

**Internet Appendix**  
**for**  
**The Relevance of Broker Networks for Information**  
**Diffusion in the Stock Market**

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**Table A.1 Oster (2016) Test**

This table displays the results for the implementation of the Oster (2016) test on the relationship between manager performance and centrality. Panel A displays the manager-level performance results from Table 4, Panel A, going from a fully uncontrolled regression of performance on centrality, to the fully controlled fixed effect models reported in the paper. Panel B displays the results from the Oster (2016) test. Results for the uncontrolled model correspond to Columns one, six and eleven for 1-day, 5-day and 10-day performance, respectively. Results for the controlled model correspond to Columns 5, 10 and 15 for 1-day, 5-day and 10-day performance, respectively. The bias-adjusted coefficients in Columns 3-5 are estimated for three different degrees of selection. Column 6 gives the degree of selection on unobservables in order to give  $\beta = 0$ . As recommended in the original paper by Oster (2016), in computing the test statistic, we assume  $R_{max} = \max(2.2 \times \tilde{R}, 1)$ , where  $\tilde{R}$  is the R-squared from the controlled regression. Robust standard errors are clustered at the manager-month level. Asterisks denote significance levels (\*\*=1%, \*=5%, =10%).

**Panel A. Baseline specifications without controls.**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	1-day					5-day					10-day				
Eig. Centrality	0.619*** (0.102)	0.659*** (0.104)	0.892*** (0.108)	0.614*** (0.11)	0.555*** (0.119)	1.275*** (0.292)	1.310*** (0.298)	1.847*** (0.309)	1.359*** (0.314)	1.294*** (0.34)	1.480*** (0.421)	1.532*** (0.43)	2.147*** (0.444)	1.434*** (0.451)	1.619*** (0.489)
Broker Volume		0.0637 (0.122)	-0.173 (-0.125)	0.312** (0.128)	0.648*** (0.139)		0.351 (0.352)	0.0446 (0.358)	1.026*** (0.367)	1.641*** (0.4)		0.309 (0.506)	0.154 (0.515)	1.370*** (0.528)	2.114*** (0.574)
Average Trade Size		-1.699*** (0.052)	-1.699*** (0.052)	-2.233*** (0.069)	-2.995*** (0.091)		-3.324*** (0.133)	-3.296*** (0.134)	-4.443*** (0.179)	-5.535*** (0.23)		-3.808*** (0.186)	-3.751*** (0.186)	-4.861*** (0.249)	-5.929*** (0.312)
Time FE	No	No	Yes	Yes	No	No	No	Yes	Yes	No	No	No	Yes	Yes	No
Manager FE	No	No	No	Yes	No	No	No	No	Yes	No	No	No	No	Yes	No
Manager-Time FE	No	No	No	No	Yes	No	No	No	No	Yes	No	No	No	No	Yes
Observations	633,603	633,603	633,603	633,603	633,603	629,936	629,936	629,936	629,936	629,936	622,216	622,216	622,216	622,216	622,216
R-squared	0.000	0.002	0.003	0.010	0.138	0.000	0.001	0.002	0.006	0.142	0.000	0.001	0.002	0.006	0.149

**Panel B. Oster (2016) test for different  $\delta$ .**

	(1)	(2)	(3)	(4)	(5)	(6)
	Baseline $\beta$ (S.E.) $[R^2]$	Controlled $\beta$ (S.E.) $[\tilde{R}]$	Bias-Adjusted $\beta^*$ with $\tilde{\delta} = 0.5$	Bias-Adjusted $\beta^*$ with $\tilde{\delta} = 1$	Bias-Adjusted $\beta^*$ with $\tilde{\delta} = 2$	$\delta$ for $\beta = 0$
<b>1-day</b>	0.619*** (0.102) $[0.000]$	0.555*** (0.119) $[0.138]$	0.502	0.428	0.152	2.288
<b>5-day</b>	1.275*** (0.292) $[0.000]$	1.294*** (0.340) $[0.142]$	1.31	1.333	1.418	3.986
<b>10-day</b>	1.480*** (0.421) $[0.000]$	1.619*** (0.489) $[0.149]$	2.738	1.902	2.533	6.726

