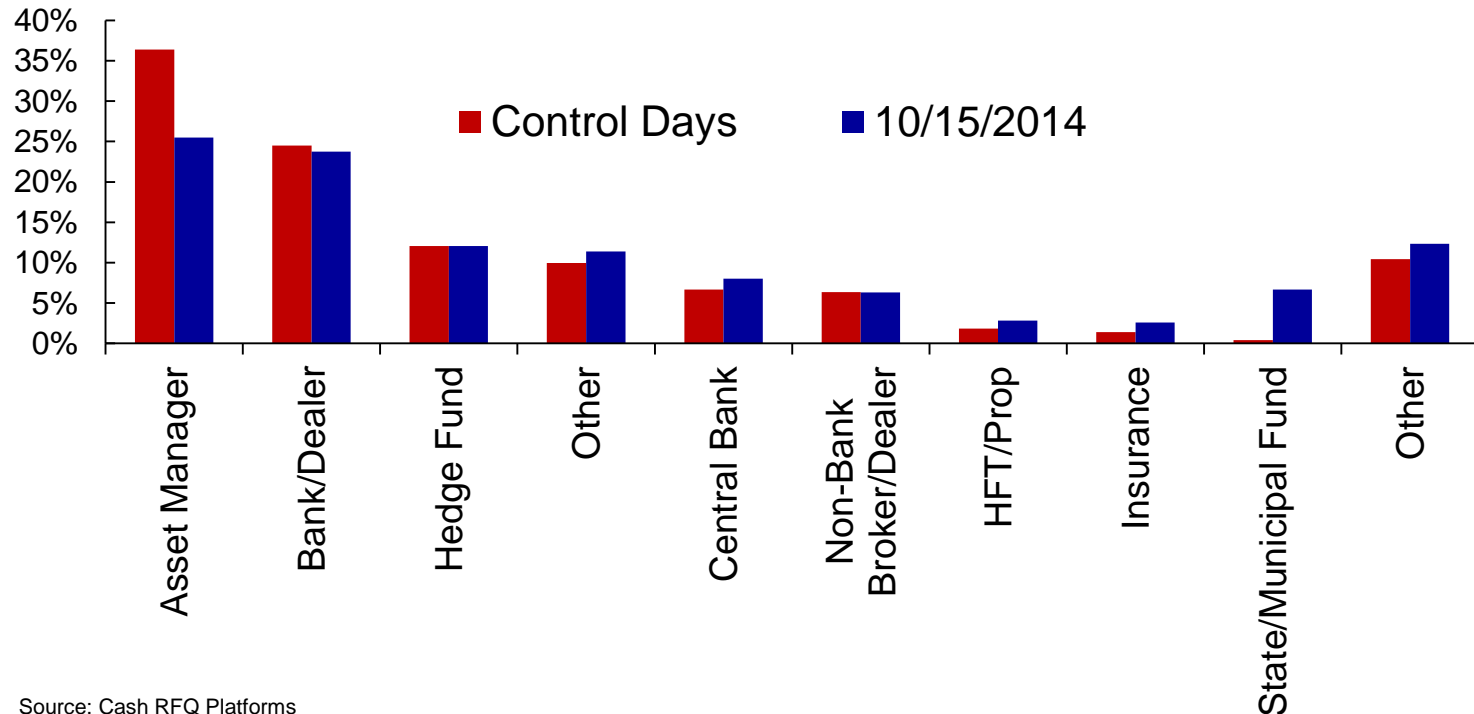
- Significant dealer concentration of RFQ volume
- Diversity of client flows greater on 10/15

Dealer Volume Share

Control Days 10/15/2014

Top 10 Dealers	76.2%	73.9%
Other Dealers	23.8%	26.1%

Customer RFQ Volume Share



Source: Cash RFQ Platforms

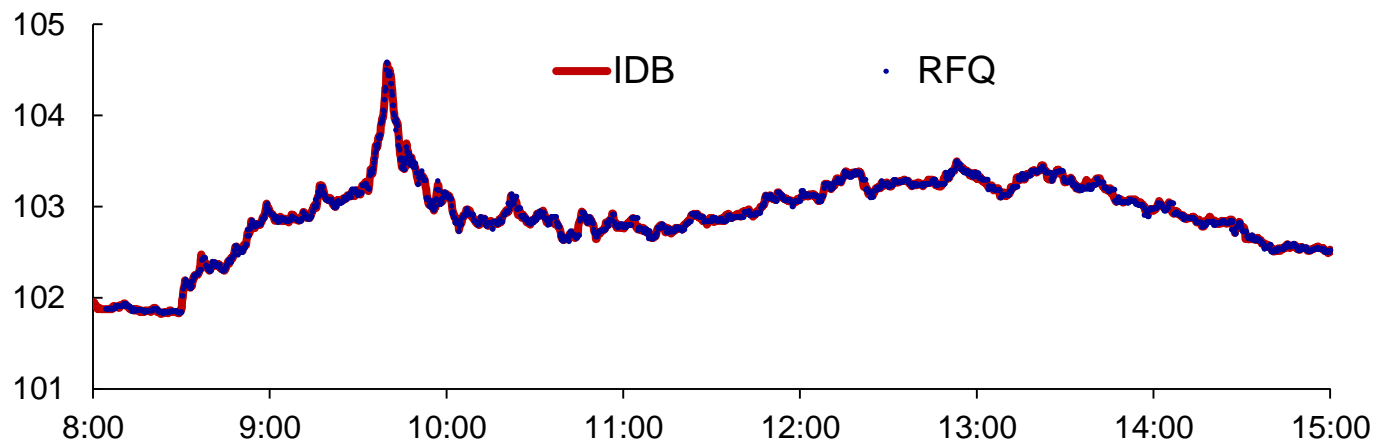
Note: Other includes Corporates, Pension Funds, Sovereign Wealth Funds, Private Equity, Foreign Governments, and Other



