

Internet Appendix
of
The Sound of Silence:
What Do We Know When Insiders Do Not Trade?

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Contents of Internet Appendix

Internet Appendix Tables:

- 1 -- Panel Regression Analysis of Litigation Risk Hypothesis on the PSLRA of 1995 Experiment**
- 2 -- Panel Regression Analysis of Litigation Risk Hypothesis on the UD Law Experiment**
- 3 -- Panel Regression Analysis of Litigation Risk Hypothesis on the Peer Effect Experiment**
- 4 -- Portfolio Analysis of Insider Mild Trading**
- 5 -- Time-series and Cross-sectional Analysis of Insider Mild Trading and Future Returns**
- 6 -- Portfolio Analysis of Insider Mild Trading on the UD Law Experiment**
- 7 -- Portfolio Analysis of Insider Silence**
- 8 -- Cumulative Abnormal Returns, Insider Buying and Selling in Merger Targets**
- 9 -- Summary statistics on the Grand Sample**
- 10 -- Insider Silence, Insider Sales, and Large Stock Price Crashes**
- 11 -- Insider Silence, Insider Sales, and Securities Class Action Litigation**
- 12 -- Panel Regression Analysis of Net Insider Sell**
- 13 -- Insider Silence, Insider Sell, and Stock Price Decline**

Internet Appendix Figures:

- 1 -- Cumulative Abnormal Returns and Insider Net Buying in Merger Targets**
- 2 -- Cumulative Abnormal Returns and Insider Net Buying in Merger Targets (High Premium Subsample)**
- 3 -- Cumulative Abnormal Returns and Insider Net Buying in Merger Targets (Low Premium Subsample)**

Internet Appendix: Construction of buy-and-hold abnormal return (BHAR)

Internet Appendix Table 1 -- Panel Regression Analysis of Litigation Risk Hypothesis on the PSLRA of 1995 Experiment

Variables	1 Month	3 Month	6 Month	1 Year	2 Year
Silence	-0.20 (-2.30)	-0.84 (-5.45)	-1.87 (-8.21)	-4.04 (-10.89)	-1.40 (-4.12)
Post 95	4.47 (9.00)	12.64 (9.98)	13.68 (5.98)	45.19 (13.51)	-63.19 (-15.15)
Silence × Post 95	-0.20 (-1.95)	-0.54 (-2.57)	-0.75 (-2.44)	-1.39 (-2.82)	-4.54 (-8.93)
Buy	0.14 (2.30)	0.28 (2.61)	0.40 (2.57)	0.72 (3.05)	0.86 (3.73)
Market capitalization	-0.04 (-1.73)	-0.14 (-3.27)	-0.19 (-3.48)	-0.47 (-5.61)	-0.59 (-7.48)
Book-to-market	0.28 (5.15)	0.94 (9.92)	1.89 (13.83)	3.27 (16.90)	2.28 (12.16)
Past Return	0.04 (0.30)	0.04 (0.17)	-0.39 (-1.48)	-2.29 (-6.79)	-4.16 (-21.71)
Net Issues	-1.98 (-8.46)	-5.98 (-14.47)	-12.01 (-20.94)	-19.49 (-23.12)	-5.55 (-6.40)
Adj. R-squared	0.17	0.18	0.17	0.13	0.14

This table presents panel regression results of insider silence where silence is interacted with the proxy on the PSLRA of 1995. The dependent variable is the subsequent 1-month, 3-month, 6-month, 1-year and 2-year cumulative excess return (in percent). The independent variables include insider silence (Silence), the dummy variable on the PSLRA of 1995 (Post 95), insider buy (Buy), log of market capitalization (Market capitalization), log of book-to-market ratio (Book-to-market), past 12-month returns (Past returns), and net stock issues (Net issues). We include the interaction term between Silence and the post 1995 dummy variable (Silence × Post 95). More details on the definitions of the variables can be found in Appendix A. Fixed effects and the interception term are considered in each model. The robust *t*-statistics in parentheses are accordingly based on clustered standard errors.

Internet Appendix Table 2 -- Panel Regression Analysis of Litigation Risk Hypothesis on the UD Law Experiment

Variables	1 Month	3 Month	6 Month	1 Year	2 Year
Silence	-0.35 (-5.51)	-1.27 (-11.61)	-2.51 (-15.84)	-5.29 (-21.04)	-4.78 (-17.79)
UD Law	-0.04 (-0.92)	-0.12 (-1.50)	-0.17 (-1.51)	-0.59 (-3.23)	0.15 (0.80)
Silence × UD Law	0.29 (2.11)	1.00 (4.43)	1.83 (5.52)	3.65 (7.49)	3.39 (5.96)
Buy	0.12 (2.27)	0.21 (2.25)	0.27 (2.01)	0.61 (2.89)	0.70 (3.28)
Market capitalization	-0.04 (-2.11)	-0.14 (-4.06)	-0.21 (-4.62)	-0.47 (-6.61)	-0.47 (-7.01)
Book-to-market	0.27 (6.52)	0.90 (12.70)	1.79 (17.39)	3.20 (21.54)	2.53 (16.49)
Past Return	0.06 (0.58)	0.09 (0.51)	-0.28 (-1.30)	-2.05 (-7.64)	-4.06 (-25.64)
Net Issues	-1.94 (-10.12)	-5.79 (-17.27)	-11.45 (-24.20)	-18.50 (-26.52)	-5.63 (-7.16)
Adj. R-squared	0.16	0.18	0.16	0.13	0.14

This table presents panel regression results where silence is interacted with the UD Law proxy. The dependent variable is the subsequent 1-month, 3-month, 6-month, 1-year and 2-year cumulative excess return (in percent). The independent variables include insider silence (Silence), insider buy (Buy), log of market capitalization (Market capitalization), log of book-to-market ratio (Book-to-market), past 12-month returns (Past return), and net stock issues (Net issues). We include the interaction terms between Silence and the UD Law dummy variable, and the interaction terms between Silence and the dummy variable. More details on the definitions of the variables can be found in Appendix A. Fixed effects and the interception term are considered in each model. The robust *t*-statistics in parentheses are accordingly based on clustered standard errors.

Internet Appendix Table 3 -- Panel Regression Analysis of Litigation Risk Hypothesis on the Peer Effect Experiment

Variables	1 Month	3 Month	6 Month	1 Year	2 Year
Silence	-0.17 (-2.16)	-0.73 (-5.10)	-1.57 (-7.42)	-3.47 (-10.42)	-1.61 (-5.08)
Cases by State/Sector	0.00 (0.03)	-0.42 (-1.26)	-1.41 (-3.14)	-2.48 (-3.74)	-1.35 (-1.81)
Silence × Cases by State/Sector	-0.22 (-1.95)	-0.61 (-3.03)	-1.03 (-3.46)	-1.95 (-4.15)	-4.48 (-8.98)
Buy	0.12 (2.13)	0.22 (2.10)	0.29 (1.90)	0.64 (2.80)	0.77 (3.51)
Market capitalization	-0.04 (-1.71)	-0.14 (-3.42)	-0.21 (-3.90)	-0.46 (-5.63)	-0.46 (-6.06)
Book-to-market	0.27 (5.14)	0.90 (9.76)	1.80 (13.59)	3.21 (17.15)	2.55 (14.08)
Past Return	0.06 (0.47)	0.09 (0.41)	-0.28 (-1.09)	-2.05 (-6.10)	-4.07 (-21.60)
Net Issues	-1.94 (-8.69)	-5.81 (-14.68)	-11.48 (-20.79)	-18.57 (-22.82)	-5.70 (-6.92)
Adj. R-squared	0.16	0.18	0.16	0.13	0.14

This table presents panel regression results where silence is interacted with the dummy variable if there is at least one class action in the same state or at least one class action in the same sector last year (Cases by State/Sector). The dependent variable is the subsequent 1-month, 3-month, 6-month, one-year, and two-year cumulative excess return (in percent). The independent variables include insider silence (Silence), insider buy (Buy), log of market capitalization (Market capitalization), log of book-to-market ratio (Book-to-market), past 12-month returns (Past Return), and net stock issues (Net issues). We include the interaction terms between Silence and the cases by state/sector dummy variable. More details on the definitions of the variables can be found in Appendix A. Fixed effects and the interception term are considered in each model. The robust *t*-statistics in parentheses are accordingly based on clustered standard errors.

Internet Appendix Table 4 -- Portfolio Analysis of Insider Mild Trading

Panel A: Excess return

Portfolio	Cumulative excess returns over the holding period		
	One month	Six months	12 months
Silence	6.36 (1.65)	6.62 (2.08)	7.40 (2.52)
Buy	10.8 (2.81)	10.6 (3.19)	11.56 (3.90)
Sell	9.36 (2.44)	9.74 (3.18)	10.66 (3.82)
Mild Trading	9.96 (2.86)	9.92 (3.38)	10.38 (3.84)
Heavy Sell	9.72 (2.14)	10.12 (2.88)	11.34 (3.60)
Silence - Sell	-3.00 (-3.09)	-3.12 (-4.56)	-3.26 (-4.20)
Mild Trading - Sell	0.60 (0.43)	0.18 (0.15)	-0.28 (-0.22)
Silence - Heavy Sell	-3.36 (-2.05)	-3.50 (-2.79)	-3.92 (-3.08)
Mild Trading - Heavy Sell	0.24 (0.12)	-0.20 (-0.10)	-0.96 (-0.50)

Internet Appendix Table 4 -- Portfolio Analysis of Insider Mild Trading, continued

Panel B: Abnormal return related to match portfolios in the spirit of DGTW (1997)

