

Online Appendix
or
**“The Difference a Day Makes: Timely Disclosure and Trading Efficiency in
the Muni Market”**

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This online appendix contains the full version of Tables 4, 5, 6, 8 and 9 in the paper.

Table OA-1: This table reports the pooled OLS regression on changes in dealer markups by trade size groups. It is the full version of Table 4 in the paper.

Table OA-2: This table reports the difference-in-differences results on changes in dealer markups using a subset of corporate bonds disseminated in the first two phases of TRACE as the control group. It is the full version of Table 5 in the paper.

Table OA-3: This table reports the MLE results for the decomposition of dealer markups. It is the full version of Table 6 in the paper.

Table OA-4: This table reports the difference-in-differences results on the changes in trading volume using a subset of corporate bonds disseminated in the first two phases of TRACE as the control group. It is the full version of Table 8 in the paper.

Table OA-5: This table reports the difference-in-differences results on the changes in daily (Panel A) and weekly (Panel B) dealer capital commitment using a subset of corporate bonds disseminated in the first two phases of TRACE as the control group. It is the full version of Table 9 in the paper.

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Table OA-1**Pooled regression analysis of dealer markups**

This table reports the pooled regression results on changes in dealer markups by trade size groups. The dependent variable is Dealer Net Markup (bps), defined as the ratio of the difference between the par-weighted average sale price and the dealer's purchase price to the purchase price, adjusted for the maturity-matched muni index returns. RealTime is an indicator variable that equals 1 if the trade occurs after the implementation of RTRS (2005/03–2005/12), and 0 otherwise (2004/03–2004/12). The control variables include both bond/issuer characteristics and general market conditions. All control variables are defined in Appendix C. Ln and $t-1$ represent logarithmic transformation and lagged value, respectively. Issuer fixed effects are included. Standard errors are clustered at the bond level and reported in the parentheses. Statistical significance of 1%, 5%, and 10% are indicated by ***, **, and *, respectively.

Variables	0–25K	25–100K	100–200K	200–500K	500–1,000K	1,000K+
RealTime	–16.59*** (0.44)	–13.79*** (0.54)	–14.91*** (1.40)	–12.84*** (1.42)	–10.51*** (2.10)	–4.09*** (1.13)
No. Interdealer (Ln)	90.95*** (0.84)	51.21*** (0.76)	38.49*** (1.57)	32.46*** (1.40)	36.04*** (2.46)	23.69*** (1.63)
RealTime*No. Interdealer	–19.04*** (1.05)	–14.47*** (0.94)	–11.37*** (1.93)	–10.32*** (1.70)	–15.95*** (2.87)	–11.68*** (1.87)
Trade Size (Ln)	–32.95*** (0.33)	–35.98*** (0.48)	–25.63*** (2.33)	–27.95*** (1.41)	–35.73*** (3.47)	–10.79*** (0.65)
AAA	–13.53*** (1.45)	0.34 (1.51)	2.30 (3.07)	0.15 (2.98)	–3.98 (4.01)	0.64 (2.19)
AA	0.88 (1.01)	15.33*** (0.98)	20.19*** (2.05)	14.84*** (2.00)	3.70 (3.01)	–0.54 (1.59)
A-BBB	3.61*** (1.05)	15.74*** (1.08)	23.38*** (2.36)	19.62*** (2.46)	12.45*** (3.84)	4.22** (2.01)
BB-B	29.07*** (4.12)	39.50*** (4.99)	44.24*** (10.90)	51.24*** (12.68)	20.44 (14.41)	11.28 (8.37)
CCC-D	72.83*** (13.08)	51.81*** (19.68)	35.01 (35.14)	45.96 (30.99)	16.68 (39.54)	–23.16 (21.95)
Age (Ln)	–14.09*** (0.77)	–16.04*** (0.69)	–8.68*** (1.38)	–5.10*** (1.29)	0.41 (1.90)	0.33 (1.09)
Maturity (Ln)	75.84*** (0.76)	72.40*** (0.71)	62.78*** (1.45)	46.97*** (1.37)	24.00*** (2.08)	8.54*** (1.17)
Coupon (Ln)	–46.32*** (0.88)	–62.51*** (0.86)	–72.68*** (1.93)	–75.80*** (2.25)	–75.16*** (4.64)	–43.32*** (4.03)
Issue Size (Ln)	–2.80*** (0.35)	–3.80*** (0.36)	–4.38*** (0.77)	–4.11*** (0.74)	–3.76*** (1.10)	–1.87*** (0.65)
Treasury Yield ($t-1$)	–1.34*** (0.42)	1.76*** (0.42)	3.47*** (0.96)	3.71*** (0.92)	7.07*** (1.38)	3.74*** (0.82)
Treasury Volatility	2.29*** (0.05)	1.75*** (0.05)	1.17*** (0.12)	0.83*** (0.11)	0.71*** (0.17)	0.37*** (0.10)
Callable	5.11*** (0.95)	10.33*** (0.83)	3.87** (1.68)	6.51*** (1.57)	5.21** (2.47)	5.38*** (1.42)
Guaranteed	7.03*** (1.06)	6.97*** (0.96)	5.06*** (1.84)	4.50*** (1.72)	6.47** (2.67)	2.10 (1.43)
Insured	–9.52*** (0.98)	–2.87*** (0.91)	0.09 (1.76)	4.99*** (1.63)	6.42** (2.50)	1.67 (1.34)
Letter or Line	–20.05*** (6.28)	–16.56** (7.77)	–27.12 (17.84)	–28.60 (22.02)	–3.15 (44.33)	–33.90 (22.15)