RFQ Platform Trade Pricing

\$ per 100 par

On-the-Run 10-Year RFQ Pricing



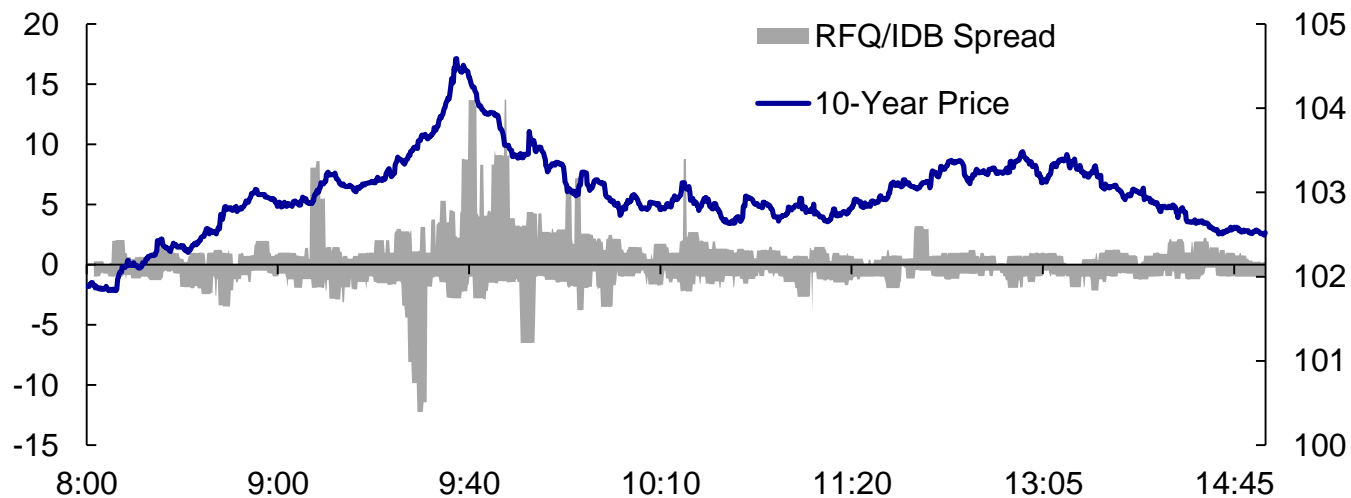
Source: Cash RFQ and IDB Platforms

Note: IDB quote mid point; RFQ transaction prices

ticks (64ths)