Portfolio	Cumulative excess returns over the holding period		
	One month	Six months	12 months
Silence	-2.76 (-2.84)	-2.80 (-3.89)	-2.68 (-4.08)
Buy	0.60 (0.72)	-0.36 (-0.53)	-0.15 (-0.24)
Sell	0.36 (0.53)	0.30 (0.47)	0.48 (0.77)
Mild Trading	0.24 (0.26)	-0.50 (-0.69)	-0.91 (-1.31)
Heavy Sell	0.84 (0.71)	1.00 (1.17)	1.58 (1.84)
Silence - Sell	-3.12 (-3.94)	-3.10 (-5.28)	-3.17 (-4.90)
Mild Trading - Sell	-0.12 (-0.13)	-0.80 (-1.21)	-1.39 (-1.92)
Silence - Heavy Sell	-3.60 (-3.05)	-3.82 (-4.96)	-4.25 (-5.22)
Mild Trading - Heavy Sell	-0.60 (-0.41)	-1.52 (-1.47)	-2.49 (-2.31)

Internet Appendix Table 4 -- Portfolio Analysis of Insider Mild Trading, continued

Panel C: Fama-French three-factor alpha

Portfolio	Cumulative excess returns over the holding period		
	One month	Six months	12 months
Silence	-2.64 (-3.24)	-3.26 (-3.38)	-3.84 (-3.60)
Buy	0.60 (0.56)	-0.22 (-0.24)	-0.05 (-0.06)
Sell	0.48 (0.71)	0.82 (1.02)	0.88 (0.98)
Mild Trading	0.84 (0.71)	0.54 (0.51)	0.39 (0.39)
Heavy Sell	0.60 (0.52)	1.18 (1.09)	1.40 (1.21)
Silence - Sell	-3.12 (-3.46)	-4.08 (-4.59)	-4.72 (-5.53)
Mild Trading - Sell	0.36 (0.36)	-0.28 (-0.34)	-0.48 (-0.62)
Silence - Heavy Sell	-3.12 (-2.40)	-4.40 (-3.53)	-5.19 (-4.43)
Mild Trading - Heavy Sell	0.24 (0.19)	-0.64 (-0.51)	-1.01 (-0.84)

Internet Appendix Table 4 -- Portfolio Analysis of Insider Mild Trading, continued

Panel D: Fama-French-Carhart four-factor alpha

Portfolio	Cumulative excess returns over the holding period		
	One month	Six months	12 months
Silence	-2.04 (-2.58)	-2.20 (-2.34)	-1.86 (-1.89)
Buy	2.16 (2.30)	1.26 (1.55)	1.67 (2.19)
Sell	0.84 (1.29)	1.80 (2.39)	2.39 (3.12)
Mild Trading	2.28 (2.13)	2.10 (2.16)	2.00 (2.10)
Heavy Sell	0.12 (0.16)	1.72 (1.54)	2.78 (2.45)
Silence - Sell	-3.00 (-3.08)	-4.00 (-4.23)	-4.25 (-4.54)
Mild Trading - Sell	1.44 (1.53)	0.30 (0.35)	-0.38 (-0.44)
Silence - Heavy Sell	-2.28 (-1.66)	-3.92 (-3.02)	-4.60 (-3.72)
Mild Trading - Heavy Sell	2.16 (1.55)	0.36 (0.28)	-0.78 (-0.57)

Internet Appendix Table 4 -- Portfolio Analysis of Insider Mild Trading, continued

Panel E: Extended Fama-French-Carhart six-factor alpha

Portfolio	Cumulative excess returns over the holding period		
	One month	Six months	12 months
Silence	-2.52 (-2.90)	-2.70 (-2.70)	-2.31 (-2.21)
Buy	2.40 (2.43)	1.34 (1.50)	1.87 (2.25)
Sell	0.96 (1.17)	1.94 (2.28)	2.58 (3.00)
Mild Trading	2.52 (2.12)	2.12 (2.01)	2.04 (1.98)
Heavy Sell	0.00 (0.03)	1.78 (1.40)	2.96 (2.30)
Silence - Sell	-3.36 (-3.33)	-4.64 (-4.59)	-4.89 (-4.87)
Mild Trading - Sell	1.56 (1.58)	0.20 (0.20)	-0.54 (-0.57)
Silence - Heavy Sell	-3.36 (-3.29)	-4.60 (-4.55)	-4.84 (-4.81)
Mild Trading - Heavy Sell	2.40 (1.65)	0.34 (0.23)	-0.92 (-0.62)

This table presents the portfolio returns of trading strategies associated with insider mild trading. Portfolios are formed based on the insider trading activity over the prior 12 months. The “silence” portfolio includes firms with no insider trading activity. The “mild trading” portfolio includes firms with mild trading which is defined as the insider trading at the lowest decile group, year by year, based on the number of insider shares traded (either bought or sold) out of the total number of shares outstanding with size adjusted. (Here size adjustment means that we compare stocks within the same decile size group). The “buy” and “sell” portfolios include firms whose insiders have, on the net, bought and sold shares respectively. The “heavy sell” portfolios include firms in which the amount of shares sold are in the highest 30% of the “sell” group. For each of the portfolios we calculate their cumulative excess returns (net of T-bill rates) over the holding periods of one, six, and 12 months. Returns are in percent per year. Panel A shows the time-series averages of cross-sectional means of the portfolio returns. Panel B shows the abnormal returns adjusted for the matched portfolios in the spirit of DGTW (1997), in which the matched portfolios are matched with stocks held in the evaluated portfolio on the basis of market capitalization and book-to-market ratios of these stocks. Panel C shows the Fama-French three-factor alphas of the portfolios. The annual alphas are computed as 12 times the monthly estimates. Panel D shows the Fama-French-Carhart four-factor alphas of the portfolios, and Panel E shows the extended Fama-French-Carhart six-factor alphas of the portfolios in which the benchmark model includes Fama-French three factors, the momentum factor, the Pastor and Stambaugh (2003) liquidity risk factor, and the Sadka (2006) liquidity risk factor. We report Newey-West *t*-statistics in parentheses.

Internet Appendix Table 5 -- Time-series and Cross-sectional Analysis of Insider Mild Trading and Future Returns

Variables	1 Month	3 Month	6 Month	1 Year	2 Year
Mild Trading	-0.02 (-0.47)	-0.09 (-0.81)	-0.33 (-2.25)	-1.23 (-5.49)	-2.32 (-8.96)
Buy	0.18 (3.22)	0.44 (4.31)	0.77 (5.04)	1.79 (7.67)	2.00 (8.71)
Market capitalization	-0.04 (-1.41)	-0.11 (-2.80)	-0.15 (-2.94)	-0.34 (-4.28)	-0.35 (-4.64)
Book-to-market	0.25 (4.90)	0.85 (9.29)	1.70 (12.93)	3.02 (16.08)	2.40 (13.18)
Past Return	0.06 (0.49)	0.10 (0.46)	-0.26 (-1.02)	-2.02 (-5.98)	-4.04 (-21.47)
Net Issues	-1.95 (-8.68)	-5.81 (-14.67)	-11.48 (-20.74)	-18.64 (-22.84)	-5.88 (-7.11)
Adj. R-squared	0.16	0.18	0.16	0.13	0.14

This table presents panel regression results of insider mild trading where mild trading which is defined as the insider trading at the lowest decile group, year by year, based on the number of insider shares traded (either bought or sold) out of the total number of shares outstanding with size adjusted. (Here size adjustment means that we compare stocks within the same decile size group). The dependent variable is the subsequent 1-month, 3-month, 6-month, one-year, and two-year cumulative excess return (in percent). The independent variables include insider silence (Silence), insider buy (Buy), log of market capitalization (Market capitalization), log of book-to-market ratio (Book-to-market), past 12-month returns (Past Return), and net stock issues (Net issues). More details on the definitions of the variables can be found in Appendix A. Fixed effects and the interception term are considered in each model. The robust *t*-statistics in parentheses are accordingly based on clustered standard errors.

Internet Appendix Table 6 -- Portfolio Analysis of Insider Mild Trading on the UD Law Experiment

Panel A: Excess return

Portfolio	23 States						III. Other States			All States		
	I. Before UD Law			II. After UD Law						I & III		
	1 month	6 months	12 months	1 month	6 months	12 months	1 month	6 months	12 months	1 month	6 months	12 months
Mild Trading	9.68 (2.06)	8.01 (1.99)	11.15 (2.65)	2.50 (0.49)	5.12 (1.40)	6.35 (2.00)	9.82 (2.38)	9.82 (2.86)	10.32 (3.34)	9.95 (2.42)	9.73 (2.83)	10.44 (3.33)
Buy	10.79 (2.55)	9.71 (2.52)	11.74 (3.13)	6.78 (1.32)	7.19 (1.68)	9.08 (2.83)	10.88 (2.82)	10.48 (3.18)	11.66 (3.92)	10.92 (2.85)	10.54 (3.20)	11.73 (3.91)
Sell	9.86 (2.61)	9.65 (3.04)	11.27 (3.79)	6.69 (1.62)	7.39 (2.24)	8.70 (2.89)	9.48 (2.44)	9.87 (3.18)	10.88 (3.83)	9.56 (2.49)	9.93 (3.22)	10.93 (3.88)
Mild Trading - Sell	-0.16 (-0.06)	-1.63 (-0.89)	-0.12 (-0.06)	-3.00 (-1.15)	-1.29 (-0.89)	-1.82 (-1.11)	0.34 (0.25)	-0.05 (-0.05)	-0.56 (-0.62)	0.38 (0.29)	-0.21 (-0.22)	-0.50 (-0.59)

Panel B: Abnormal return related to match portfolios in the spirit of DGTW (1997)

