Changes in the Municipal Capital Markets since the Financial Crisis

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Our Approach to this Study

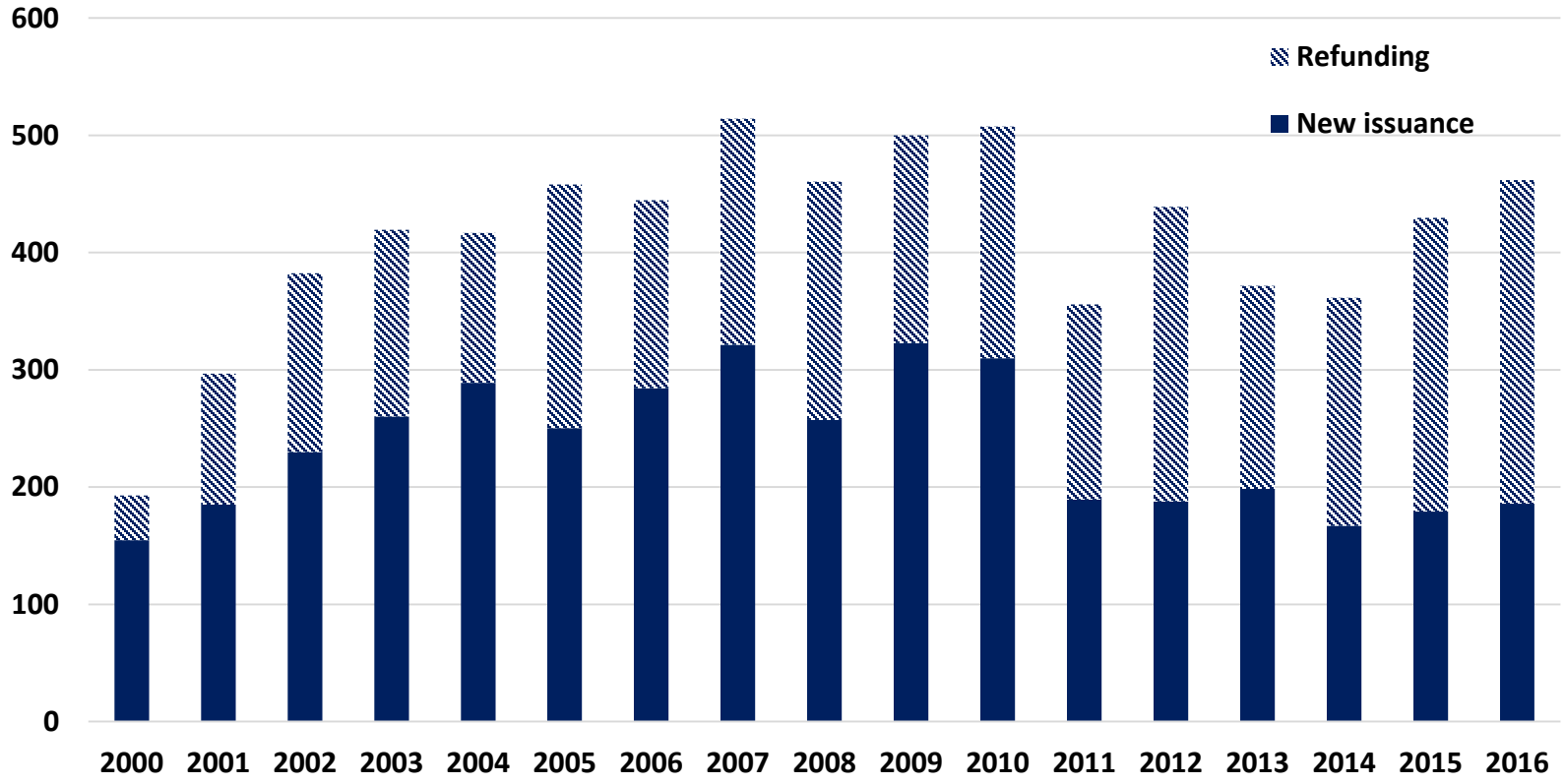
- Systematically analyze changes in the structure, functioning and regulation of the municipal market over the period 2000-2016
- Created 27 data tables and summaries available on the MFC conference website
- Presentation focuses on the data presented in 10 of these tables
- Primary data sources include Mergent, MSRB and Texas Bond Review Board

Primary Market Sales, Bond Purpose

(Table 2 in conference handout)

Annual Municipal Bond Sales

(New Issuance vs. Refunding, 2000-2016, par amount in $ billions)