10-Year RFQ-IDB Spread

\$ per 100 par

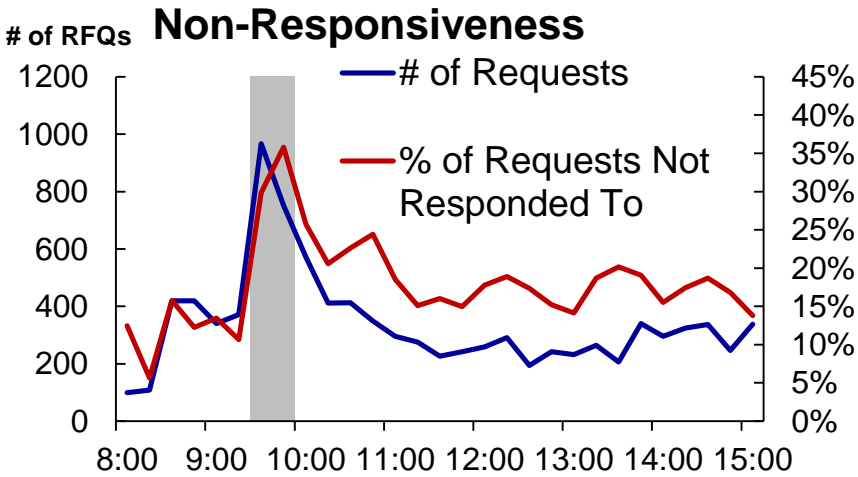


Source: Cash RFQ and IDB Platforms

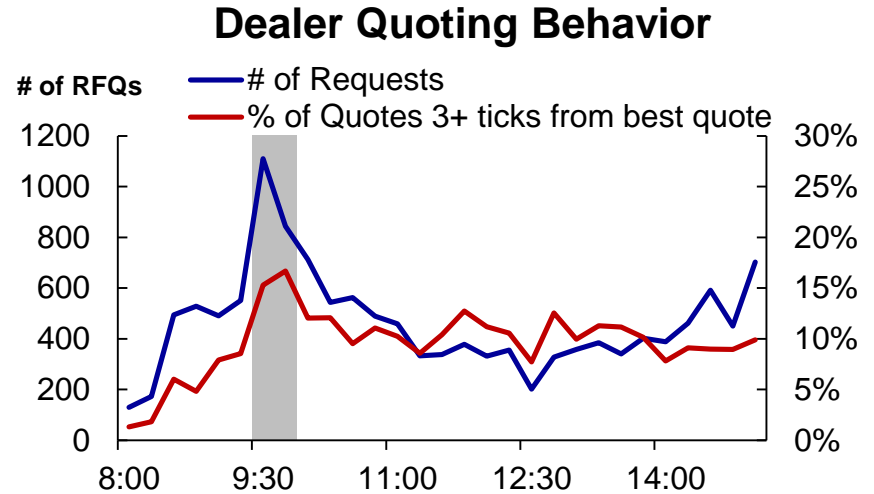
Note: 80% confidence interval, based on rolling 20 trades; time axis spaced in activity time



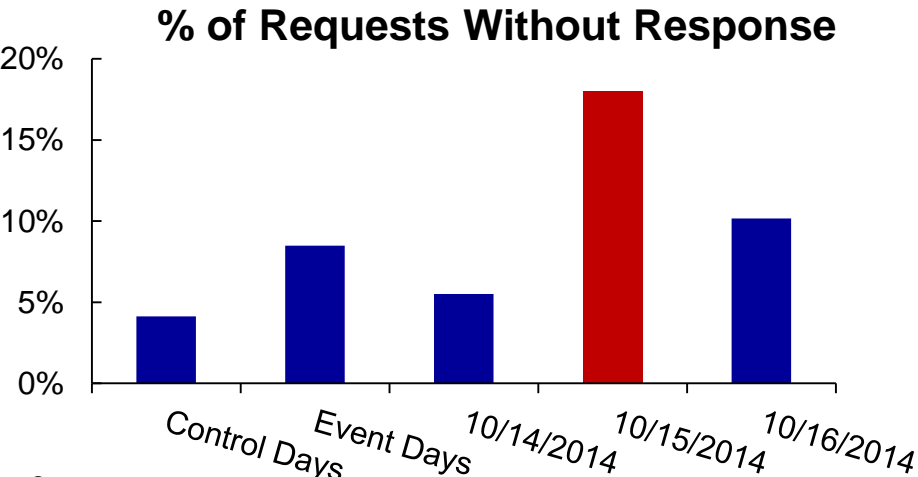
RFQ Platform Quoting Behavior



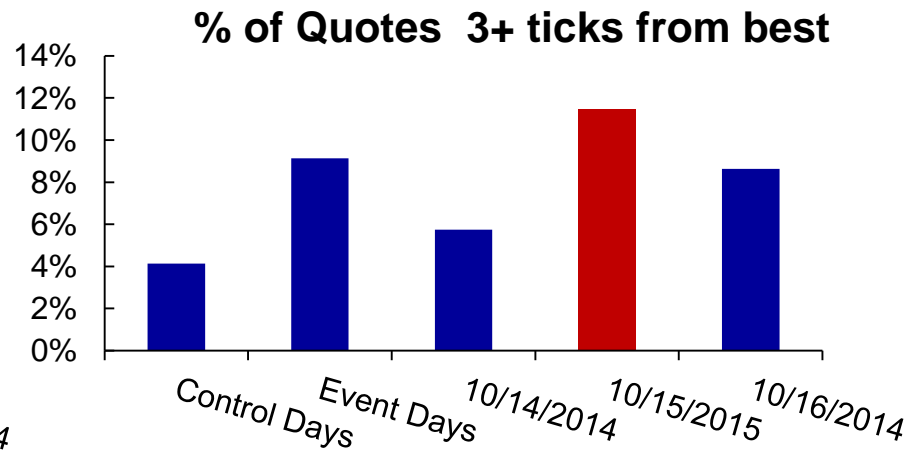
Source: Cash RFQ Platforms



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Summary of Preliminary DtC Analysis

- DtC market is a significant share of the overall Treasury market
- Dominated by the largest dealers
- Voice remains an important mode of trading in DtC segment
- No outsized trading volume observed during the event window on 10/15
- RFQ pricing generally remained tight through the period of peak volatility
 - Temporary widening in RFQ market mirrors widening of dealer quotes in IDB & Futures noted in the Joint Staff Report
- Some evidence of dealer pullback in RFQ market during event window
 - Increase in non-competitive quoting
 - Increased non-response rate
- Overall, preliminary evidence supports that the DtC market tracked IDB & Futures markets on 10/15 and that the event was not driven by DtC flows