Table OA-2**Diff-in-diff regression analysis of dealer markups**

This table reports the diff-in-diff analysis results on changes in dealer markups using a subset of corporate bonds disseminated in the first two phases of TRACE as the control group. The dependent variable is Dealer Net Markup (bps), defined as the ratio of the difference between the par-weighted average sale price and the dealer's purchase price to the purchase price and adjusted for the maturity-matched muni or corporate index returns. RealTime is an indicator variable that equals 1 if the trade occurs after the implementation of RTRS (2005/03–2005/12), and 0 otherwise (2004/03–2004/12). Muni is an indicator variable that equals 1 for a municipal bond and 0 for a corporate bond. RealTime*Muni is the interaction term between RealTime and Muni. Other interaction terms are similarly defined. All control variables are defined in Appendix C. Ln and $t-1$ represent logarithmic transformation and lagged value, respectively. Standard errors are clustered at the bond level and reported in the parentheses. Statistical significance of 1%, 5%, and 10% are indicated by ***, **, and *, respectively.

Variables	0–25K	25–100K	100–200K	200–500K	500–1,000K	1,000K+
Muni	1.05 (4.05)	48.29*** (4.60)	87.30*** (5.93)	51.23*** (4.92)	7.76* (4.64)	–18.05*** (2.25)
RealTime	–7.23* (3.80)	1.14 (3.31)	0.23 (3.30)	–0.55 (2.30)	–11.37*** (2.19)	–2.12** (1.07)
RealTime*Muni	–9.87** (3.93)	–21.68*** (3.45)	–28.78*** (3.90)	–25.55*** (3.11)	–8.22** (3.33)	–5.90*** (1.63)
No. Interdealer (Ln)	40.83*** (2.61)	51.75*** (3.17)	39.14*** (5.38)	20.95*** (4.03)	8.79** (3.52)	2.69 (1.83)
RealTime*No. Interdealer	7.20** (3.20)	–6.33* (3.74)	–0.87 (6.71)	5.42 (5.16)	7.24 (4.87)	1.04 (2.60)
Muni*Interdealer	53.04*** (2.90)	6.05* (3.40)	9.84* (5.96)	24.95*** (4.77)	43.27*** (4.74)	33.03*** (3.05)
RealTime*Muni* No. Interdealer	–22.72*** (3.61)	–4.66 (4.06)	–6.64 (7.52)	–13.91** (6.13)	–21.23*** (6.45)	–16.44*** (3.96)
Trade Size (Ln)	–22.70*** (0.55)	–40.48*** (0.79)	–30.78*** (3.30)	–33.40*** (2.03)	–25.72*** (3.11)	–3.86*** (0.44)
AAA	–26.09*** (1.81)	–25.46*** (1.65)	–32.06*** (2.88)	–20.94*** (2.55)	–14.96*** (2.65)	–5.35*** (1.40)
AA	–12.64*** (1.27)	–12.17*** (1.10)	–13.27*** (2.00)	–11.18*** (1.93)	–8.48*** (2.08)	–6.45*** (1.10)
Age (Ln)	–11.21*** (1.21)	–19.72*** (1.06)	–15.91*** (1.65)	–8.44*** (1.49)	6.81*** (1.64)	7.86*** (1.05)
Maturity (Ln)	97.68*** (2.08)	83.19*** (1.89)	51.00*** (2.36)	35.12*** (1.85)	17.70*** (1.55)	12.43*** (0.95)
Coupon (Ln)	–27.48*** (2.87)	–56.85*** (2.45)	–74.05*** (3.03)	–73.62*** (3.19)	–71.04*** (4.37)	–29.05*** (3.49)
Issue Size (Ln)	–7.21*** (0.55)	–6.25*** (0.48)	–3.48*** (0.77)	–4.42*** (0.73)	–4.22*** (0.73)	–6.04*** (0.40)