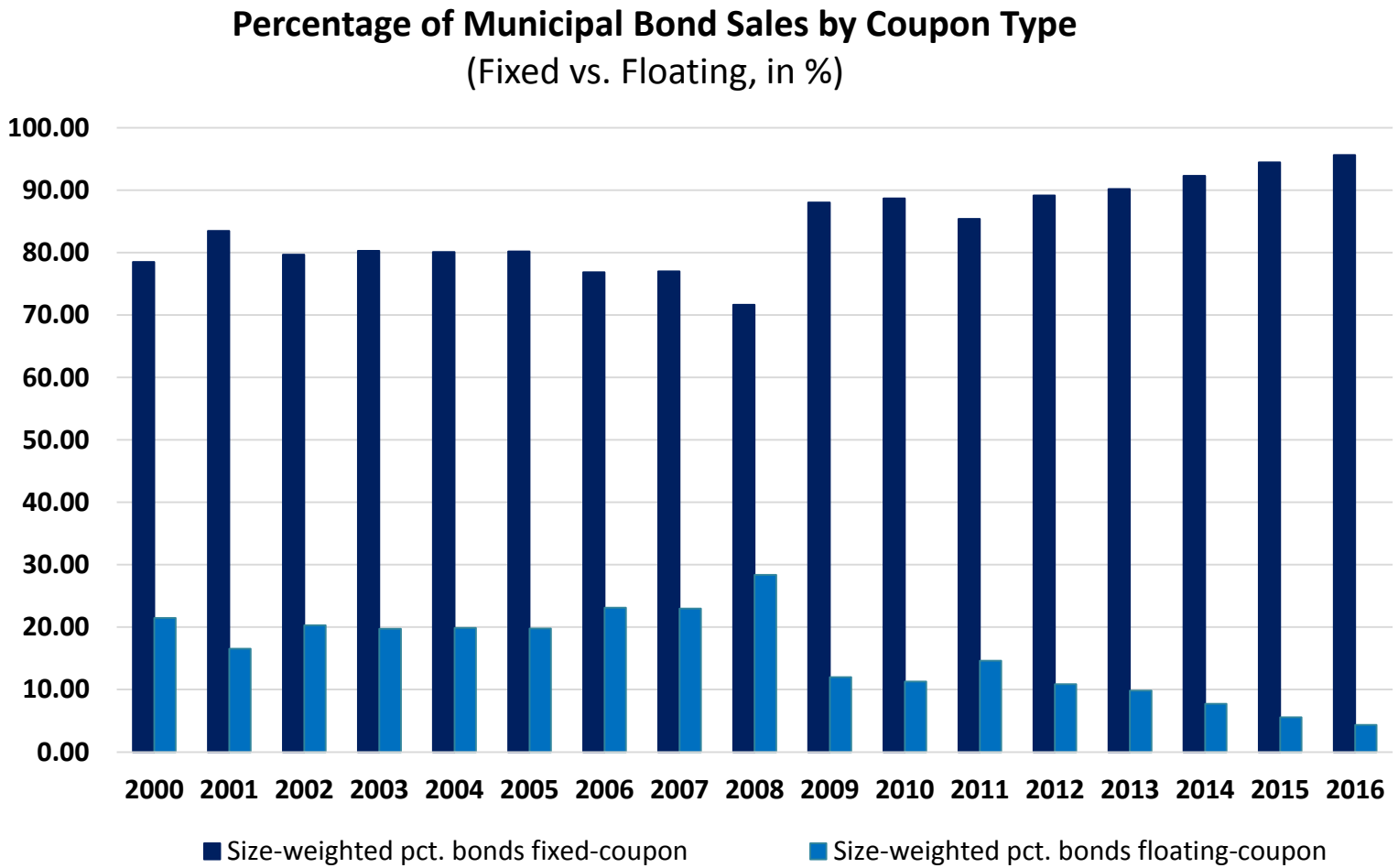
	2000-2007	2008-2010	2011-2016
Total Bond Sales during Period (in $trillions)	3.247	1.606	2.541

Primary market sales: Upshot

- Decline in bond issuance has outpaced decline in infrastructure investment.
- Increasing reliance on bank loan market and other financing sources with credit implications for bond market.
- Risk exposure can at times be difficult to gauge with increasing reliance on more opaque sources.

Primary Market Sales, Coupon Type

(Table 10 in conference handout)



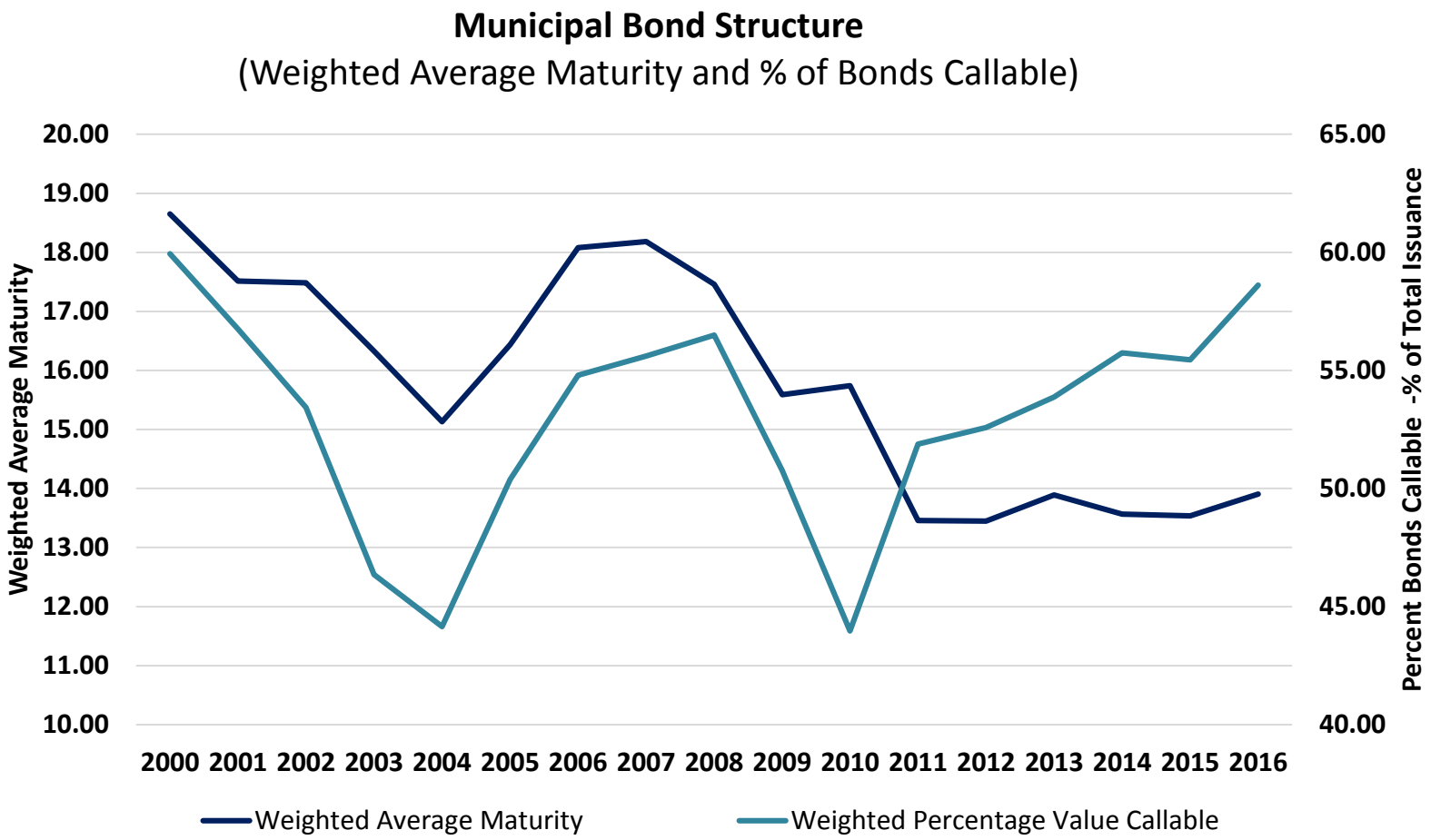
	2000-2007	2008-2010	2011-2016
Average Annual % of Municipal Bond Sales Sold Fixed Rate	79.3%	82.9%	91.3%