**Table A.2 Additional Controls**

This table regresses the value-weighted trading performance at different time horizons (in basis points) on our centrality measures. Our database is collapsed at the broker/manager/month level; we include additional controls with respect to the baseline regression: a proxy for the strength of the relationship between the manager and the broker intermediating the trade (*Relationship Strength*); the number of different clients of the broker (*Number of Clients*); a proxy of activeness of the brokers' clients, computed as the ratio of dollar volume traded by each client around earnings announcements on total volume, then averaged (volume weighting) across all the broker's clients (*Client Activeness*); number of hedge funds that are clients of the broker (*Number of Hedge Funds Clients*); client concentration of the broker, computed as the normalized Herfindahl Index of the volumes traded by each client (*Adjusted Client Concentration*); volume-weighted average of the centrality of the broker's clients –the centrality of the clients is computed as the Eigenvector Centrality of the broker, but without taking into account the strength of the link between traders and brokers (*Client Centrality*). All the measures are computed in a window of six months before the trade. T-stats based on robust standard errors, double-clustered at both the month and the manager level, are reported in parentheses. Asterisks denote significance levels (\*\*\*=1%, \*\*=5%, \*=10%).

Dependent Variable: Value-weighted trading performance									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	1 Day			5 Days			10 Days		
Eig. Centrality	0.598*** (3.085)	0.509*** (2.639)	0.469** (2.430)	1.298*** (2.636)	1.098** (2.215)	1.125** (2.298)	1.659** (2.465)	1.298* (1.911)	1.622** (2.318)
Broker Volume	-0.0669 (-0.420)	0.276* (1.810)	0.565*** (3.671)	0.587 (1.331)	1.245*** (2.927)	1.768*** (4.101)	0.880* (1.654)	1.710*** (3.316)	2.352*** (4.516)
Relationship Strength (Broker-Client Volume)	1.577*** (6.023)	0.890*** (3.917)	0.205 (0.787)	3.781*** (6.299)	2.419*** (4.114)	1.706** (2.479)	4.410*** (4.579)	3.323*** (3.656)	3.827*** (3.982)
Number of Clients	-0.292** (-2.423)	-0.256** (-2.219)	-0.305*** (-2.732)	-0.440 (-1.103)	-0.282 (-0.708)	-0.412 (-1.015)	0.112 (0.206)	0.309 (0.568)	0.151 (0.267)
Client Activeness	-0.114 (-0.694)	-0.128 (-0.821)	-0.0518 (-0.318)	1.062*** (2.640)	0.991** (2.483)	0.925** (2.160)	2.555*** (4.096)	2.423*** (3.951)	2.168*** (3.445)
Number of Hedge Funds Clients	0.701*** (4.360)	0.533*** (3.306)	0.505*** (3.188)	0.975** (2.390)	0.674 (1.635)	0.582 (1.377)	0.640 (0.986)	0.167 (0.255)	0.126 (0.193)
Adjusted Client Concentration	0.115 (0.714)	-0.124 (-0.789)	-0.259 (-1.565)	0.270 (0.657)	-0.196 (-0.504)	-0.391 (-1.015)	0.452 (0.727)	-0.0896 (-0.153)	-0.364 (-0.598)
Client Centrality (not-weighted)	0.755*** (3.927)	0.544*** (2.901)	0.513*** (2.664)	0.808* (1.665)	0.637 (1.336)	0.637 (1.366)	0.331 (0.510)	0.0828 (0.126)	-0.0382 (-0.0583)
Average Trade Size	-2.191*** (-13.45)	-2.410*** (-15.53)	-3.048*** (-16.76)	-4.494*** (-11.85)	-5.065*** (-13.56)	-5.915*** (-13.75)	-5.145*** (-8.429)	-5.705*** (-9.396)	-6.826*** (-11.48)
Time FE	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No
Manager FE	No	Yes	No	No	Yes	No	No	Yes	No
Manager-Time FE	No	No	Yes	No	No	Yes	No	No	Yes
Observations	603,030	603,021	593,467	599,310	599,303	589,780	591,569	591,561	582,051
R-squared	0.003	0.011	0.128	0.002	0.007	0.132	0.002	0.006	0.138