Portfolio	23 States						III. Other States			All States		
	I. Before UD Law			II. After UD Law						I & III		
	1 month	6 months	12 months	1 month	6 months	12 months	1 month	6 months	12 months	1 month	6 months	12 months
Mild Trading	1.57 (0.67)	-0.44 (-0.27)	0.33 (0.18)	-5.25 (-2.01)	-3.64 (-2.26)	-3.35 (-2.15)	0.16 (0.14)	-0.27 (-0.31)	-0.61 (-0.59)	0.36 (0.34)	-0.31 (-0.39)	-0.52 (-0.56)
Buy	1.44 (0.81)	0.04 (0.02)	0.18 (0.11)	-2.84 (-1.03)	-3.42 (-1.48)	-2.63 (-1.49)	0.53 (0.56)	-0.51 (-0.66)	-0.10 (-0.14)	0.63 (0.70)	-0.40 (-0.52)	-0.01 (-0.02)
Sell	0.57 (0.47)	0.24 (0.21)	0.49 (0.46)	-0.61 (-0.43)	-0.59 (-0.58)	-0.09 (-0.11)	0.63 (0.88)	0.56 (0.82)	0.84 (1.05)	0.64 (0.91)	0.54 (0.81)	0.82 (1.13)
Mild Trading - Sell	1.02 (0.43)	-0.67 (-0.38)	-0.16 (-0.09)	-4.54 (-1.86)	-3.09 (-2.76)	-3.14 (-2.44)	-0.48 (-0.40)	-0.84 (-1.06)	-1.45 (-2.05)	-0.29 (-0.25)	-0.86 (-1.10)	-1.34 (-1.95)

Internet Appendix Table 6 -- Portfolio Analysis of Insider Mild Trading on the UD Law Experiment

Panel C: Fama-French three-factor alpha

Portfolio	23 States						III. Other States			All States		
	I. Before UD Law			II. After UD Law						I & III		
	1 month	6 months	12 months	1 month	6 months	12 months	1 month	6 months	12 months	1 month	6 months	12 months
Mild Trading	0.60 (0.23)	-0.70 (-0.31)	0.29 (0.14)	-4.56 (-1.42)	-1.42 (-0.56)	-1.78 (-0.79)	-0.36 (-0.28)	-1.04 (-0.88)	-1.07 (-0.95)	-0.24 (-0.18)	-1.04 (-0.90)	-0.94 (-0.85)
Buy	1.92 (1.06)	0.22 (0.13)	0.02 (0.01)	-2.28 (-0.70)	-1.44 (-0.49)	0.15 (0.05)	0.72 (0.60)	-0.26 (-0.26)	0.08 (0.08)	0.84 (0.76)	-0.16 (-0.15)	0.15 (0.16)
Sell	1.56 (1.31)	1.64 (1.38)	1.73 (1.39)	0.00 (-0.02)	0.70 (0.42)	1.53 (0.92)	0.72 (1.01)	0.96 (1.21)	1.06 (1.20)	0.72 (1.13)	1.04 (1.32)	1.13 (1.29)
Mild Trading - Sell	-0.96 (-0.36)	-2.34 (-1.04)	-1.45 (-0.76)	-3.96 (-1.50)	-2.22 (-1.04)	-2.91 (-1.52)	-1.08 (-0.85)	-2.00 (-1.92)	-2.13 (-2.25)	-0.96 (-0.84)	-2.06 (-2.07)	-2.07 (-2.26)

Panel D: Fama-French-Carhart four-factor alpha

Portfolio	23 States						III. Other States			All States		
	I. Before UD Law			II. After UD Law						I & III		
	1 month	6 months	12 months	1 month	6 months	12 months	1 month	6 months	12 months	1 month	6 months	12 months
Mild Trading	1.08 (0.41)	0.94 (0.42)	2.11 (1.07)	-2.64 (-0.79)	0.60 (0.24)	-0.08 (-0.04)	1.32 (1.10)	0.70 (0.65)	1.09 (1.06)	1.44 (1.16)	0.72 (0.70)	1.19 (1.20)
Buy	3.24 (1.76)	1.82 (1.07)	2.17 (1.26)	0.00 (-0.00)	0.84 (0.29)	2.27 (0.80)	2.28 (2.13)	1.22 (1.30)	1.69 (2.01)	2.4 (2.34)	1.36 (1.49)	1.82 (2.20)
Sell	1.8 (1.48)	2.44 (2.08)	3.15 (2.68)	0.24 (0.11)	1.54 (0.91)	2.77 (1.73)	1.20 (1.67)	1.96 (2.62)	2.55 (3.39)	1.20 (1.73)	2.00 (2.69)	2.60 (3.46)
Mild Trading - Sell	-0.60 (-0.23)	-1.50 (-0.65)	-1.04 (-0.53)	-2.16 (-0.79)	-1.06 (-0.47)	-2.49 (-1.24)	0.24 (0.17)	-1.26 (-1.20)	-1.46 (-1.48)	0.24 (0.19)	-1.28 (-1.29)	-1.41 (-1.46)

Internet Appendix Table 6 -- Portfolio Analysis of Insider Mild Trading on the UD Law Experiment

Panel E: Extended Fama-French-Carhart six-factor alpha

Portfolio	23 States						III. Other States			All States		
	I. Before UD Law			II. After UD Law						I & III		
	1 month	6 months	12 months	1 month	6 months	12 months	1 month	6 months	12 months	1 month	6 months	12 months
Mild Trading	2.04 (0.71)	1.76 (0.75)	3.09 (1.53)	-2.76 (-0.83)	0.50 (0.20)	0.08 (0.03)	2.40 (1.91)	1.60 (1.40)	1.87 (1.73)	2.52 (1.96)	1.58 (1.47)	2.00 (1.94)
Buy	3.00 (1.50)	1.52 (0.84)	1.96 (1.07)	0.12 (0.03)	0.26 (0.09)	0.42 (0.16)	2.64 (2.41)	1.40 (1.37)	1.87 (2.05)	2.64 (2.54)	1.46 (1.48)	1.94 (2.17)
Sell	1.68 (1.25)	2.46 (1.88)	3.15 (2.40)	0.24 (0.12)	1.54 (0.91)	2.41 (1.47)	1.20 (1.61)	2.16 (2.56)	2.84 (3.35)	1.20 (1.63)	2.18 (2.60)	2.86 (3.37)
Mild Trading - Sell	0.48 (0.17)	-0.70 (-0.29)	-0.06 (-0.03)	-2.28 (-0.83)	-1.18 (-0.53)	-2.33 (-1.16)	1.20 (0.96)	-0.58 (-0.51)	-0.97 (-0.92)	1.20 (1.02)	-0.60 (-0.58)	-0.86 (-0.85)

This presents the portfolio returns of trading strategies associated with insider mild trading on the UD law experiment. Portfolios are formed based on the insider trading activity over the prior 12 months. The “mild trading” portfolio includes firms with mild trading which is defined as the insider trading at the lowest decile group, year by year, based on the number of insider shares traded (either bought or sold) out of the total number of shares outstanding with size adjusted. (Here size adjustment means that we compare stocks within the same decile size group). The “buy” and “sell” portfolios include firms whose insiders have, on the net, bought and sold shares respectively. For each of the portfolios we calculate their cumulative excess returns (net of T-bill rates) over the holding periods of one, six, and 12 months. Returns are in percent per year. Panel A shows the time-series averages of cross-sectional means of the annualized portfolio returns. The row of “silence – sell” present return spreads between the corresponding portfolios. Panel B shows the annualized abnormal returns adjusted for the matched portfolios in the spirit of DGTW (1997), in which the matched portfolios are matched with stocks held in the evaluated portfolio on the basis of market capitalization and book-to-market ratios of these stocks. Panel C shows the Fama-French three-factor alphas of the portfolios. Panel D shows the Fama-French-Carhart four-factor alphas of the portfolios, and Panel E shows the extended Fama-French-Carhart six-factor alphas of the portfolios in which the benchmark model includes Fama-French three factors, the momentum factor, the Pastor and Stambaugh (2003) liquidity risk factor, and the Sadka (2006) liquidity risk factor. The annual alphas are computed as 12 times the monthly estimates. We report Newey-West *t*-statistics in parentheses.

Internet Appendix Table 7 -- Portfolio Analysis of Insider Silence

Panel A: Excess return

Portfolio	Cumulative excess returns over the holding period		
	One month	Six months	12 months
Panel A: By Trading Type			
Silence	6.36 (1.65)	6.62 (2.08)	7.40 (2.52)
Buy	10.80 (2.81)	10.60 (3.19)	11.56 (3.90)
Sell	9.36 (2.44)	9.74 (3.18)	10.66 (3.82)
Silence - Sell	-3.00 (-3.09)	-3.12 (-4.56)	-3.26 (-4.20)
Panel B: Kim and Skinner (2012)'s measure (KS)			
High KS	8.23 (1.52)	8.90 (2.06)	10.42 (2.64)
Median KS	9.86 (2.81)	9.87 (3.31)	10.53 (3.87)
Low KS	9.69 (3.42)	9.78 (3.98)	10.31 (4.43)
High KS - Low KS	-1.46 (-0.41)	-0.88 (-0.29)	0.11 (0.04)
Panel C: Intersection			
Silence&High KS - Sell&High KS	-5.06 (-2.89)	-4.03 (-2.90)	-4.97 (-2.71)
Silence&Median KS - Sell&Median KS	-1.89 (-1.36)	-3.00 (-3.05)	-2.58 (-2.82)
Silence&Low KS - Sell&Low KS	-2.60 (-2.46)	-2.44 (-4.32)	-2.14 (-5.38)

Internet Appendix Table 7 -- Portfolio Analysis of Insider Silence, continued

Panel B: Abnormal return related to match portfolios in the spirit of DGTW (1997)