Table OA-3**Decomposition of dealer markups: Intermediation costs vs. bargaining power**

This table reports the maximum likelihood estimation of Eq. (3) that decomposes dealer net markup into the Intermediation Costs and Bargaining Power Gain components. The dependent variable is Dealer Net Markup (bps), defined as the ratio of the difference between the par-weighted average sale price and the dealer's purchase price to the purchase price and adjusted for the maturity-matched muni index returns. Intermediation Costs is the constant term θ_0 in Eq. (4). Bargaining Power Gain is the constant term α_0 in the conditional mean of the one-sided error term as specified in Eq. (5). Symmetric Error is the constant term in the standard deviation of symmetric error term as specified in Eq. (A3). RealTime is an indicator variable that equals 1 if the trade occurs after the implementation of RTRS (2005/03–2005/12) and 0 otherwise (2004/03–2004/12). All control variables are demeaned and defined in Appendix C. Ln represents logarithmic transformation. Standard errors are reported in the parentheses. Statistical significance of 1%, 5%, and 10% are indicated by ***, **, and *, respectively.

Variables	0–25K	25–100K	100–200K	200–500K	500–1,000K	1,000K+
Intermediation Cost	163.60*** (0.43)	117.09*** (0.50)	65.13*** (1.22)	4.29*** (0.67)	–9.06*** (0.55)	–12.02*** (0.35)
RealTime	–12.99*** (0.58)	–10.35*** (0.70)	–16.78*** (1.64)	2.52*** (0.83)	4.84*** (0.80)	3.87*** (0.49)
Trade Size (Ln)	–19.10*** (0.51)	–36.94*** (0.77)	–18.36*** (3.11)	–2.65*** (0.92)	–6.33*** (1.49)	0.14 (0.31)
Bargaining Power	74.08*** (0.41)	67.33*** (0.48)	73.24*** (1.19)	98.52*** (0.92)	72.89*** (0.99)	40.28*** (0.51)
RealTime	–4.54*** (0.54)	–7.17*** (0.63)	–6.32*** (1.44)	–25.03*** (1.07)	–23.91*** (1.20)	–11.52*** (0.63)
Trade Size (Ln)	–18.22*** (0.65)	–1.66 (1.17)	–24.15*** (4.62)	–38.80*** (2.00)	–75.72*** (4.48)	–41.97*** (1.33)
AAA	–26.58*** (0.70)	–11.80*** (0.86)	–9.51*** (1.91)	–3.48*** (1.21)	–3.04** (1.38)	–1.51* (0.86)
AA	–11.11*** (0.52)	3.16*** (0.61)	8.47*** (1.37)	2.49*** (0.86)	–0.65 (1.00)	–3.04*** (0.64)
A-BBB	–1.04* (0.53)	14.54*** (0.64)	21.73*** (1.47)	6.34*** (0.97)	2.10* (1.14)	0.04 (0.72)
BB-B	22.37*** (1.70)	38.04*** (2.12)	42.48*** (5.38)	7.88** (3.68)	5.46 (4.06)	9.87*** (2.09)
CCC-D	34.01*** (5.30)	17.36*** (5.48)	–4.22 (11.38)	0.73 (6.80)	3.32 (6.33)	1.89 (2.99)
Age (Ln)	–13.58*** (0.31)	–15.90*** (0.34)	–9.32*** (0.72)	–3.30*** (0.45)	0.16 (0.51)	1.21*** (0.33)
Maturity (Ln)	78.10*** (0.46)	72.06*** (0.52)	48.65*** (1.19)	11.23*** (0.68)	3.41*** (0.74)	1.28*** (0.47)
Coupon (Ln)	–36.89*** (0.41)	–54.90*** (0.44)	–61.43*** (0.96)	–29.56*** (0.88)	–18.53*** (1.05)	–9.54*** (0.71)
Issue Size (Ln)	–2.85*** (0.16)	–2.68*** (0.18)	–3.04*** (0.39)	–1.46*** (0.23)	–0.61** (0.29)	0.62*** (0.20)
Treasury Yield ($t-1$)	–1.63*** (0.35)	1.67*** (0.40)	6.37*** (0.91)	1.29** (0.55)	1.48** (0.59)	0.30 (0.38)
Treasury Volatility	1.91*** (0.04)	1.42*** (0.05)	0.99*** (0.10)	0.71*** (0.06)	0.54*** (0.07)	0.28*** (0.05)
Callable	3.27*** (0.54)	8.56*** (0.58)	6.50*** (1.17)	5.09*** (0.71)	2.82*** (0.84)	3.59*** (0.56)
Guaranteed	6.25*** (0.44)	5.92*** (0.48)	5.06*** (1.02)	2.24*** (0.64)	2.23*** (0.76)	1.17** (0.51)
Insured	–8.34*** (0.35)	–1.31*** (0.39)	3.11*** (0.82)	4.39*** (0.49)	2.65*** (0.58)	–0.46 (0.39)
Letter or Line	3.74 (2.53)	0.17 (3.39)	2.72 (7.85)	–20.11*** (5.65)	–9.31 (8.64)	–8.07* (4.37)