Coupon type: Upshot

- 2006-2007 was the peak of the variable-rate bond issuance boom.
- Variable-rate structures at times embedded risks for issuers – interest rate basis risk, acceleration, downgrade exposures.
- As MSRB, SEC, and ratings agencies know, these risks have not disappeared.

Primary Market Sales, Bond Structure

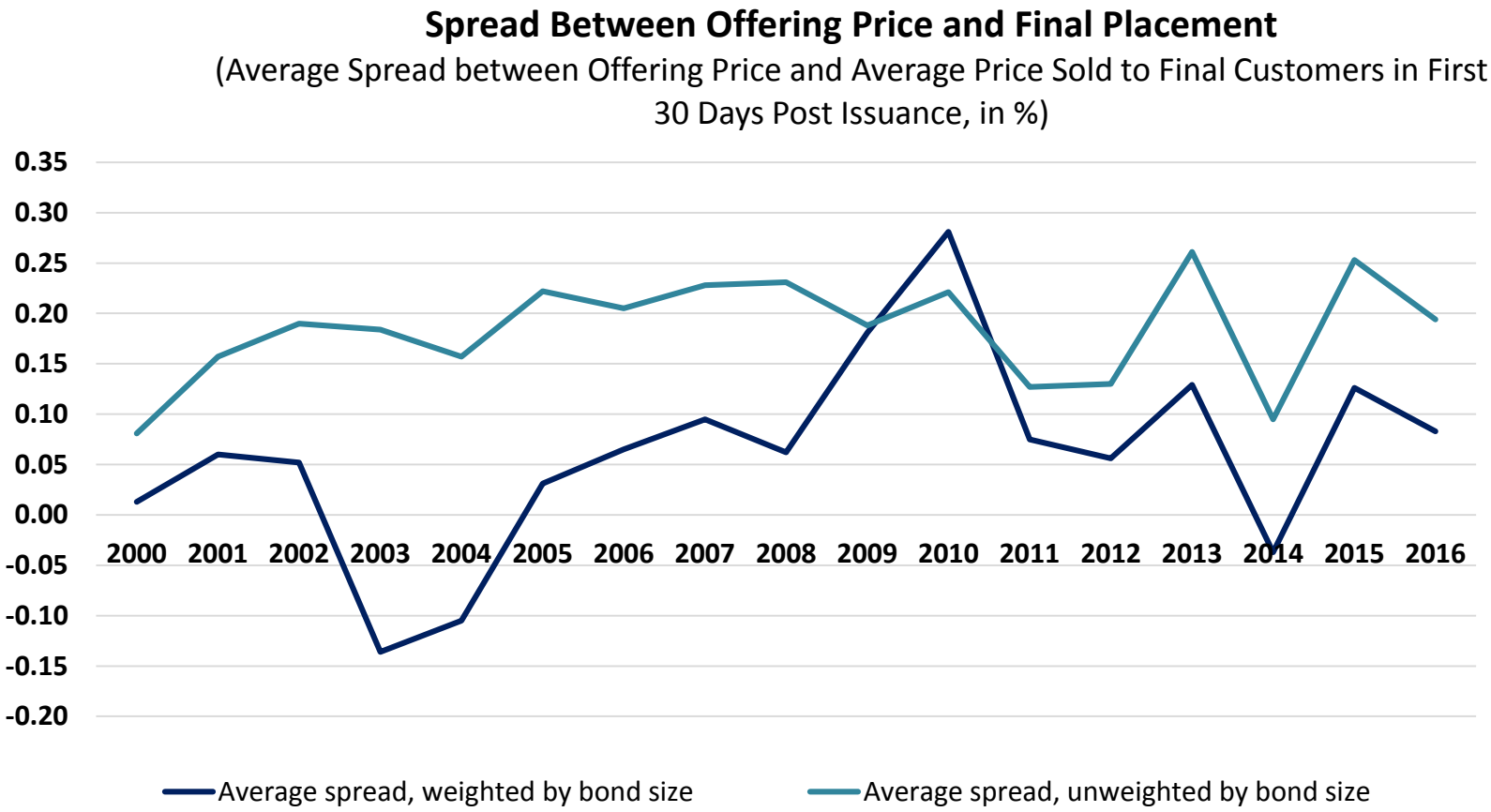
(Table 11 in conference handout)



	2000-2007	2008-2010	2011-2016
Weighted Average Maturity	17.136	16.254	13.635
Percent Bonds Callable	52.06%	50.32%	54.76%

Primary Market Underpricing by Bond Size

(Table 17 in conference handout)