Portfolio	Cumulative excess returns over the holding period		
	One month	Six months	12 months
Panel A: By Trading Type			
Silence	-2.76 (-2.84)	-2.80 (-3.89)	-2.68 (-4.08)
Buy	0.60 (0.72)	-0.36 (-0.53)	-0.15 (-0.24)
Sell	0.36 (0.53)	0.30 (0.47)	0.48 (0.77)
Silence - Sell	-3.12 (-3.94)	-3.10 (-5.28)	-3.17 (-4.90)
Panel B: Kim and Skinner (2012)'s measure (KS)			
High KS	-0.32 (-0.20)	-0.07 (-0.06)	0.63 (0.46)
Median KS	0.73 (0.92)	0.19 (0.23)	0.09 (0.12)
Low KS	-0.26 (-0.18)	-0.72 (-0.53)	-0.83 (-0.69)
High KS - Low KS	-0.05 (-0.02)	0.64 (0.28)	1.46 (0.65)
Panel C: Intersection			
Silence&High KS - Sell&High KS	-4.58 (-3.07)	-3.77 (-3.08)	-4.48 (-2.92)
Silence&Median KS - Sell&Median KS	-2.33 (-1.74)	-3.08 (-3.30)	-2.61 (-2.75)
Silence&Low KS - Sell&Low KS	-2.67 (-2.62)	-2.44 (-3.67)	-2.28 (-4.43)

Internet Appendix Table 7 -- Portfolio Analysis of Insider Silence, continued

Panel C: Fama-French three-factor alpha

Portfolio	Cumulative excess returns over the holding period		
	One month	Six months	12 months
Panel A: By Trading Type			
Silence	-2.64 (-3.24)	-3.26 (-3.38)	-3.84 (-3.60)
Buy	0.60 (0.56)	-0.22 (-0.24)	-0.05 (-0.06)
Sell	0.48 (0.71)	0.82 (1.02)	0.88 (0.98)
Silence - Sell	-3.12 (-3.46)	-4.08 (-4.59)	-4.72 (-5.53)
Panel B: Kim and Skinner (2012)'s measure (KS)			
High KS	-3.00 (-2.76)	-2.36 (-1.90)	-2.02 (-1.42)
Median KS	1.08 (1.17)	0.62 (0.68)	0.61 (0.65)
Low KS	2.52 (2.51)	2.36 (2.35)	2.15 (2.16)
High KS - Low KS	-5.52 (-3.30)	-4.72 (-2.79)	-4.18 (-2.39)
Panel C: Intersection			
Silence&High KS - Sell&High KS	-6.00 (-3.42)	-6.42 (-3.89)	-7.89 (-5.01)
Silence&Median KS - Sell&Median KS	-1.44 (-1.08)	-3.42 (-2.81)	-4.03 (-3.57)
Silence&Low KS - Sell&Low KS	-2.64 (-2.54)	-2.76 (-2.94)	-2.47 (-2.71)

Internet Appendix Table 7 -- Portfolio Analysis of Insider Silence, continued

Panel D: Fama-French-Carhart four-factor alpha

Portfolio	Cumulative excess returns over the holding period		
	One month	Six months	12 months
Panel A: By Trading Type			
Silence	-2.04 (-2.58)	-2.20 (-2.34)	-1.86 (-1.89)
Buy	2.16 (2.30)	1.26 (1.55)	1.67 (2.19)
Sell	0.84 (1.29)	1.80 (2.39)	2.39 (3.12)
Silence - Sell	-3.00 (-3.08)	-4.00 (-4.23)	-4.25 (-4.54)
Panel B: Kim and Skinner (2012)'s measure (KS)			
High KS	-1.56 (-1.51)	-0.14 (-0.12)	0.96 (0.75)
Median KS	1.44 (1.64)	1.38 (1.55)	1.83 (2.11)
Low KS	2.52 (2.49)	2.62 (2.57)	2.69 (2.68)
High KS - Low KS	-3.96 (-2.45)	-2.76 (-1.59)	-1.74 (-0.95)
Panel C: Intersection			
Silence&High KS - Sell&High KS	-6.00 (-3.22)	-6.28 (-3.59)	-7.13 (-4.08)
Silence&Median KS - Sell&Median KS	-0.72 (-0.48)	-2.78 (-2.15)	-3.16 (-2.68)
Silence&Low KS - Sell&Low KS	-2.64 (-2.49)	-2.76 (-2.82)	-2.16 (-2.26)

Internet Appendix Table 7 -- Portfolio Analysis of Insider Silence, continued

Panel E: Extended Fama-French-Carhart six-factor alpha

Portfolio	Cumulative excess returns over the holding period		
	One month	Six months	12 months
Panel A: By Trading Type			
Silence	-2.52 (-2.90)	-2.70 (-2.70)	-2.31 (-2.21)
Buy	2.40 (2.43)	1.34 (1.50)	1.87 (2.25)
Sell	0.96 (1.17)	1.94 (2.28)	2.58 (3.00)
Silence - Sell	-3.36 (-3.33)	-4.64 (-4.59)	-4.89 (-4.87)
Panel B: Kim and Skinner (2012)'s measure (KS)			
High KS	-1.08 (-1.01)	0.44 (0.35)	1.66 (1.22)
Median KS	1.32 (1.39)	1.34 (1.37)	1.82 (1.90)
Low KS	2.16 (1.93)	2.20 (1.97)	2.29 (2.08)
High KS - Low KS	-3.24 (-1.85)	-1.78 (-0.97)	-0.63 (-0.33)
Panel C: Intersection			
Silence&High KS - Sell&High KS	-7.32 (-3.76)	-8.06 (-4.31)	-8.88 (-4.74)
Silence&Median KS - Sell&Median KS	-0.84 (-0.51)	-2.92 (-2.10)	-3.40 (-2.66)
Silence&Low KS - Sell&Low KS	-2.28 (-2.08)	-2.64 (-2.60)	-2.04 (-2.04)

Internet Appendix Table 7 -- Portfolio Analysis of Insider Silence, continued

Panel F: Excess return

Portfolio	Cumulative excess returns over the holding period		
	One month	Six months	12 months
Panel A: By Trading Type			
Silence	6.36 (1.65)	6.62 (2.08)	7.40 (2.52)
Buy	10.80 (2.81)	10.60 (3.19)	11.56 (3.90)
Sell	9.36 (2.44)	9.74 (3.18)	10.66 (3.82)
Silence - Sell	-3.00 (-3.09)	-3.12 (-4.56)	-3.26 (-4.20)
Panel B: By Firm Volatility Measure (Firm Vol)			
High Firm Vol	8.45 (1.38)	8.23 (1.73)	9.27 (2.17)
Median Firm Vol	9.73 (2.60)	10.11 (3.20)	10.40 (3.71)
Low Firm Vol	8.55 (3.24)	8.75 (3.59)	9.24 (3.81)
High Firm Vol - Low Firm Vol	-0.09 (-0.02)	-0.51 (-0.13)	0.03 (0.01)
Panel C: Intersection			
Silence&High Firm Vol - Sell&High Firm Vol	-6.72 (-3.37)	-6.37 (-4.42)	-6.31 (-3.68)
Silence&Median Firm Vol - Sell&Median Firm Vol	-1.57 (-1.34)	-2.39 (-2.61)	-2.66 (-3.06)
Silence&Low Firm Vol - Sell&Low Firm Vol	-1.78 (-2.01)	-1.36 (-2.76)	-1.13 (-2.46)

Internet Appendix Table 7 -- Portfolio Analysis of Insider Silence, continued

Panel G: Abnormal return related to match portfolios in the spirit of DGTW (1997)

Portfolio	Cumulative excess returns over the holding period		
	One month	Six months	12 months
Panel A: By Trading Type			
Silence	-2.76 (-2.84)	-2.80 (-3.89)	-2.68 (-4.08)
Buy	0.60 (0.72)	-0.36 (-0.53)	-0.15 (-0.24)
Sell	0.36 (0.53)	0.30 (0.47)	0.48 (0.77)
Silence - Sell	-3.12 (-3.94)	-3.10 (-5.28)	-3.17 (-4.90)
Panel B: By Firm Volatility Measure (Firm Vol)			
High Firm Vol	0.43 (0.24)	0.20 (0.13)	0.77 (0.45)
Median Firm Vol	0.34 (0.41)	0.26 (0.32)	0.23 (0.29)
Low Firm Vol	-0.70 (-0.44)	-1.11 (-0.76)	-1.06 (-0.86)
High Firm Vol - Low Firm Vol	1.14 (0.36)	1.30 (0.49)	1.83 (0.69)
Panel C: Intersection			
Silence&High Firm Vol - Sell&High Firm Vol	-6.28 (-3.67)	-5.82 (-4.92)	-5.84 (-4.34)
Silence&Median Firm Vol - Sell&Median Firm Vol	-1.04 (-0.93)	-2.11 (-2.71)	-2.33 (-2.81)
Silence&Low Firm Vol - Sell&Low Firm Vol	-2.55 (-2.72)	-1.98 (-3.17)	-1.66 (-3.09)

Internet Appendix Table 7 -- Portfolio Analysis of Insider Silence

Panel H: Fama-French three-factor alpha

Portfolio	Cumulative excess returns over the holding period		
	One month	Six months	12 months
Panel A: By Trading Type			
Silence	-2.64 (-3.24)	-3.26 (-3.38)	-3.84 (-3.60)
Buy	0.60 (0.56)	-0.22 (-0.24)	-0.05 (-0.06)
Sell	0.48 (0.71)	0.82 (1.02)	0.88 (0.98)
Silence - Sell	-3.12 (-3.46)	-4.08 (-4.59)	-4.72 (-5.53)
Panel B: By Firm Volatility Measure (Firm Vol)			
High Firm Vol	-2.76 (-2.25)	-2.84 (-2.10)	-2.15 (-1.40)
Median Firm Vol	0.96 (0.90)	1.04 (0.96)	0.86 (0.81)
Low Firm Vol	2.64 (2.37)	2.54 (2.35)	2.21 (2.07)
High Firm Vol - Low Firm Vol	-5.40 (-2.75)	-5.38 (-2.82)	-4.36 (-2.22)
Panel C: Intersection			
Silence&High Firm Vol - Sell&High Firm Vol	-7.32 (-3.68)	-8.12 (-4.72)	-8.71 (-5.45)
Silence&Median Firm Vol - Sell&Median Firm Vol	-1.56 (-1.36)	-3.36 (-3.19)	-3.92 (-3.88)
Silence&Low Firm Vol - Sell&Low Firm Vol	-1.56 (-1.73)	-1.36 (-1.64)	-1.44 (-1.79)