Table OA-3 (continued)**Decomposition of dealer markups: Intermediation costs vs. bargaining power**

Transaction Freq.	-13.27*** (2.52)	5.12 (3.83)	6.64 (11.29)	1.60 (7.90)	24.16** (10.12)	13.37** (6.06)
State Volume	2.51*** (0.40)	5.39*** (0.43)	5.54*** (0.88)	0.81 (0.55)	0.67 (0.66)	0.72 (0.44)
State Imbalance	7.62** (3.17)	15.37*** (3.34)	-5.74 (6.83)	-2.35 (4.14)	-0.02 (5.27)	-0.85 (3.43)
State Issues	6.76*** (1.43)	0.01 (1.57)	1.54 (3.33)	6.80*** (2.10)	7.47*** (2.41)	3.84** (1.63)
Taxable	4.82*** (1.64)	-4.97** (1.95)	-7.07** (3.52)	-3.51* (2.04)	-3.30 (2.01)	1.63 (1.36)
Prerefunded	-39.01*** (0.82)	-34.62*** (1.13)	-18.43*** (2.28)	-5.62*** (1.45)	-5.39*** (1.72)	-1.48 (1.01)
Revenue Bond	2.29*** (0.36)	1.97*** (0.43)	1.75* (0.93)	0.17 (0.57)	-0.45 (0.66)	-1.46*** (0.43)
Tax Revenue	-2.21*** (0.78)	-5.03*** (0.84)	-2.32 (1.74)	-2.79** (1.08)	-2.39* (1.27)	-0.66 (0.83)
Gen. Obligation	-5.73*** (1.18)	-5.67*** (1.23)	-9.08*** (2.44)	-2.97** (1.38)	1.19 (1.62)	-2.21* (1.22)
School	-12.93*** (0.87)	-10.96*** (0.93)	-8.54*** (1.93)	-2.02* (1.17)	-2.91* (1.49)	-1.13 (1.08)
Development	5.46*** (1.61)	11.02*** (1.85)	9.89** (3.92)	1.24 (2.47)	2.15 (3.07)	3.11* (1.88)
Housing	3.13*** (0.78)	21.61*** (1.06)	24.62*** (2.52)	9.09*** (1.85)	4.46** (2.05)	9.01*** (1.38)
Sewer	-10.30*** (0.56)	-9.63*** (0.64)	-7.71*** (1.39)	-2.83*** (0.84)	-0.29 (0.98)	-0.71 (0.69)
Redevelopment	7.02*** (1.36)	7.64*** (1.52)	11.07*** (3.33)	3.76 (2.33)	2.37 (3.01)	5.34** (2.16)
Utilities	-3.58*** (1.35)	-7.91*** (1.54)	-6.46** (3.24)	2.97 (2.07)	-6.16** (2.58)	-2.03 (1.57)
Improvement	-7.78*** (0.42)	-4.29*** (0.45)	0.24 (0.93)	0.65 (0.56)	0.76 (0.67)	-0.55 (0.44)
Facilities	-9.88*** (1.60)	-5.04*** (1.87)	-8.80** (4.10)	1.38 (2.44)	3.97 (2.58)	1.10 (2.22)
Refunding	4.44*** (0.32)	4.68*** (0.36)	2.53*** (0.77)	2.47*** (0.47)	1.64*** (0.57)	1.31*** (0.38)