	2000-2007	2008-2010	2011-2016
Average Spread, Weighted by Bond Size	0.020	0.187	0.074
Average Spread, Unweighted by Bond Size	0.181	0.212	0.179

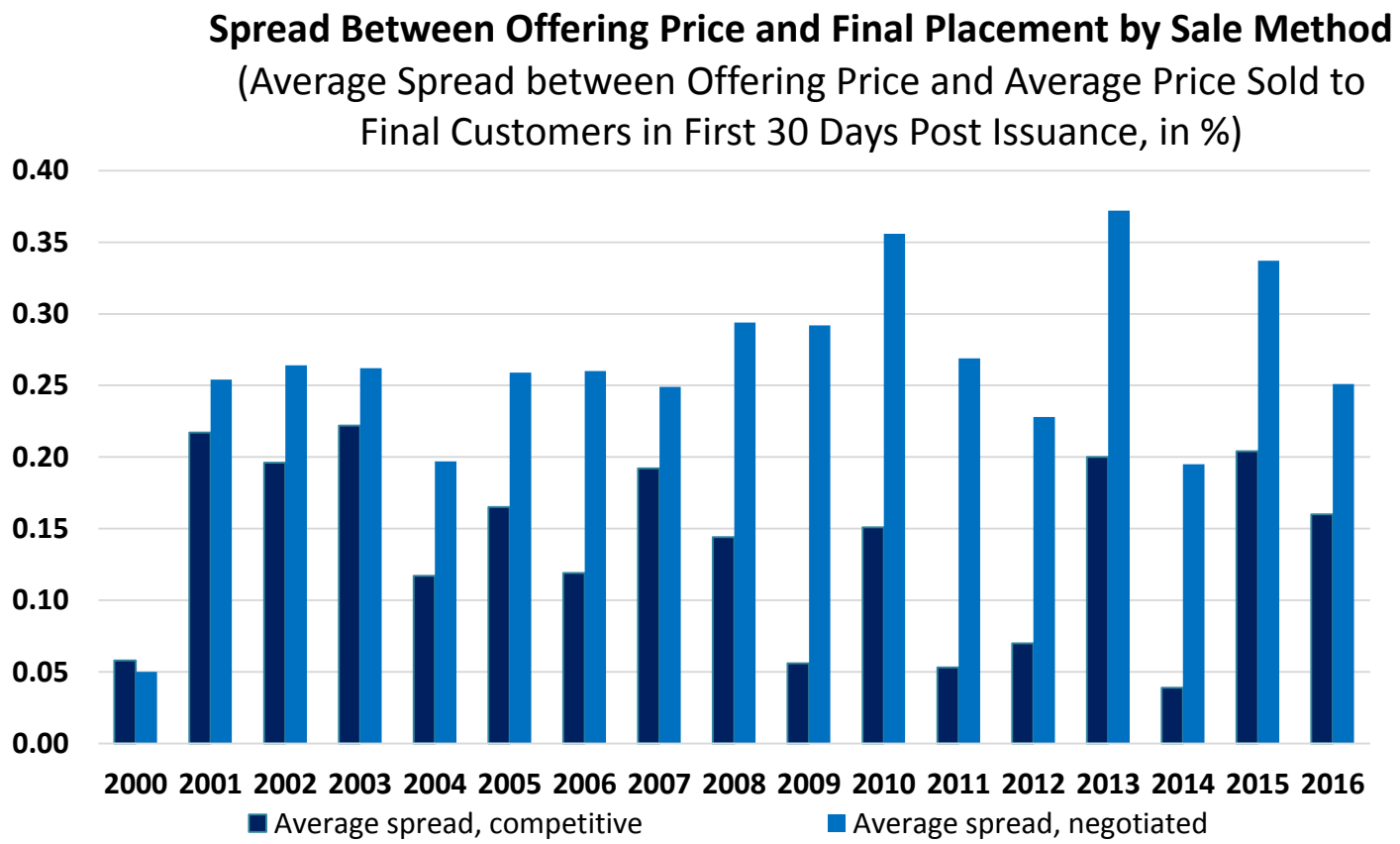
Primary market underpricing: Upshot

- Extent of underpricing in the market depends critically on whether you consider the “average bond” or the “average dollar of a bond issue”.

- 2009-2010 unusual: larger bonds had more primary market underpricing.