Internet Appendix Table 7 -- Portfolio Analysis of Insider Silence, continued

Panel I: Fama-French-Carhart four-factor alpha

Portfolio	Cumulative excess returns over the holding period		
	One month	Six months	12 months
Panel A: By Trading Type			
Silence	-2.04 (-2.58)	-2.20 (-2.34)	-1.86 (-1.89)
Buy	2.16 (2.30)	1.26 (1.55)	1.67 (2.19)
Sell	0.84 (1.29)	1.80 (2.39)	2.39 (3.12)
Silence - Sell	-3.00 (-3.08)	-4.00 (-4.23)	-4.25 (-4.54)
Panel B: By Firm Volatility Measure (Firm Vol)			
High Firm Vol	-1.44 (-1.23)	-0.62 (-0.49)	0.91 (0.67)
Median Firm Vol	1.56 (1.48)	1.94 (1.87)	2.12 (2.17)
Low Firm Vol	2.52 (2.24)	2.66 (2.40)	2.57 (2.39)
High Firm Vol - Low Firm Vol	-3.96 (-2.03)	-3.28 (-1.69)	-1.66 (-0.83)
Panel C: Intersection			
Silence&High Firm Vol - Sell&High Firm Vol	-6.72 (-3.20)	-7.66 (-4.15)	-7.73 (-4.42)
Silence&Median Firm Vol - Sell&Median Firm Vol	-1.44 (-1.11)	-3.20 (-2.87)	-3.63 (-3.59)
Silence&Low Firm Vol - Sell&Low Firm Vol	-1.32 (-1.46)	-1.12 (-1.31)	-1.13 (-1.36)

Internet Appendix Table 7 -- Portfolio Analysis of Insider Silence, continued

Panel J: Extended Fama-French-Carhart six-factor alpha

Portfolio	Cumulative excess returns over the holding period		
	One month	Six months	12 months
Panel A: By Trading Type			
Silence	-2.52 (-2.90)	-2.70 (-2.70)	-2.31 (-2.21)
Buy	2.40 (2.43)	1.34 (1.50)	1.87 (2.25)
Sell	0.96 (1.17)	1.94 (2.28)	2.58 (3.00)
Silence - Sell	-3.36 (-3.33)	-4.64 (-4.59)	-4.89 (-4.87)
Panel B: By Firm Volatility Measure (Firm Vol)			
High Firm Vol	-1.32 (-1.14)	-0.30 (-0.22)	1.25 (0.87)
Median Firm Vol	1.56 (1.39)	1.96 (1.82)	2.16 (2.06)
Low Firm Vol	2.28 (1.94)	2.30 (1.99)	2.36 (2.08)
High Firm Vol - Low Firm Vol	-3.6 (-1.81)	-2.60 (-1.29)	-1.12 (-0.53)
Panel C: Intersection			
Silence&High Firm Vol - Sell&High Firm Vol	-6.48 (-3.09)	-7.98 (-4.17)	-8.46 (-4.62)
Silence&Median Firm Vol - Sell&Median Firm Vol	-1.68 (-1.30)	-3.38 (-2.95)	-3.99 (-3.82)
Silence&Low Firm Vol - Sell&Low Firm Vol	-1.44 (-1.51)	-1.22 (-1.37)	-1.23 (-1.41)

Internet Appendix Table 7 -- Portfolio Analysis of Insider Silence, continued

This table presents the portfolio returns of trading strategies associated with insider silence. Portfolios are formed based on the insider trading activity over the prior 12 months. The “silence” portfolio includes firms with no insider trading activity. The “buy” and “sell” portfolios include firms whose insiders have, on the net, bought and sold shares respectively. The row “silence – sell” presents return spreads between the corresponding portfolios. The “High KS” portfolio includes firms in the top tercile of Kim and Skinner (2012)’s measure (KS). The composite measure, KS, developed in Kim and Skinner (2012), is built upon industry membership, firm size, sales growth, past stock returns, skewness, volatility, and trading volume. The “Median KS” portfolio includes firms in the middle tercile of Kim and Skinner (2012)’s measure (KS), and the “Low KS” portfolio includes firms in the bottom tercile of Kim and Skinner (2012)’s measure (KS). The row “High KS - Low KS” presents return spreads between the corresponding portfolios. The “High Firm Vol” portfolio includes firms in the top tercile of firm volatility (Firm Vol). The “Median Firm Vol” portfolio includes firms in the middle tercile of firm volatility, and the “Low Firm Vol” portfolio includes firms in the bottom tercile of firm volatility. The row “High Firm Vol - Low Firm Vol” presents return spreads between the corresponding portfolios. For each of the portfolios we calculate their cumulative excess returns (net of T-bill rates) over the holding periods of one, six, and 12 months. Returns are in percent per year. Panels A and F show the time-series averages of cross-sectional means of the portfolio returns. Panels B and G show the abnormal returns adjusted for the matched portfolios in the spirit of DGTW (1997), in which the matched portfolios are matched with stocks held in the evaluated portfolio on the basis of market capitalization and book-to-market ratios of these stocks. Panels C and H show the Fama-French three-factor alphas of the portfolios. The annual alphas are computed as 12 times the monthly estimates. Panels D and I show the Fama-French-Carhart four-factor alphas of the portfolios, and Panels E and J show the extended Fama-French-Carhart six-factor alphas of the portfolios in which the benchmark model includes Fama-French three factors, the momentum factor, the Pastor and Stambaugh (2003) liquidity risk factor, and the Sadka (2006) liquidity risk factor. In addition, Panels A-E report the cumulative excess returns and regression alphas for the double-sorted portfolios on trading type and Kim and Skinner (2012)’s measure (KS), and Panels F-J report the cumulative excess returns and regression alphas for the double-sorted portfolios on trading type and firm volatility. We report Newey-West *t*-statistics in parentheses.

Internet Appendix Table 8 -- Cumulative Abnormal Returns, Insider Buying and Selling in Merger Targets

Months	AR	p-value	CAR	Buy	Sell
-24	0.3%	0.197	0.3%	9.6%	19.7%
-23	0.5%	0.041	0.8%	9.8%	19.7%
-22	0.4%	0.128	1.2%	10.0%	18.8%
-21	0.2%	0.385	1.4%	8.9%	19.0%
-20	0.3%	0.137	1.8%	9.5%	20.1%
-19	0.4%	0.118	2.2%	9.7%	19.0%
-18	0.6%	0.008	2.8%	9.5%	19.8%
-17	0.0%	0.938	2.8%	9.4%	19.7%
-16	0.0%	0.886	2.8%	9.0%	19.8%
-15	0.5%	0.042	3.3%	8.4%	20.1%
-14	0.1%	0.555	3.5%	8.8%	19.9%
-13	-0.2%	0.399	3.3%	9.0%	18.7%
-12	0.5%	0.245	3.7%	8.7%	19.7%
-11	-0.1%	0.618	3.6%	9.0%	19.1%
-10	-0.2%	0.375	3.4%	8.4%	18.4%
-9	-0.1%	0.721	3.3%	8.5%	18.8%
-8	0.1%	0.638	3.5%	8.9%	19.5%
-7	-0.2%	0.488	3.3%	8.4%	18.4%
-6	-0.7%	0.002	2.6%	8.6%	18.3%
-5	-0.6%	0.007	1.9%	7.7%	18.5%
-4	0.1%	0.586	2.1%	6.1%	16.7%
-3	0.5%	0.055	2.5%	6.2%	15.4%
-2	0.6%	0.014	3.1%	5.5%	14.1%
-1	2.9%	0.000	6.0%	3.5%	10.4%
0	25.2%	0.000	31.2%	2.9%	11.4%
1	0.3%	0.196	31.5%	2.0%	11.8%
2	0.1%	0.768	31.5%	2.1%	11.8%
3	0.0%	0.968	31.5%	2.3%	12.1%
4	0.6%	0.020	32.1%	2.7%	13.3%
5	-0.2%	0.410	31.8%	3.2%	13.5%
6	-0.5%	0.184	31.4%	4.4%	11.9%
7	-0.2%	0.591	31.2%	5.1%	12.9%
8	0.3%	0.525	31.5%	5.4%	14.1%
9	0.0%	0.981	31.5%	8.0%	14.4%
10	1.0%	0.110	32.5%	7.4%	14.7%
11	0.6%	0.327	33.1%	6.0%	14.6%
12	-1.2%	0.046	31.8%	7.5%	12.2%

The sample includes 4,267 targets involved in merger deals announced during 1992–2010. The first column represents the months relative to the announcement month, which is set to month 0. Column “AR” is the average abnormal return for the month; “p-value” is the p-value testing the statistical significance of the average abnormal return based on two-tailed t-tests; “CAR” is the cumulative abnormal return; the “Buy” (“Sell”) column is the proportion of targets whose insiders net buy (sell) during the month.

Internet Appendix Table 9 -- Summary statistics on the Grand Sample

NID	Silence	Buy	Sell	Mean	Std. Dev.	P5	P25	P50	P75	P95
1 m	74.1%	7.6%	18.4%	-0.093	0.260	-0.548	-0.099	-0.018	0.002	0.099
3 m	49.4%	15.5%	35.1%	-0.150	0.403	-0.906	-0.166	-0.027	0.004	0.157
6 m	32.9%	20.5%	46.6%	-0.241	0.624	-1.391	-0.279	-0.046	0.007	0.237
12 m	19.5%	23.8%	56.7%	-0.440	1.078	-2.445	-0.531	-0.095	0.010	0.406

For each firm, net insider demand (NID) of time t is defined as the number of shares that insiders buy minus the number of shares that insiders sell, normalized by the total number of shares outstanding at the end of time t . Each row in the table presents summary statistics of NID measured over the past 1, 3, 6, or 12 months, respectively. Silence, buy, and sell are the percentage of firms whose insiders keep silent, net buy, and net sell, respectively, over the past time period listed in the first column. The summary statistics are calculated using a pooled sample over the period from 227 cross-sections (February 1992 to December 2010) with an average cross-section size of 3,895.