**Table A.3 Execution**

This table regresses the value-weighted trading performance, robust to execution costs, at different time horizons (in basis points) on our centrality measures. Columns (1) and (5) report the baseline results for comparison. Columns (2) and (6) present the results when we replace the actual execution price with the opening price of the day to compute the trading performance; in Columns (3) and (7) we use the value-weighted average daily price as a replacement and in Columns (4) and (8) we use the closing price of the day. Our database here is collapsed at the broker/manager/stock/month level, thus we are able to add manager/stock/time fixed effects. We include as a control the natural logarithm of the dollar trade volume intermediated by each broker in the last six months and the average dollar volume traded (in the stock) by the manager with the broker in the month in which performance is assessed. The centrality measure is standardized to mean zero, unit variance. T-stats based on robust standard errors, double-clustered at both the month and the manager level, are reported in parentheses. We report the results of a Chow test for the difference between the performance computed with the execution price and each one of the alternatives. Asterisks denote significance levels (\*\*\*=1%, \*\*=5%, \*=10%).

	(1)	(3) 5 Day Trading Performance			(5)	(7) 10 Day Trading performance			(8)
	Execution	Open	Average Daily	Closing	Execution	Open	Average Daily	Closing	
Eig. Centrality	0.975*** (3.614)	1.573*** (3.754)	0.888*** (2.930)	0.853** (2.023)	1.498** (2.303)	2.010*** (2.832)	1.334** (2.099)	1.372* (1.696)	
Broker Volume	-1.397** (-1.986)	-1.363 (-1.523)	-1.227* (-1.699)	-1.293* (-1.749)	-1.877** (-2.373)	-1.724* (-1.852)	-1.687** (-2.101)	-1.787** (-2.076)	
Average Trade Size	-0.136 (-0.705)	2.702*** (7.847)	0.703*** (3.746)	0.0896 (0.523)	0.188 (0.827)	2.881*** (9.778)	0.991*** (4.688)	0.441** (2.017)	
Observations	17,620,550	17,623,409	17,621,476	17,620,270	17,362,843	17,365,029	17,363,404	17,362,802	
R-squared	0.387	0.397	0.389	0.381	0.425	0.430	0.427	0.422	
Manager-Stock-Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
<b>Chow Test for Execution Vs. Alternative</b>									
		5 Day Trading performance				10 Day Trading performance			
		Open	Average Daily	Closing		Open	Average Daily	Closing	
F-Statistic		1.44	0.05	0.06		0.28	0.03	0.01	
P-Value		0.230	0.831	0.8071		0.5946	0.8567	0.904	

**Table A.4 Alternative Centrality Measures**

This table regresses the value-weighted trading performance at different time horizons (in basis points) on alternative centrality measures. We include as a control the natural logarithm of the dollar trade volume intermediated by each broker in the last six months and the average dollar volume traded (in the stock) by the manager with the broker in the month in which performance is assessed. In Columns 1-3, the main independent variable is degree centrality. In Columns 4-12, the main independent variable is Katz-Bonacich centrality with increasing value of the decay parameter: in 4-6 it is set to 25% of its maximum value; for 7-9, it is set to 50% and for 10-12, it is set to 75%. The centrality measures are standardized to mean zero, unit variance. T-stats based on robust standard errors, double clustered at both the month and the manager level, are reported in parentheses. Asterisks denote significance levels (\*\*\*=1%, \*\*=5%, \*=10%).

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Degree			Katz-Bonacich 25%			Katz-Bonacich 50%			Katz-Bonacich 75%		
	1-day	5-day	10-day	1-day	5-day	10-day	1-day	5-day	10-day	1-day	5-day	10-day
Centrality Measures	0.501* (1.808)	1.534* (1.959)	2.229** (2.105)	1.456* (1.680)	4.724*** (2.986)	5.594** (2.109)	0.543 (1.523)	1.834*** (3.089)	2.082** (2.015)	0.353 (1.335)	1.284*** (3.293)	1.402** (2.035)
Broker Volume	-0.192 (-1.242)	-1.123* (-1.800)	-1.716** (-2.170)	-0.287* (-1.667)	-1.430** (-2.490)	-2.082** (-2.587)	-0.288 (-1.626)	-1.444** (-2.519)	-2.083** (-2.555)	-0.273 (-1.532)	-1.413** (-2.467)	-2.035** (-2.516)
Trade Size	0.141 (1.390)	0.151 (0.593)	0.459 (1.307)	0.142 (1.409)	0.149 (0.591)	0.458 (1.314)	0.142 (1.411)	0.150 (0.594)	0.459 (1.318)	0.143 (1.412)	0.149 (0.593)	0.459 (1.317)
Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Manager FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Stock FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	22,494,329	22,361,444	22,093,895	22,494,329	22,361,444	22,093,895	22,494,329	22,361,444	22,093,895	22,494,329	22,361,444	22,093,895
R-squared	0.003	0.002	0.002	0.003	0.002	0.002	0.003	0.002	0.002	0.003	0.002	0.002