Primary Market Underpricing by Sale Method

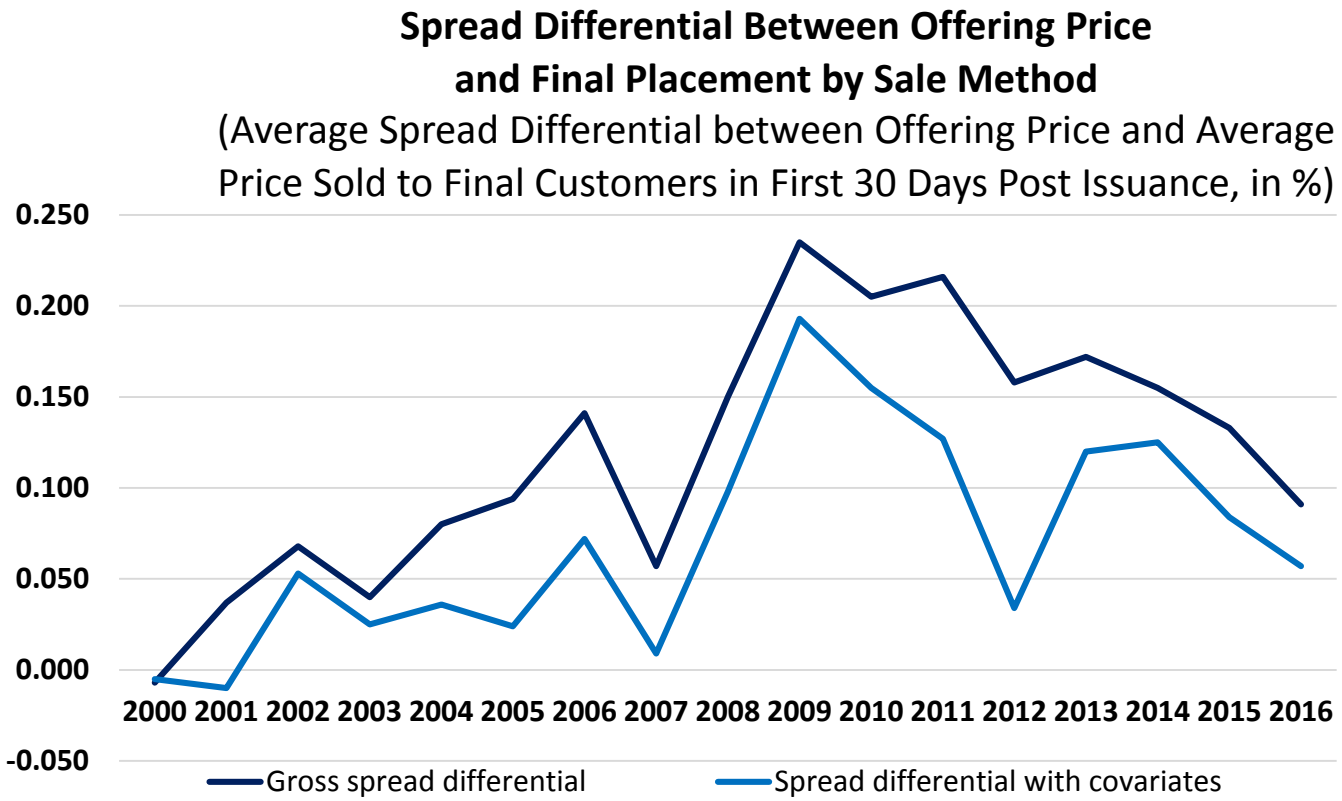
(Table 20 in conference handout)



	2000-2007	2008-2010	2011-2016
Average Spread, Competitive	0.162	0.122	0.124
Average Spread, Negotiated	0.248	0.310	0.275

Primary Market Underpricing by Sale Method

(Table 20 in conference handout)

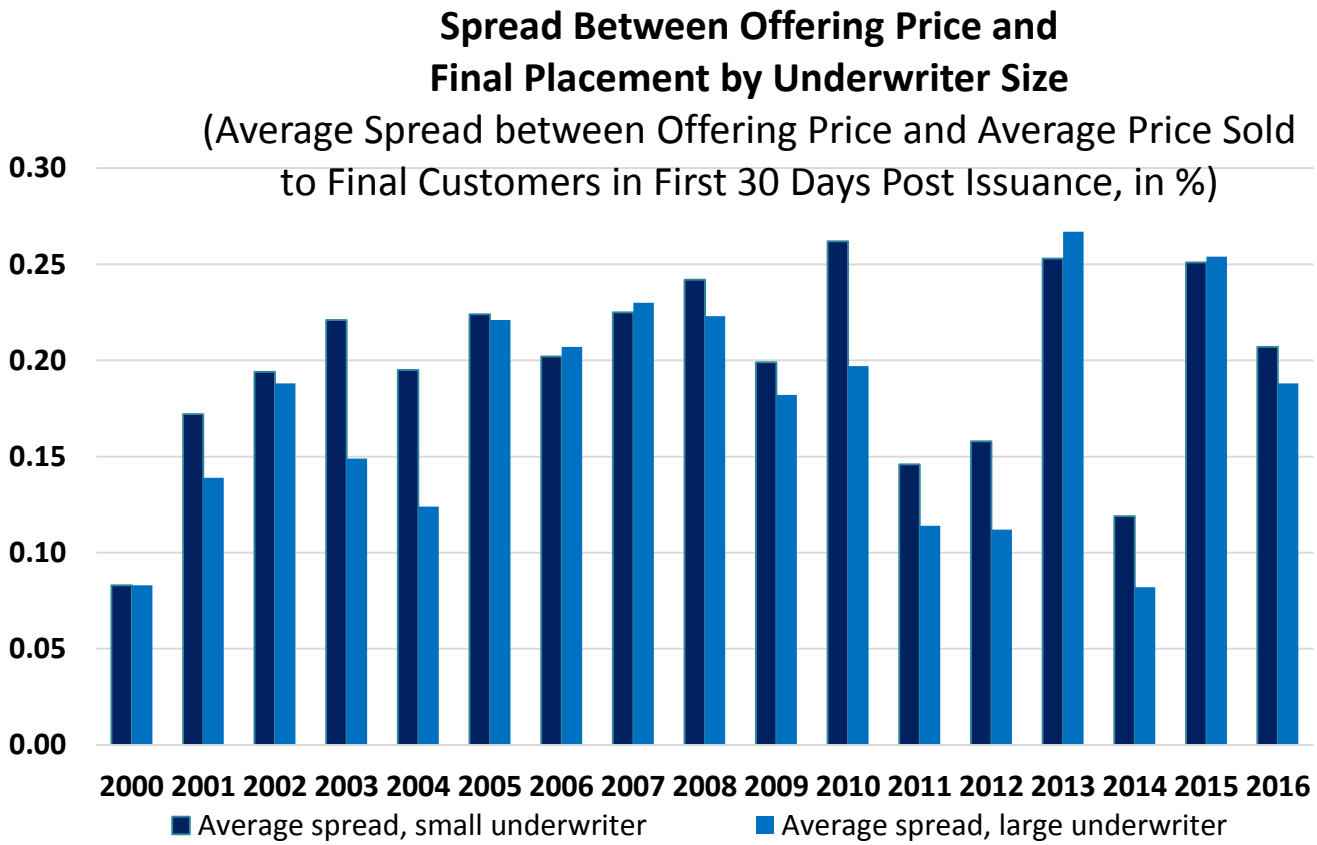


Spread differential = Average Negotiated Spread minus Average Competitive Spread

	2000-2007	2008-2010	2011-2016
Gross Spread Differential	0.086	0.188	0.151
Spread Differential with Covariates	0.062	0.134	0.106