Internet Appendix Table 10 -- Insider Silence, Insider Sales, and Large Stock Price Crashes

Panel A: OLS regressions

Dependent Variable Models	Large Crash					
	I.a.	I.b.	II.a.	II.b.	III.a.	III.b.
<i>Independent Variables:</i>						
Silence	0.0008 (2.09)		0.0007 (1.67)		0.0008 (2.01)	
INSSAL _{t-1}		-0.0011 (-1.51)		-0.0012 (-1.58)		-0.0012 (-1.58)
INSSAL _{t-2,t-12}		0.0022 (0.26)		0.0036 (0.42)		0.0023 (0.27)
<i>Control Variables:</i>						
Market capitalization	0.0002 (1.59)	0.0002 (1.14)			0.0002 (1.57)	0.0002 (1.09)
Book-to-market	-0.0004 (-1.92)	-0.0011 (-3.17)			-0.0005 (-2.43)	-0.0012 (-3.47)
Past Return	-0.0016 (-11.47)	-0.0015 (-6.64)	-0.0017 (-11.66)	-0.0016 (-6.70)	-0.0016 (-11.12)	-0.0014 (-6.09)
Net Issues	0.0014 (1.23)	-0.0002 (-0.11)			0.0020 (1.73)	0.0003 (0.17)
TTV _{t-1}			0.0004 (3.63)	0.0001 (0.77)	0.0003 (3.59)	0.0001 (0.80)
TTV _{t-2,t-12}			-0.0006 (-5.60)	-0.0003 (-1.91)	-0.0007 (-6.07)	-0.0004 (-2.40)

Internet Appendix Table 10 -- Insider Silence, Insider Sales, and Large Stock Price Crashes, continued

Panel B: Logit regressions

Dependent Variable Models	Large Crash					
	I.a.	I.b.	II.a.	II.b.	III.a.	III.b.
<i>Independent Variables:</i>						
Silence	0.1424 (0.0456)		0.1373 (0.0515)		0.1220 (0.0875)	
INSSAL _{t-1}		-7.6523 (0.3641)		-8.6613 (0.3196)		-7.3239 (0.3705)
INSSAL _{t-2,t-12}		0.2942 (0.9173)		0.1536 (0.9577)		0.2903 (0.9163)
<i>Control Variables:</i>						
Log(size)	0.0479 (0.0014)	0.0363 (0.1444)			0.0488 (0.0010)	0.0375 (0.1272)
Book-to-market	0.2161 (<.0001)	0.1444 (0.0487)			0.2125 (<.0001)	0.1417 (0.0622)
Past Return	-0.5099 (<.0001)	-0.2891 (<.0001)	-0.5412 (<.0001)	-0.3024 (<.0001)	-0.5425 (<.0001)	-0.2998 (<.0001)
Net Issues	-0.0117 (0.9456)	-0.0121 (0.9690)			0.0646 (0.7056)	0.0692 (0.8225)
TTV _{t-1}			0.0593 (<.0001)	0.0290 (0.2306)	0.0588 (<.0001)	0.0092 (0.2234)
TTV _{t-2,t-12}			-0.1289 (<.0001)	-0.1038 (0.0037)	-0.1277 (<.0001)	-0.1041 (0.0037)

Internet Appendix Table 10 -- Insider Silence, Insider Sales, and Large Stock Price Crashes, continued

Panel C: Probit regressions

Dependent Variable Models	Large Crash					
	I.a.	I.b.	II.a.	II.b.	III.a.	III.b.
<i>Independent Variables:</i>						
Silence	0.0524 (0.0775)		0.0530 (0.0711)		0.0445 (0.1349)	
INSSAL _{t-1}		-3.1461 (0.3285)		-3.6279 (0.2800)		-3.0516 (0.3312)
INSSAL _{t-2,t-12}		0.1116 (0.9214)		0.0483 (0.9668)		0.1146 (0.9176)
<i>Control Variables:</i>						
Log(size)	0.0200 (0.0011)	0.0150 (0.1388)			0.0204 (0.0009)	0.0155 (0.1232)
Book-to-market	0.1136 (<.0001)	0.0739 (0.0380)			0.1114 (<.0001)	0.0695 (0.0577)
Past Return	-0.1954 (<.0001)	-0.1109 (0.0001)	-0.2063 (<.0001)	-0.1140 (<.0001)	-0.2059 (<.0001)	-0.1131 (0.0001)
Net Issues	0.0009 (0.9894)	-0.0042 (0.9738)			0.0314 (0.6556)	0.0274 (0.8282)
TTV _{t-1}			0.0268 (<.0001)	0.0111 (0.2789)	0.0265 (<.0001)	0.0112 (0.2748)
TTV _{t-2,t-12}			-0.0536 (<.0001)	-0.0390 (0.0066)	-0.0527 (<.0001)	-0.0388 (0.0071)

Internet Appendix Table 10 -- Insider Silence, Insider Sales, and Large Stock Price Crashes, continued

This table presents panel regression results of insider silence and insider sale where the dependent variables are the dummy variables which take the value one when the subsequent excess monthly return is more than 3.1 standard deviations away and below the historical mean, where historical mean and standard deviation are estimated using return data over the past 12 months, and takes the value zero otherwise. Panel A reports the OLS regression results, in which the robust t -statistics in parentheses are based on clustered standard errors. Panel B reports the logit regression results and Panel C reports the probit regression results, in which the p -values are reported in parentheses. Regarding the main independent variables, Silence is a dummy variable that equals one if there is no insider trading activity during the past 12-month period and zero otherwise. $INSSAL_{t-1}$ is the previous month's insider sales, $INSSAL_{t-2,t-12}$ is the average of the insider sales during the period $t - 12$ to $t - 2$. The Control variables include log of market capitalization (Market capitalization), log of book-to-market ratio (Book-to-market), past 12-month returns (Past returns), net stock issues (Net issues), TTV_{t-1} is the previous month's total trading volume, and $TTV_{t-2,t-12}$ is the average total trading volume during the period $t - 12$ to $t - 2$. Fixed effects are considered in each model.

Internet Appendix Table 11 -- Insider Silence, Insider Sales, and Securities Class Action Litigation

Panel A: OLS regressions

Dependent Variable Models	Litigation					
	I.a.	I.b.	II.a.	II.b.	III.a.	III.b.
<i>Independent Variables:</i>						
Silence	0.0012 (3.37)		0.0007 (2.05)		0.0013 (3.75)	
INSSAL _{t-1}		0.0004 (0.68)		-0.0003 (-0.51)		0.0005 (0.88)
INSSAL _{t-2,t-12}		0.0040 (0.73)		-0.0022 (-0.40)		0.0034 (0.62)
<i>Control Variables:</i>						
Market capitalization	0.0013 (11.84)	0.0013 (8.22)			0.0014 (12.22)	0.0014 (8.57)
Book-to-market	-0.0008 (-4.56)	-0.0009 (-2.78)			-0.0003 (-1.95)	-0.0005 (-1.59)
Past Return	-0.0009 (-7.16)	-0.0010 (-5.13)	-0.0017 (-11.52)	-0.0019 (-8.13)	-0.0014 (-9.94)	-0.0015 (-6.73)
Net Issues	0.0071 (6.27)	0.0050 (3.01)			0.0048 (4.23)	0.0031 (1.83)
TTV _{t-1}			0.0010 (6.97)	0.0006 (3.12)	0.0010 (7.08)	0.0007 (3.33)
TTV _{t-2,t-12}			0.0004 (2.11)	0.0005 (2.16)	0.0003 (1.58)	0.0004 (1.75)

Internet Appendix Table 11 -- Insider Silence, Insider Sales, and Securities Class Action Litigation, continued

Panel B: Logit regressions

Dependent Variable Models	Litigation					
	I.a.	I.b.	II.a.	II.b.	III.a.	III.b.
<i>Independent Variables:</i>						
Silence	0.3268 (0.0027)		0.3493 (0.0013)		0.3762 (0.0006)	
INSSAL _{t-1}		1.7775 (0.6276)		0.7267 (0.8886)		1.7068 (0.6675)
INSSAL _{t-2,t-12}		0.9117 (0.8480)		-0.8800 (0.9277)		0.7025 (0.9025)
<i>Control Variables:</i>						
Log(size)	0.1627 (<.0001)	0.1894 (<.0001)			0.1705 (<.0001)	0.2056 (<.0001)
Book-to-market	0.2804 (<.0001)	0.2887 (0.0004)			0.2692 (<.0001)	0.3011 (0.0002)
Past Return	-0.6551 (<.0001)	-0.8811 (<.0001)	-0.6343 (<.0001)	-0.8565 (<.0001)	-0.5969 (<.0001)	-0.8097 (<.0001)
Net Issues	1.3805 (<.0001)	1.0639 (0.0086)			1.1601 (<.0001)	0.8443 (0.0474)
TTV _{t-1}			0.0735 (<.0001)	0.0451 (0.0299)	0.0723 (<.0001)	0.0448 (0.0408)
TTV _{t-2,t-12}			0.0615 (<.0001)	0.0730 (0.0098)	0.0596 (<.0001)	0.0780 (0.0078)

Internet Appendix Table 11 -- Insider Silence, Insider Sales, and Securities Class Action Litigation, continued