**Table A.5 Large Trade Profits**

This table relates the probability of a positive return over five trading days (the dependent variable) for a manager (who is required to be an Hedge Fund) executing a large net volume with a specific broker on a stock, with respect to non-large net volume executions. Large net volumes over a five trading days window are captured by the dummy variable Large Trade and are defined as net volumes (i.e. imbalances) larger or equal than the 75th percentile (or the 90th percentile) of the imbalances distribution estimated in the previous six months. All the imbalances are scaled by the trading volume in CRSP. We include as a control the natural logarithm of the market capitalization and the Amihud illiquidity measure for the stock, estimated over the previous twelve months. T-stats are reported in parentheses. Asterisks denote significance levels (\*\*\*=1%, \*\*=5%, \*=10%).

Dependent Variable: Dummy that identifies positive profits				
	(1)	(2)	(3)	(4)
	<b>P75</b>		<b>P90</b>	
Large Trade	0.503*** (218.3)	0.505*** (219.5)	0.690*** (146.5)	0.691*** (147.1)
Market Cap	0.00912*** (26.07)		0.0104*** (29.92)	
Amihud Illiquidity	-0.408*** (-7.013)		-0.446*** (-7.797)	
Constant	2.026*** (259.8)	2.228*** (3,489)	2.032*** (261.3)	2.264*** (3,674)
Observations	34,950,742	35,236,163	34,950,742	35,236,163

**Table A.6 Adding and Severing Relationships**

This table relates the probability that a manager will add or sever a relationship with a broker with market-level conditions and manager performance. The dependent variable in Columns 1-3 is a dummy taking a value of 1 if a broker has added broker(s) relative to the previous month. In Columns 4-6 it is a dummy taking a value of 1 if the manager has dropped broker(s) relative to the previous month. We include as explanatory variables a dummy taking a value of one if the average VIX index for that month is in the top quartile relative to all other months, the monthly return on the S&P 500 and the manager's performance in the quarter previous. Continuous explanatory variables are standardized to mean zero, unit variance. Standard errors are clustered at the manager-year level. T-stats are reported in parentheses. Asterisks denote significance levels (\*\*=1%, \*=5%, \*=10%).

	(1)	(2)	(3)	(4)	(5)	(6)
	Dummy=1 if manager added brokers from prev. month			Dummy=1 if manager dropped brokers from prev. month		
VIX Dummy	-0.0104** (-2.326)	-0.00698 (-1.513)	-0.00700 (-1.516)	0.00751* (1.677)	0.00632 (1.381)	0.00616 (1.347)
S&P500 Monthly Return		0.00727*** (3.490)	0.00726*** (3.490)		-0.00251 (-1.268)	-0.00253 (-1.279)
Lagged Mgr. Performance			0.000219 (0.132)			0.00274* (1.962)
Manager FE	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	66,375	66,375	66,375	66,375	66,375	66,375
R-squared	0.037	0.037	0.037	0.038	0.038	0.038

**Table A.7 Common Information or Common Broker?**

This table relates the trading behavior of followers after a large trade and manager similarity. Specifically, this table runs the same test found in Table 5, Panel B, but with proxies for manager similarity interacted with the time period dummies. For each manager in each month, we aggregate the volume intermediated with each broker over the six previous months, focusing on the 30 most central brokers for that month, and construct a vector of manager-broker intermediated volume. Then, for each big trade, we compute each follower's Euclidian distance and correlation from the big trade originator, using the manager-broker vectors. Euclidian distance is increasing in dissimilarity, so we first divide the distances from each originator by the largest distance for that originator in that month, change the sign and then add one, so that the measure is equal to zero for the most dissimilar manager and 1 for the originator herself. The dependent variable is a dummy equal to one if the follower is trading in the same direction as the originator. In Columns 1-3, the time dummies are interacted with Euclidian distance; in Columns 4-6, they are interacted with correlation. T-stats based on robust standard errors, double-clustered at both the month and the manager level, are reported in parentheses. Asterisks denote significance levels (\*\*\*=1%, \*\*=5%, \*=10%).