Primary Market Underpricing by Underwriter Size

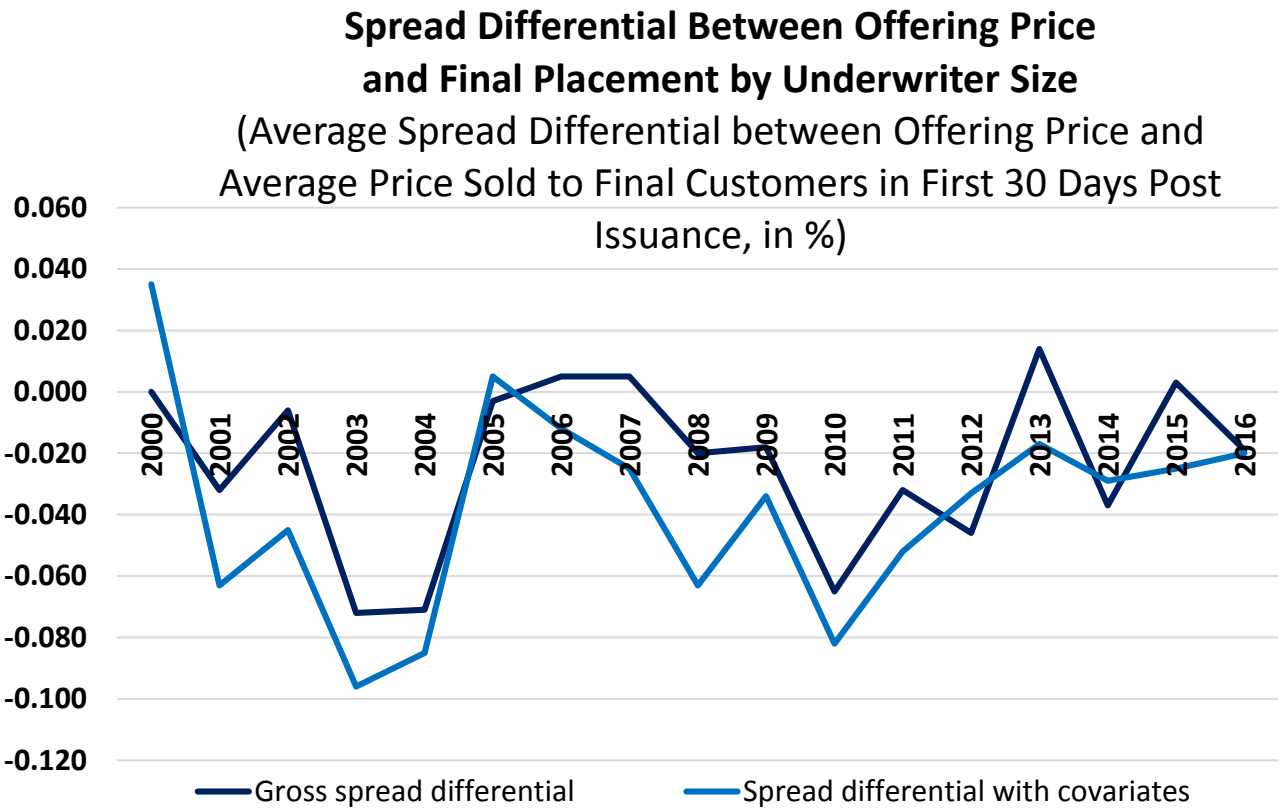
(Table 21 in conference handout)



	2000-2007	2008-2010	2011-2016
Average Spread, Small Underwriter	0.187	0.236	0.190
Average Spread, Large Underwriter	0.176	0.198	0.173

Primary Market Underpricing by Underwriter Size

(Table 21 in conference handout)



Spread differential = Average Large Underwriter Spread minus Average Small Underwriter Spread