Panel C: Probit regressions

Dependent Variable Models	Litigation					
	I.a.	I.b.	II.a.	II.b.	III.a.	III.b.
<i>Independent Variables:</i>						
Silence	0.1303 (0.0029)		0.1489 (0.0006)		0.1560 (0.0004)	
INSSAL _{t-1}		0.8988 (0.5171)		0.4802 (0.7815)		0.9258 (0.5178)
INSSAL _{t-2,t-12}		0.4231 (0.8196)		-0.3010 (0.9285)		0.3394 (0.8745)
<i>Control Variables:</i>						
Log(size)	0.0636 (<.0001)	0.0712 (<.0001)			0.0672 (<.0001)	0.0793 (<.0001)
Book-to-market	0.1467 (<.0001)	0.1485 (0.0005)			0.1423 (<.0001)	0.1564 (0.0003)
Past Return	-0.1918 (<.0001)	-0.2517 (<.0001)	-0.2081 (<.0001)	-0.2819 (<.0001)	-0.1966 (<.0001)	-0.2621 (<.0001)
Net Issues	0.6004 (<.0001)	-0.4771 (0.0040)			0.4907 (<.0001)	0.3668 (0.0347)
TTV _{t-1}			0.0374 (<.0001)	0.0262 (0.0053)	0.0362 (<.0001)	0.0269 (0.0050)
TTV _{t-2,t-12}			0.0268 (<.0001)	0.0314 (0.0099)	0.0267 (<.0001)	0.0326 (0.0080)

Internet Appendix Table 11 -- Insider Silence, Insider Sales, and Securities Class Action Litigation, continued

This table presents panel regression results of insider silence and insider sale where the binary dependent variables are the dummy variables which take the value one when firms have securities class action litigation in the following month, and takes the value zero otherwise. Panel A reports the OLS regression results, in which the robust t -statistics in parentheses are based on clustered standard errors. Panel B reports the logit regression results and Panel C reports the probit regression results, in which the p -values are reported in parentheses. Regarding the main independent variables, Silence is a dummy variable that equals one if there is no insider trading activity during the past 12-month period and zero otherwise. $INSSAL_{t-1}$ is the previous month's insider sales, $INSSAL_{t-2,t-12}$ is the average of the insider sales during the period $t - 12$ to $t - 2$. The Control variables include log of market capitalization (Market capitalization), log of book-to-market ratio (Book-to-market), past 12-month returns (Past returns), net stock issues (Net issues), TTV_{t-1} is the previous month's total trading volume, and $TTV_{t-2,t-12}$ is the average total trading volume during the period $t - 12$ to $t - 2$. Fixed effects are considered in each model.

Internet Appendix Table 12 -- Panel Regression Analysis of Net Insider Sell

Panel A: The base experiment

Variables	(1)	(2)	(3)	(4)
	3 Month	1 Month	3 Month	1 Month
Sell_1m	-0.09 (-1.30)	-0.13 (-3.03)	-0.21 (-2.75)	-0.18 (-3.97)
UD Law	0.04 (0.34)	0.00 (0.05)	-0.01 (-0.09)	-0.01 (-0.19)
Sell_1m× UD Law	-0.05 (-0.40)	-0.02 (-0.19)	-0.02 (-0.16)	-0.003 (-0.03)
Silence			-1.25 (-12.41)	-0.42 (-7.14)
Market capitalization			-0.14 (-3.92)	-0.04 (-1.90)
Book-to-market			0.90 (12.59)	0.26 (6.41)
PastReturn			0.09 (0.55)	0.07 (0.66)
Net Issues			-5.81 (-17.36)	-1.95 (-10.18)
Adj. R-squared	0.17	0.16	0.18	0.16

Panel B: The sell group only

Variables	(1)	(2)	(3)	(4)
	3 Month	1 Month	3 Month	1 Month
UD Law	-0.05 (-0.50)	-0.02 (-0.40)	-0.08 (-0.80)	-0.03 (-0.54)
Market capitalization			-0.18 (-4.09)	-0.04 (-1.74)
Book-to-market			0.85 (8.44)	0.27 (4.57)
PastReturn			0.02 (0.08)	0.05 (0.47)
Net Issues			-6.31 (-11.60)	-1.91 (-6.30)
Adj. R-squared	0.19	0.18	0.19	0.18

Panel A of the table presents panel regression results of net insider sell over the past month (“sell_1m” in the table) where net insider sell is interacted with the proxy on the UD law. Panel B of the table presents the panel regression results only for the sub-group with non-zero net insider sell over the past month. The dependent variable is the subsequent 1-month cumulative excess return (in percent). The independent variables include net insider sell over the past month (sell_1m), the UD law dummy variable (UD Law), the interaction term between net insider sell over the past month and the UD law dummy variable (Sell_1m× UD Law), insider silence over the past year (Silence), log of market capitalization (Market capitalization), log of book-to-market ratio (Book-to-market), past 12-month returns (Past returns), and net stock issues (Net issues). More details on the definitions of the variables can be found in Appendix B. Fixed effects are considered in each model. The robust *t*-statistics in parentheses are accordingly based on clustered standard errors.

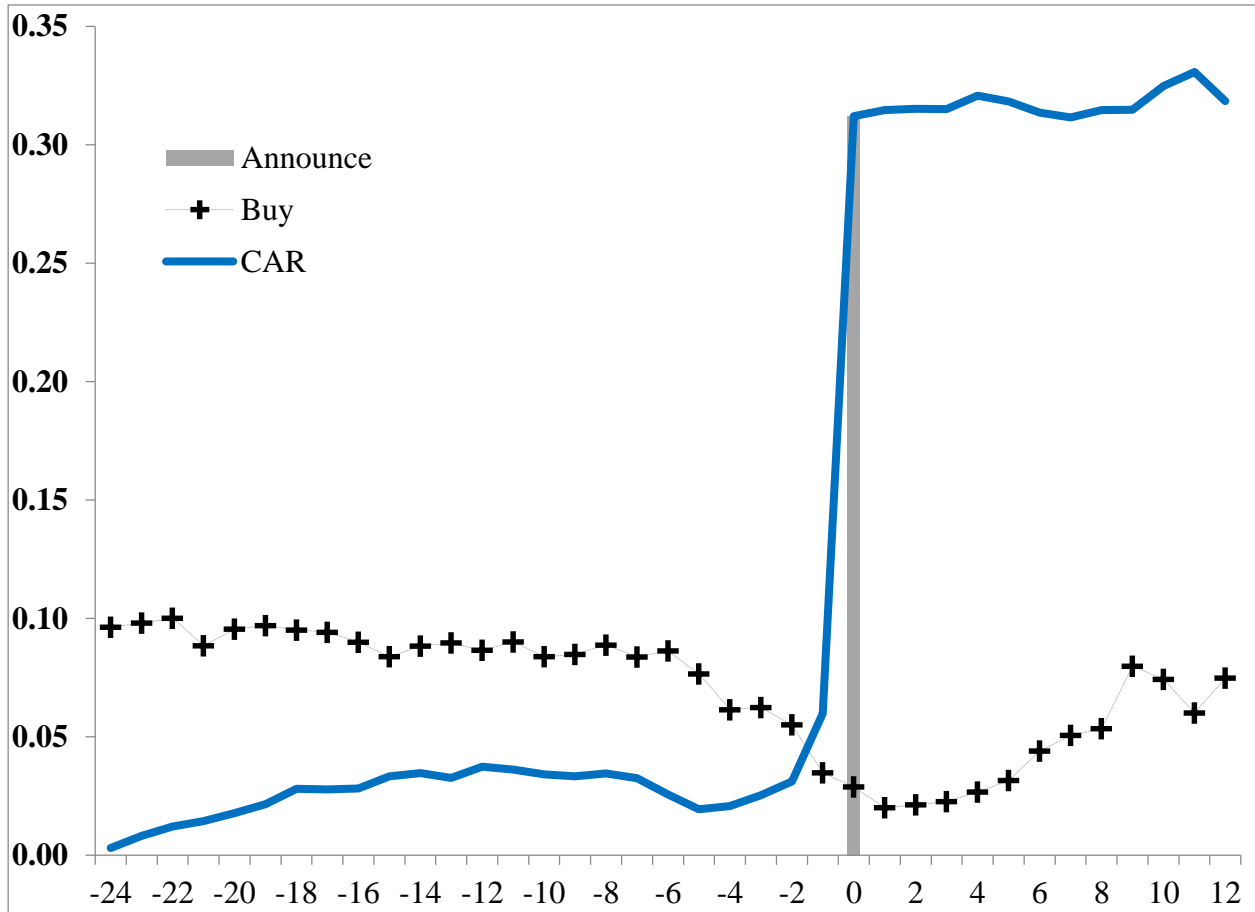
Internet Appendix Table 13 -- Insider Silence, Insider Sell, and Stock Price Decline

	Parameter	Estimate	Standard Error	Pr > ChiSq
<i>Panel A: Stock Price Crash</i>				
	Intercept	-2.5688	0.1878	<.0001
Price crash in the following month	Silence over past 1 Year	0.0478	0.0271	0.0772
	Book to Market	0.1375	0.0131	<.0001
	Log(Size)	0.0227	0.0055	<.0001
	Intercept	-2.5516	0.1877	<.0001
Price crash in the following month	Sell over past 1 Year	-0.0110	0.0186	0.5521
	Book to Market	0.1386	0.0131	<.0001
	Log(Size)	0.0224	0.0056	<.0001
<i>Panel B: Stock Price Modest Decline</i>				
	Intercept	-2.1905	0.0270	<.0001
Price modest decline in the following month	Silence over past 1 Year	0.0047	0.0040	0.2349
	Book to Market	0.1314	0.0017	<.0001
	Log(Size)	-0.0045	0.0008	<.0001
	Intercept	-2.1955	0.0270	<.0001
Price modest decline in the following month	Sell over past 1 Year	0.0166	0.0027	<.0001
	Book to Market	0.1324	0.0017	<.0001
	Log(Size)	-0.0056	0.0008	<.0001

This table reports the probit regressions results on the prediction whether their stock price crashes in the following month (Panel A), or whether their stock price incurs modest decline in the following month, (Panel B). A firm is classified into the “crash” group if its subsequent monthly return (in excess of the CRSP value-weighted market return) is 3.1 standard deviations below the historical mean, and a firm is classified into the “price modest decline” group if its subsequent monthly return (in excess of the CRSP value-weighted market return) is negative but within 1.5 standard deviations away from the historical mean, where historical mean and standard deviation are estimated using return data over the past 12 months. Industry (Fama-French 49 industries) fixed effects are considered.