	(1)	(2)	(3)	(4)	(5)	(6)
	Euclidian Distance			Correlation		
Mgr. Similarity × Competition	-0.0163 (-0.567)	-0.0167 (-0.595)	-0.0133 (-0.336)	-0.0258 (-0.842)	-0.0253 (-0.834)	-0.0265 (-0.634)
Mgr. Similarity × Week 1	0.000264 (0.161)	0.000611 (0.376)	0.000518 (0.243)	-0.00185 (-1.032)	-0.00193 (-1.100)	-0.00207 (-1.097)
Mgr. Similarity × Week 2	-0.00277* (-1.945)	-0.00253* (-1.764)	-0.00165 (-0.799)	-0.00198 (-1.284)	-0.00247 (-1.611)	-0.00211 (-1.122)
Mgr. Similarity × Week 3	-0.00111 (-0.561)	-0.000805 (-0.433)	-0.00111 (-0.420)	0.000395 (0.198)	9.98e-05 (0.0519)	0.00102 (0.424)
Mgr. Similarity × Week 4	-0.00131 (-0.583)	-0.000954 (-0.440)	-0.00241 (-0.827)	0.000743 (0.303)	0.000620 (0.262)	0.00187 (0.593)
Mgr. Similarity	0.00239 (1.191)	0.000766 (0.613)	0.00458* (1.904)	0.00112 (0.550)	0.000895 (0.532)	0.00143 (0.557)
Competition	0.0749*** (3.378)	0.0715*** (3.293)	0.0961*** (3.059)	0.0765*** (4.188)	0.0727*** (4.007)	0.0996*** (3.871)
Week 1	0.00235** (2.337)	0.00218** (2.132)	0.00260** (2.180)	0.00318*** (3.460)	0.00320*** (3.477)	0.00365*** (3.302)
Week 2	-5.07e-05 (-0.0432)	-2.06e-05 (-0.0177)	-0.000817 (-0.649)	-0.000637 (-0.557)	-0.000304 (-0.274)	-0.000816 (-0.572)
Week 3	-0.00134 (-0.797)	-0.00132 (-0.819)	-0.00193 (-0.996)	-0.00201 (-1.291)	-0.00173 (-1.159)	-0.00284 (-1.603)
Week 4	-0.00205 (-1.075)	-0.00198 (-1.094)	-0.00241 (-1.210)	-0.00295 (-1.525)	-0.00267 (-1.457)	-0.00426** (-2.085)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Stock FE	No	No	Yes	No	No	Yes
Time FE	No	No	Yes	No	No	Yes
Manager FE	Yes	No	Yes	Yes	No	Yes
Manager-Time FE	No	Yes	No	No	Yes	No
Stock-Time FE	Yes	Yes	No	Yes	Yes	No
Observations	20,895,212	20,874,722	21,038,921	20,896,734	20,876,241	21,040,576
R-squared	0.079	0.093	0.006	0.079	0.093	0.006