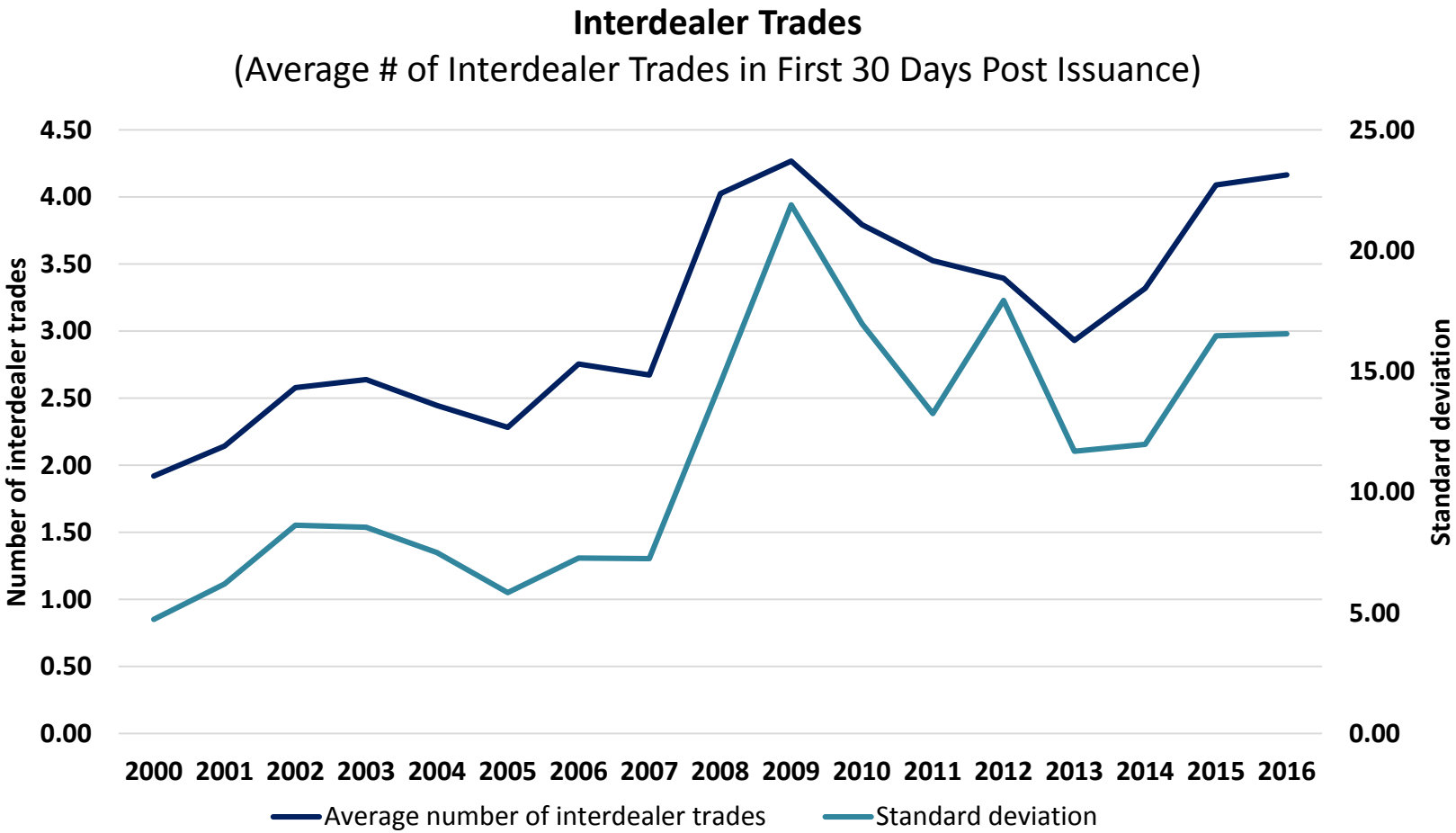
	2000-2007	2008-2010	2011-2016
Gross Spread Differential	-0.011	-0.038	-0.017
Spread Differential with Covariates	-0.036	-0.058	-0.031

Primary market underpricing: Upshot

- Greater underpricing in bonds issued via smaller underwriters.
- This relative underpricing differential becomes GREATER when you control for the bonds' characteristics.

Interdealer Trades, First 30 Days

(Table 18 in conference handout)



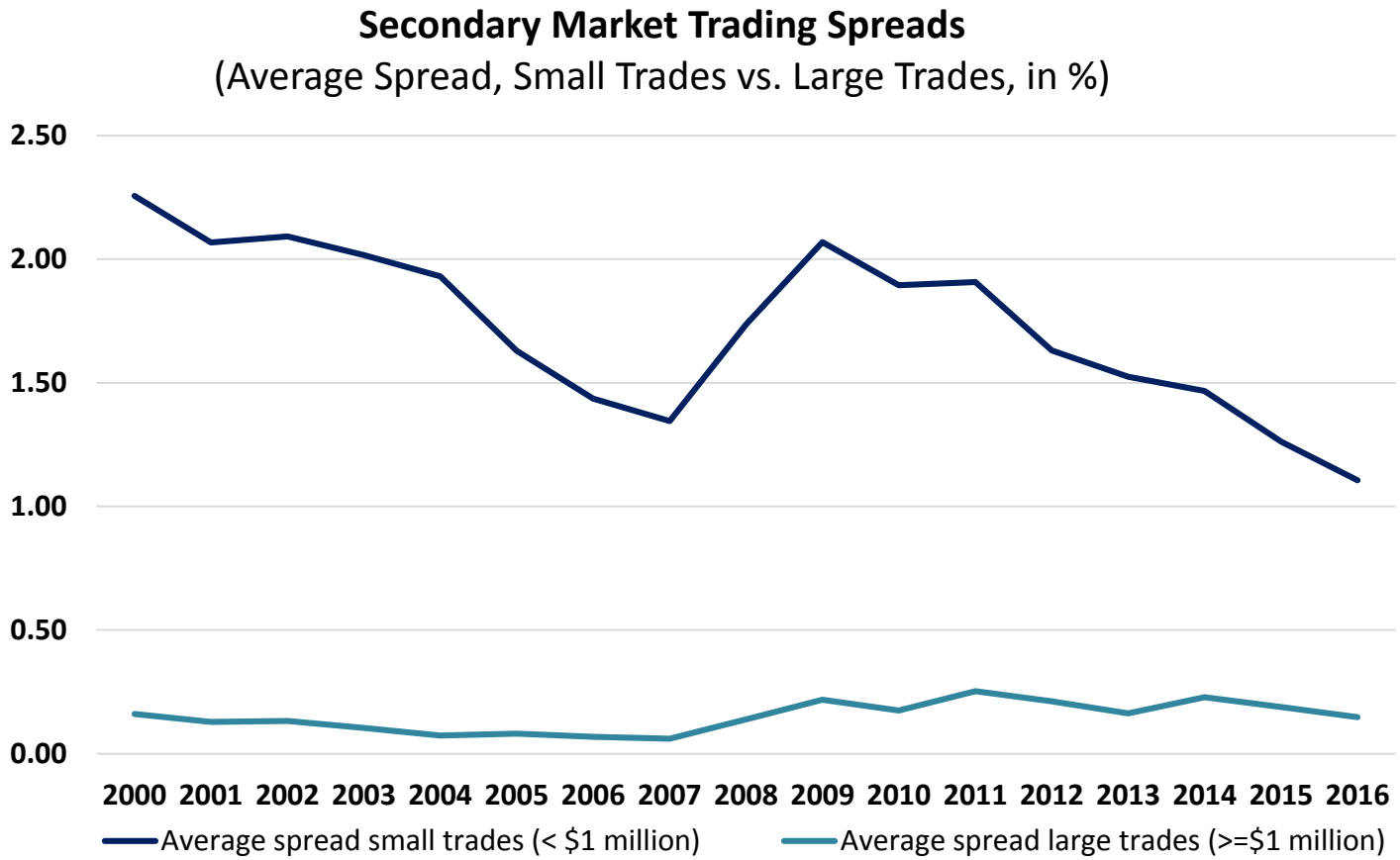
	2000-2007	2008-2010	2011-2016
Average Number of Interdealer Trades	2.389	4.019	3.607
Average Standard Deviation	7.028	18.214	15.111