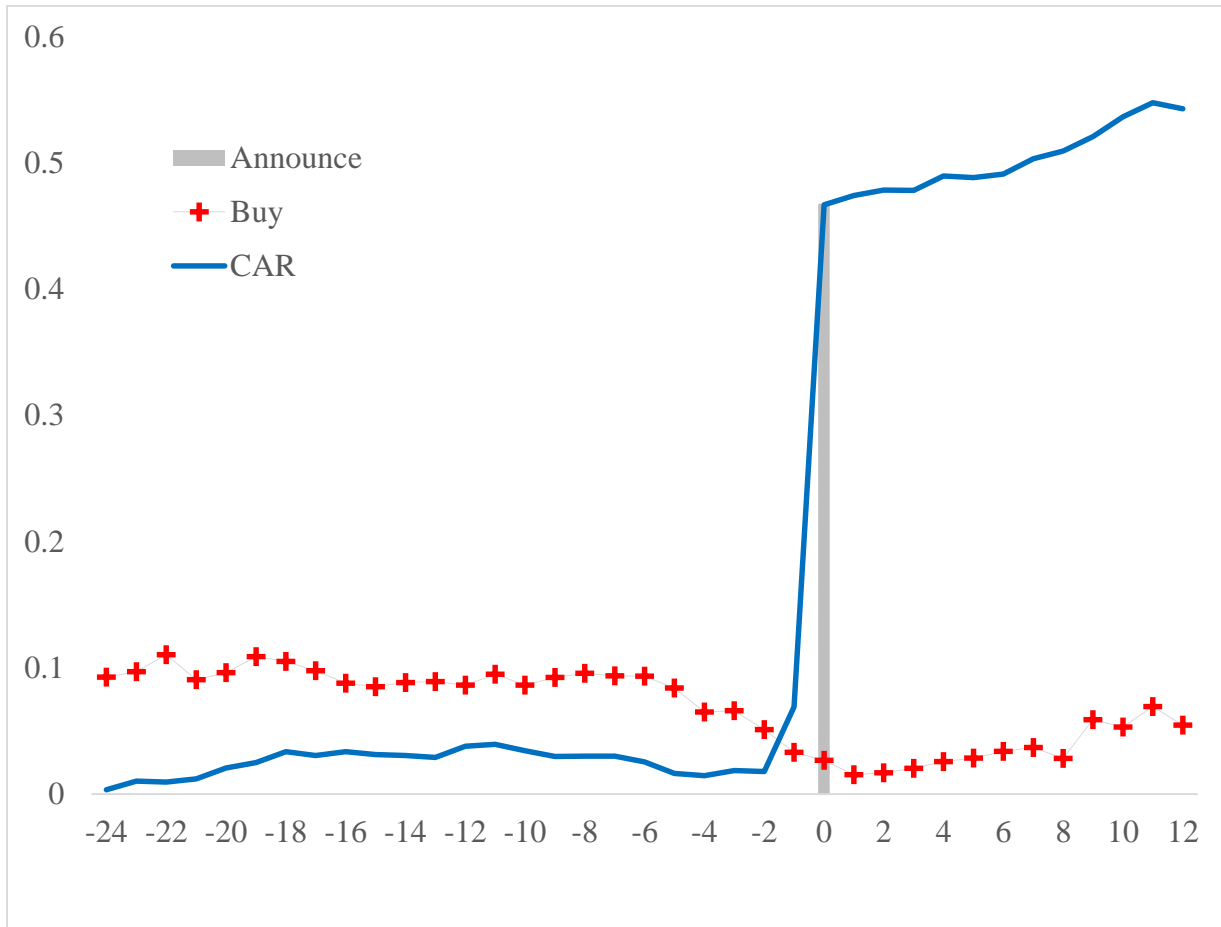
Internet Appendix Figure 1 -- Cumulative Abnormal Returns and Insider Net Buying in Merger Targets

The sample includes 4,267 targets involved in merger deals announced during 1992–2010. Month 0 is the announcement month. The graph shows the proportions of targets whose insiders buy in net (Buy) from 24 months before to 12 months after the announcement. The thick solid line draws the cumulative abnormal returns.



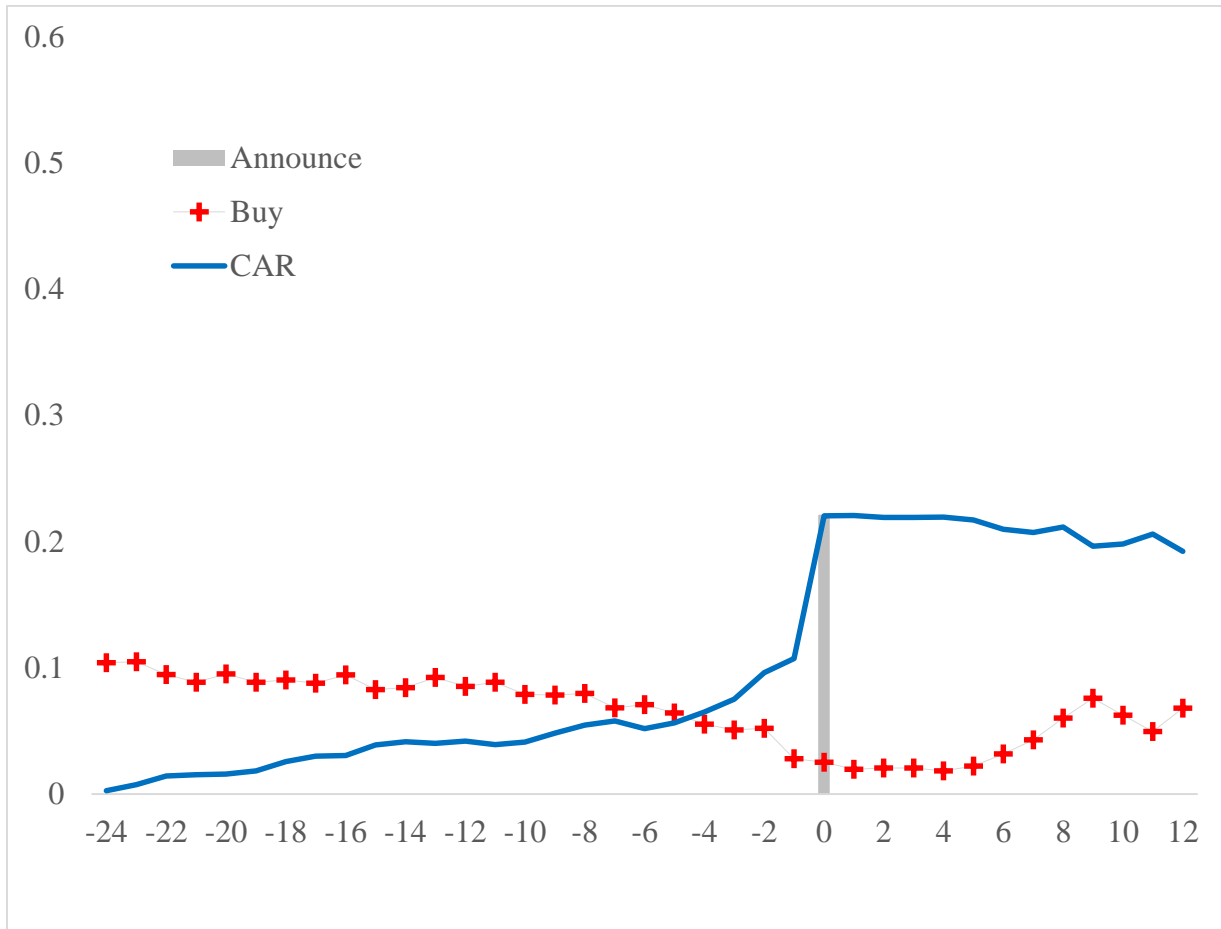
Internet Appendix Figure 2 -- Cumulative Abnormal Returns and Insider Net Buying in Merger Targets

The sample includes 2,133 targets involved in merger deals announced during 1992–2010. These targets receive relatively higher premium (above sample median based on the stock price four weeks prior to the announcement). Month 0 is the announcement month. The graph shows the proportions of targets whose insiders buy in net (Buy) from 24 months before to 12 months after the announcement. The thick solid line draws the cumulative abnormal returns.



Internet Appendix Figure 3 -- Cumulative Abnormal Returns and Insider Net Buying in Merger Targets

The sample includes 2,134 targets involved in merger deals announced during 1992–2010. These targets receive relatively lower premium (below sample median based on the stock price four weeks prior to the announcement). Month 0 is the announcement month. The graph shows the proportions of targets whose insiders buy in net (Buy) from 24 months before to 12 months after the announcement. The thick solid line draws the cumulative abnormal returns.



Internet Appendix A: Construction of buy-and-hold abnormal return (BHAR)

We construct buy-and-hold abnormal return (BHAR) in a way similar to the recent literature (e.g., Lakonishok and Lee, 2001; Sias and Whidbee, 2010). Specifically, at the end of June of year t , we independently form NYSE size and book-to-market (B/M) quintiles to extract the breakpoint values, and assign AMEX and NASDAQ stocks to the 5 x 5 portfolios according to their size and B/M values. The equal-weight portfolio return serves as the benchmark return for the stock in the same size and B/M portfolio for the months starting from July of year t to June of year $t+1$. Portfolio assignment is rebalanced every year. BHAR for stock j is defined as the buy-and-hold raw return of stock j minus the buy-and-hold benchmark portfolio return. If a stock is delisted before the holding period, returns of the months after delisting are replaced with the benchmark portfolio returns. The delisting return is used for the delisting month. We calculate BHAR for all stocks/months over the holding period of one to 24 months.