**Table A.8 Unusual Stocks for Followers**

This table relates the trading behavior of *followers* after a large trade. The *followers* are all the managers, different from the one who generates the large trade (i.e. the *originator*), who trade the stock with the same broker who intermediates the large trade. We restrict attention to stocks that have been above the median of trading volume for the originator in the previous six months and in the bottom decile for the followers. We divide the sample in three sub-periods: the two trading weeks preceding the week in which the large trade was made (*before*); the period in which the large trade has started, but the originator is still trading in the same direction at a sustained pace (*competition*); and the period after the originator has stopped trading, up to four weeks after the large trade week in which he initiated the trade sequence (week 1 to 4). When we refer to week one after the large trade, we identify the period that ranges from end of the competition period to the end of the first week after the large trade week; in a similar way, when we refer to week two to four. In the first three Columns, the dependent variable is a dummy that takes value one if the follower trades in the same direction as the originator, while in Columns 4-6 it is the log of the net dollar volume of the followers. Panel B reports the same specification but interacting the time dummies with the centrality measure. We include as a control the natural logarithm of the dollar trade volume intermediated by each broker in the last six months and the natural logarithm of the large trade volume, taken in absolute value (as before, scaled by the trading volume in CRSP). The centrality measure is standardized to mean zero, unit variance. The most conservative specifications include stock-time and manager-time fixed effects. Panels C-D and E-F report similar specifications, focusing on different sub-samples of usual and unusual. For Panels C-D, we restrict attention to stocks that have been above the median of trading volume for both the originator and the follower (i.e. *usual-usual*). For Panels E-F, we restrict attention to stocks that have been in the bottom decile of trading volume for the originator and above median for the follower (i.e. *unusual-usual*). T-stats based on robust standard errors, double-clustered at both the month and the manager level, are reported in parentheses. Asterisks denote significance levels (\*\*\*=1%, \*\*=5%, \*=10%).

**Panel A: Usual for the Originator, Unusual for the followers**

	(1)	(2)	(3)	(4)	(5)	(6)
	Dummy=1 if follower trades in the same direction as the informed trade			Log of dollar imbalances from followers		
Competition	0.0829*** (6.727)	0.0784*** (5.798)	0.114*** (9.647)	1.882*** (6.824)	1.734*** (5.795)	2.548*** (8.918)
Week 1	0.00539 (1.079)	0.00695 (1.301)	0.00376 (1.060)	0.104 (0.885)	0.112 (0.902)	0.0814 (0.959)
Week 2	-0.00599 (-1.073)	-0.00613 (-0.944)	-0.00540 (-1.296)	-0.163 (-1.222)	-0.196 (-1.295)	-0.113 (-1.135)
Week 3	0.000180 (0.0288)	-0.00176 (-0.232)	-0.00122 (-0.275)	0.000869 (0.00614)	-0.0684 (-0.417)	-0.00317 (-0.0314)
Week 4	-0.000941 (-0.120)	-0.00945 (-0.994)	-0.00191 (-0.387)	-0.0286 (-0.170)	-0.249 (-1.276)	-0.0365 (-0.341)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Stock FE	No	No	Yes	No	No	Yes
Time FE	No	No	Yes	No	No	Yes
Manager FE	Yes	No	Yes	Yes	No	Yes
Manager-Time FE	No	Yes	No	No	Yes	No
Stock-Time FE	Yes	Yes	No	Yes	Yes	No
Observations	280,188	263,917	352,251	279,840	263,563	351,816
R-squared	0.520	0.609	0.065	0.519	0.612	0.062

**Panel B: Central vs Peripheral**

	(1)	(2)	(3)	(4)	(5)	(6)
	Dummy=1 if follower trades in the same direction as the informed trade			Log of dollar imbalances from followers		
Centrality × Competition	0.0243*** (6.480)	0.0226*** (5.223)	0.0334*** (6.375)	0.582*** (6.889)	0.545*** (5.851)	0.820*** (6.450)
Centrality × Week 1	0.00570 (1.308)	0.00237 (0.566)	0.00301 (0.969)	0.137 (1.438)	0.0726 (0.790)	0.0627 (0.850)
Centrality × Week 2	-0.00437 (-1.138)	-0.0107*** (-2.668)	-0.00239 (-0.668)	-0.0968 (-1.141)	-0.224*** (-2.621)	-0.0646 (-0.776)
Centrality × Week 3	-0.0113** (-2.303)	-0.0191*** (-4.044)	-0.00541 (-1.481)	-0.262** (-2.524)	-0.426*** (-4.162)	-0.129 (-1.571)
Centrality × Week 4	-0.0152*** (-2.859)	-0.0197*** (-2.629)	-0.00747* (-1.746)	-0.310*** (-2.846)	-0.367** (-2.507)	-0.148 (-1.584)
Centrality	0.00813*** (2.878)	0.00775** (2.518)	0.00624** (2.340)	0.199*** (2.959)	0.190*** (2.641)	0.168*** (2.758)
Competition	0.0758*** (5.839)	0.0712*** (6.832)	0.106*** (9.956)	1.715*** (6.188)	1.564*** (7.185)	2.338*** (9.198)
Week 1	0.00520 (1.332)	0.00662 (1.407)	0.00393 (1.228)	0.0993 (1.105)	0.104 (0.947)	0.0848 (1.119)
Week 2	-0.00613 (-1.173)	-0.00614 (-0.791)	-0.00559 (-1.519)	-0.166 (-1.449)	-0.197 (-1.152)	-0.118 (-1.342)
Week 3	-0.000232 (-0.0293)	-0.00213 (-0.198)	-0.00162 (-0.392)	-0.00829 (-0.0463)	-0.0771 (-0.323)	-0.0124 (-0.132)
Week 4	-0.00179 (-0.147)	-0.0101 (-0.734)	-0.00254 (-0.613)	-0.0453 (-0.170)	-0.261 (-0.850)	-0.0485 (-0.527)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Stock FE	No	No	Yes	No	No	Yes
Time FE	No	No	Yes	No	No	Yes
Manager FE	Yes	No	Yes	Yes	No	Yes
Manager-Time FE	No	Yes	No	No	Yes	No
Stock-Time FE	Yes	Yes	No	Yes	Yes	No
Observations	280,188	263,917	352,251	279,840	263,563	351,816
R-squared	0.520	0.609	0.066	0.520	0.612	0.062