Table OA-3 (continued)**Decomposition of dealer markups: Intermediation costs vs. bargaining power**

Symmetric Error	93.05*** (0.25)	79.84*** (0.30)	64.23*** (0.77)	22.66*** (0.52)	15.41*** (0.36)	14.62*** (0.21)
RealTime	-10.85*** (0.34)	-11.20*** (0.39)	-14.91*** (0.96)	-4.45*** (0.51)	-1.08** (0.44)	-0.39 (0.27)
Trade Size (Ln)	-13.56*** (0.34)	-15.76*** (0.64)	-36.88*** (3.73)	-10.24*** (3.49)	-3.34 (6.71)	-1.50 (1.25)
-2 Log Likelihood	6,099,616	3,347,336	513,274	440,189	149,845	188,362
No. observations	497,489	279,866	43,784	38,961	14,102	19,239

Table OA-4**Diff-in-diff regression analysis of trading volume**

This table reports the diff-in-diff analysis on the changes in trading volume using a subset of corporate bonds disseminated in the first two phases of TRACE as the control group. Bonds are sorted into six groups based on their average monthly trading volume in 2003 as in Table 7 and regressions are estimated separately for each trading volume group. The dependent variable is a bond's monthly trading volume defined as par value traded scaled by the bond's issue size. RealTime is an indicator variable that equals 1 if the trade occurs after the implementation of RTRS (2005/03–2005/12), and 0 otherwise (2004/03–2004/12). Muni is an indicator variable that equals 1 for a municipal bond, and 0 for a corporate bond. RealTime*Muni is the interaction term between Muni and RealTime indicators. All control variables are defined in Appendix C. Ln and $t-1$ represent logarithmic transformation and lagged value, respectively. Standard errors are clustered at the bond level and reported in the parentheses. Statistical significance of 1%, 5%, and 10% are indicated by ***, **, and *, respectively.

Variables	Group 0	Group 1	Group 2	Group 3	Group 4	Group 5
Muni	0.07 (0.12)	-0.08 (0.16)	-0.60*** (0.19)	-1.56*** (0.25)	-2.60*** (0.25)	-6.75*** (0.48)
RealTime	0.03 (0.12)	-0.09 (0.10)	-0.12 (0.12)	-0.58*** (0.15)	-0.59*** (0.23)	-1.04** (0.45)
RealTime*Muni	0.24** (0.12)	0.36*** (0.11)	0.25* (0.13)	0.62*** (0.16)	0.43* (0.22)	0.78* (0.43)
AAA	0.20*** (0.05)	0.07 (0.07)	0.15** (0.07)	0.12* (0.07)	0.15 (0.09)	-0.15 (0.16)
AA	0.12*** (0.04)	0.06 (0.06)	0.12** (0.05)	0.02 (0.05)	-0.03 (0.07)	-0.27** (0.11)
Age (Ln)	-0.44*** (0.04)	-0.47*** (0.06)	-0.53*** (0.07)	-0.53*** (0.07)	-0.51*** (0.08)	-0.20 (0.14)
Maturity (Ln)	-0.50*** (0.06)	-0.46*** (0.09)	-0.42*** (0.09)	-0.53*** (0.09)	-0.51*** (0.10)	0.14 (0.21)
Coupon (Ln)	0.06 (0.05)	-0.04 (0.11)	-0.38** (0.15)	-0.50*** (0.16)	-0.96*** (0.13)	-1.87*** (0.16)
Issue Size (Ln)	-0.10*** (0.02)	-0.00 (0.02)	0.09*** (0.02)	0.12*** (0.02)	0.18*** (0.02)	0.41*** (0.05)
VIX Change ($t-1$)	-0.02*** (0.01)	-0.01 (0.01)	0.01 (0.01)	-0.01 (0.01)	-0.02* (0.01)	-0.06*** (0.02)
Libor Rate Change ($t-1$)	-1.39*** (0.23)	-1.54*** (0.28)	-1.83*** (0.27)	-2.52*** (0.28)	-2.62*** (0.33)	-4.24*** (0.63)
Treasury Yield ($t-1$)	0.32*** (0.06)	0.25*** (0.07)	0.16** (0.07)	0.43*** (0.07)	0.41*** (0.09)	0.66*** (0.16)
Treasury Volatility	0.01 (0.01)	0.00 (0.01)	-0.00 (0.01)	0.01 (0.01)	0.00 (0.01)	0.01 (0.02)
Callable	-0.06 (0.07)	-0.15 (0.10)	-0.34*** (0.13)	-0.39** (0.16)	-0.25* (0.13)	-0.67*** (0.22)
Guaranteed	0.03 (0.05)	-0.01 (0.07)	-0.05 (0.06)	-0.07 (0.06)	-0.02 (0.07)	0.06 (0.11)
Insured	0.44*** (0.04)	0.14*** (0.05)	0.07 (0.05)	0.09* (0.05)	0.27*** (0.06)	0.19* (0.10)
Letter or Line	-0.35*** (0.08)	-0.39*** (0.12)	0.51 (0.57)	0.21 (0.29)	-0.23 (0.28)	0.05 (0.68)