Primary market interdealer trades: Upshot

- A stable regime change in the 2008 period: average number of interdealer trades in primary market goes from around 2 to around 4.

Secondary Market Trading

(Tables 24 and 25 in conference handout)



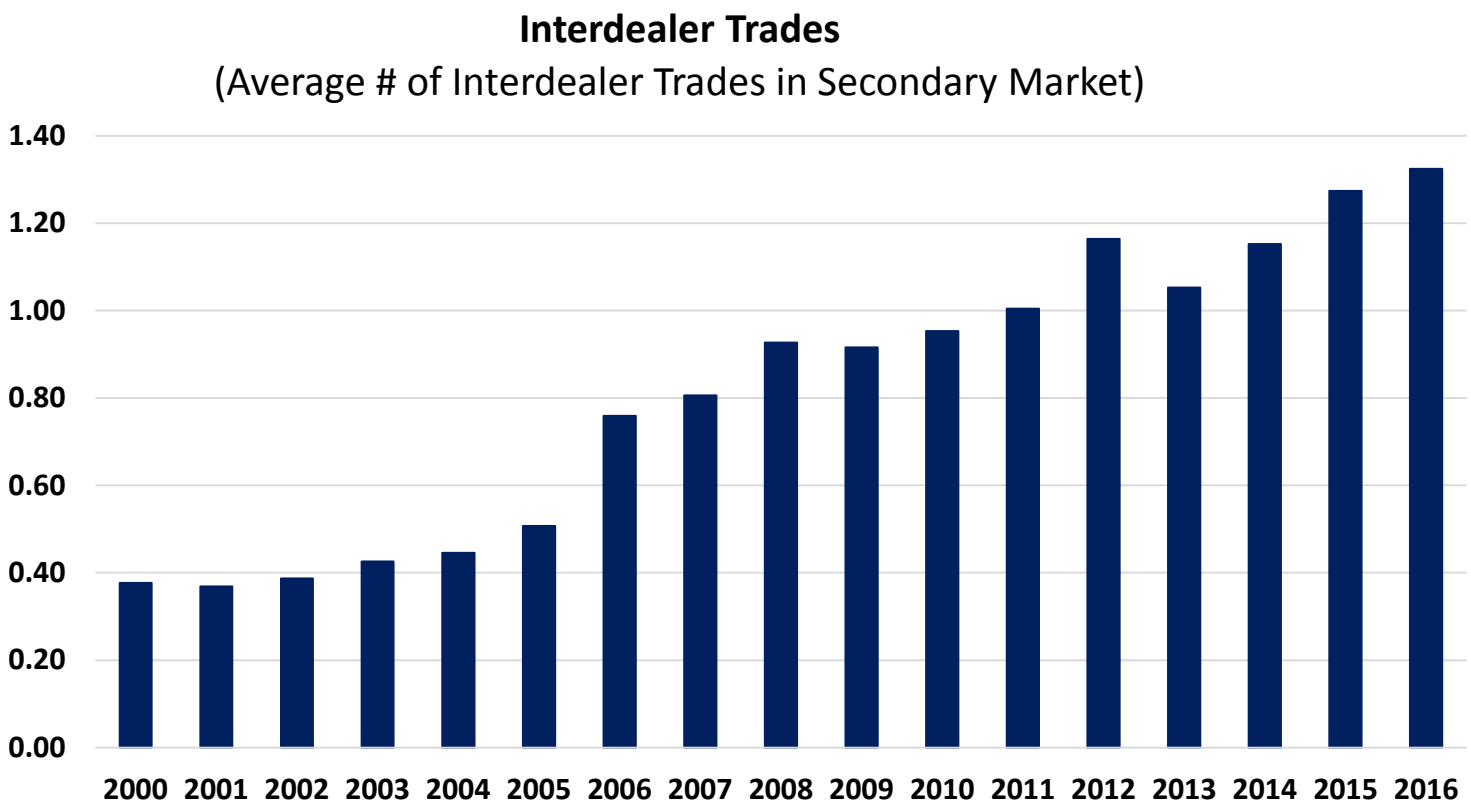
	2000-2007	2008-2010	2011-2016
Average Spread, Small Trades	1.820	1.902	1.498
Average Spread, Large Trades	0.096	0.172	0.198

Secondary market transaction costs: Upshot

- Always higher (%) trading costs for small trades than large trades.
- Small trades becoming cheaper over time, with 2007-2009 “blip”.
- Large trades became more expensive in 2007-2009; not a blip.

Interdealer Trades, Secondary Market

(Table 26 in conference handout)



	2000-2007	2008-2010	2011-2016
Average Number of Interdealer Trades	0.53	0.93	1.15

Conclusions

- Changing market environment: increasing reliance on non-traditional sources.

- Issuance and trading costs in the market increased in 2007-2009. Extent to which they have come back down depends on where you look and how you slice the data.

- In both cases trading is more “intricate”, in the sense that they are involving more intermediation.