Table OA-5 Panel A:
Diff-in-diff regression analysis of dealer daily capital commitment

This table reports the diff-in-diff analysis on the changes in daily (Panel A) and weekly (Panel B) dealer capital commitment using a subset of corporate bonds disseminated in the first two phases of TRACE as the control group. Bonds are sorted into six groups based on their average monthly trading volume in 2003 as in Table 7 and regressions are estimated separately for each trading volume group. The dependent variable is the monthly average of aggregate daily (or weekly) dealer capital commitment for each bond, calculated as the absolute value of the dealers' aggregate buy volume less the dealers' aggregate sell volume during the day (or week), scaled by the total daily (or weekly) trading volume for the bond. RealTime is an indicator variable that equals 1 if the trade occurs after the implementation of RTRS (2005/03–2005/12), and 0 otherwise (2004/03–2004/12). Muni is an indicator variable that equals 1 for a municipal bond, and 0 for a corporate bond. RealTime*Muni is the interaction term between the two indicators. All control variables are defined in Appendix C. Ln and $t-1$ represent logarithmic transformation and lagged value, respectively. Standard errors are clustered on the bond level and reported in the parentheses. Statistical significance of 1%, 5%, and 10% are indicated by ***, **, and *, respectively.

Variables	Group 0	Group 1	Group 2	Group 3	Group 4	Group 5
Muni	0.12*** (0.03)	-1.53*** (0.26)	-1.71*** (0.41)	-0.86* (0.47)	-2.44*** (0.48)	-6.86*** (0.62)
RealTime	0.17*** (0.05)	-0.63*** (0.10)	-1.09*** (0.16)	-1.70*** (0.21)	-2.39*** (0.21)	-2.51*** (0.23)
RealTime*Muni	-0.11** (0.05)	0.39*** (0.10)	0.52*** (0.14)	0.97*** (0.19)	1.46*** (0.19)	1.94*** (0.21)
AAA	-0.02 (0.01)	-0.15** (0.07)	-0.16* (0.09)	-0.15 (0.12)	-0.21* (0.13)	-0.60*** (0.12)
AA	0.01 (0.01)	-0.02 (0.06)	-0.03 (0.08)	0.07 (0.10)	-0.15 (0.10)	-0.41*** (0.10)
Age (Ln)	-0.00 (0.01)	0.15** (0.07)	0.29*** (0.10)	0.31*** (0.11)	0.29** (0.11)	0.22* (0.12)
Maturity (Ln)	0.02 (0.01)	0.33*** (0.07)	0.71*** (0.12)	1.08*** (0.14)	1.17*** (0.13)	1.49*** (0.15)
Coupon (Ln)	-0.11*** (0.01)	-0.51*** (0.19)	-1.35*** (0.25)	-1.10*** (0.20)	-1.70*** (0.12)	-1.91*** (0.10)
Issue Size (Ln)	0.07*** (0.01)	0.57*** (0.03)	1.56*** (0.04)	2.33*** (0.06)	2.32*** (0.06)	1.87*** (0.06)
VIX Change ($t-1$)	-0.00 (0.00)	0.01** (0.00)	0.05*** (0.01)	0.07*** (0.01)	0.09*** (0.01)	0.05*** (0.01)
Libor Rate Change ($t-1$)	-0.10*** (0.03)	-2.12*** (0.14)	-4.50*** (0.21)	-6.63*** (0.25)	-6.92*** (0.24)	-5.64*** (0.24)
Treasury Yield ($t-1$)	0.03*** (0.01)	0.21*** (0.05)	0.40*** (0.07)	0.96*** (0.09)	0.97*** (0.09)	0.81*** (0.09)
Treasury Volatility	0.00** (0.00)	0.01* (0.01)	0.02** (0.01)	0.03*** (0.01)	0.04*** (0.01)	0.01 (0.01)
Callable	0.08*** (0.01)	0.36** (0.14)	0.35 (0.26)	-0.39 (0.29)	0.91*** (0.21)	0.98*** (0.15)
Guaranteed	0.07*** (0.01)	0.01 (0.05)	-0.07 (0.08)	-0.13 (0.10)	-0.04 (0.09)	-0.03 (0.08)
Insured	0.01 (0.01)	0.23*** (0.04)	0.47*** (0.06)	0.85*** (0.08)	0.96*** (0.09)	0.34*** (0.09)

Table OA-5 Panel B:
Diff-in-diff regression analysis of dealer weekly capital commitment

Variables	Group 0	Group 1	Group 2	Group 3	Group 4	Group 5
Muni	0.33*** (0.08)	-6.69*** (0.62)	-7.17*** (0.78)	-10.93*** (0.90)	-13.64*** (0.93)	-15.03*** (1.19)
RealTime	0.42*** (0.10)	-2.74*** (0.37)	-2.93*** (0.44)	-3.17*** (0.47)	-3.27*** (0.50)	-1.73*** (0.43)
RealTime*Muni	-0.22** (0.10)	1.85*** (0.36)	1.67*** (0.43)	1.98*** (0.46)	2.07*** (0.49)	1.08*** (0.42)
AAA	-0.03 (0.03)	-0.59*** (0.16)	-0.39* (0.20)	-0.45* (0.24)	-0.88*** (0.24)	-1.76*** (0.25)
AA	0.04 (0.03)	-0.06 (0.14)	0.03 (0.16)	0.21 (0.18)	-0.38** (0.18)	-1.06*** (0.19)
Age (Ln)	-0.14*** (0.03)	0.00 (0.15)	0.12 (0.19)	-0.07 (0.22)	0.42* (0.22)	0.88*** (0.23)
Maturity (Ln)	-0.00 (0.04)	1.20*** (0.22)	2.30*** (0.27)	3.41*** (0.28)	4.25*** (0.28)	5.19*** (0.29)
Coupon (Ln)	-0.26*** (0.05)	-0.75* (0.43)	-1.51*** (0.34)	-2.85*** (0.44)	-3.32*** (0.30)	-4.56*** (0.25)
Issue Size (Ln)	0.10*** (0.01)	1.45*** (0.07)	3.46*** (0.08)	4.28*** (0.09)	4.16*** (0.09)	3.43*** (0.10)
VIX Change ($t-1$)	-0.01** (0.00)	0.00 (0.02)	0.08*** (0.02)	0.06*** (0.02)	0.06*** (0.02)	-0.00 (0.02)
Libor Rate Change ($t-1$)	-0.07 (0.08)	-4.40*** (0.48)	-6.11*** (0.56)	-7.44*** (0.59)	-7.46*** (0.59)	-6.34*** (0.58)
Treasury Yield ($t-1$)	-0.00 (0.03)	-0.08 (0.15)	-0.08 (0.18)	0.33* (0.19)	0.41** (0.19)	0.64*** (0.19)
Treasury Volatility	0.01*** (0.00)	0.11*** (0.02)	0.14*** (0.02)	0.21*** (0.02)	0.17*** (0.02)	0.12*** (0.02)
Callable	0.09* (0.05)	-0.28 (0.34)	-0.51 (0.46)	0.73 (0.52)	1.92*** (0.40)	0.78** (0.33)
Guaranteed	0.11*** (0.03)	-0.02 (0.15)	-0.12 (0.17)	-0.61*** (0.18)	-0.09 (0.17)	-0.13 (0.18)
Insured	0.02 (0.02)	0.44*** (0.11)	0.99*** (0.14)	0.97*** (0.16)	1.29*** (0.17)	0.27 (0.17)