**Panel C: Usual for the Originator, Usual for the Followers**

	(1)	(2)	(3)	(4)	(5)	(6)
	Dummy=1 if follower trades in the same direction as the informed trade			Log of dollar imbalances from followers		
Competition	0.0582*** (4.197)	0.0555*** (4.012)	0.0730*** (4.076)	1.467*** (4.155)	1.405*** (3.984)	1.803*** (4.014)
Week 1	0.00245*** (2.868)	0.00239*** (2.784)	0.00247*** (2.999)	0.0587*** (2.746)	0.0581*** (2.708)	0.0604*** (2.910)
Week 2	-0.000721 (-0.875)	-0.000730 (-0.895)	-0.00111* (-1.677)	-0.0187 (-0.981)	-0.0181 (-0.959)	-0.0254* (-1.665)
Week 3	-0.00187* (-1.860)	-0.00183* (-1.848)	-0.00172** (-2.013)	-0.0517** (-2.322)	-0.0503** (-2.294)	-0.0446** (-2.222)
Week 4	-0.00203* (-1.765)	-0.00207* (-1.844)	-0.00207** (-2.108)	-0.0526* (-1.958)	-0.0531** (-2.020)	-0.0494** (-2.076)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Stock FE	No	No	Yes	No	No	Yes
Time FE	No	No	Yes	No	No	Yes
Manager FE	Yes	No	Yes	Yes	No	Yes
Manager-Time FE	No	Yes	No	No	Yes	No
Stock-Time FE	Yes	Yes	No	Yes	Yes	No
Observations	13,952,044	13,930,968	14,050,537	13,913,783	13,892,698	14,012,344
R-squared	0.071	0.086	0.005	0.070	0.086	0.005

**Panel D: Central vs. Peripheral**

	(1)	(2)	(3)	(4)	(5)	(6)
	Dummy=1 if follower trades in the same direction as the informed trade			Log of dollar imbalances from followers		
Centrality × Competition	0.0306*** (4.983)	0.0298*** (4.957)	0.0318*** (7.589)	0.788*** (4.807)	0.769*** (4.772)	0.810*** (7.530)
Centrality × Week 1	0.00127** (2.121)	0.00132** (2.070)	0.000685 (1.013)	0.0312* (1.853)	0.0327* (1.851)	0.0166 (0.968)
Centrality × Week 2	-0.00206** (-2.231)	-0.00171* (-1.850)	-0.00202*** (-2.762)	-0.0464* (-1.907)	-0.0389 (-1.601)	-0.0464** (-2.551)
Centrality × Week 3	-0.00209 (-1.400)	-0.00206 (-1.412)	-0.00236*** (-2.619)	-0.0584 (-1.564)	-0.0573 (-1.564)	-0.0635*** (-2.858)
Centrality × Week 4	-0.00312* (-1.687)	-0.00287 (-1.573)	-0.00291** (-2.310)	-0.0821* (-1.720)	-0.0771 (-1.627)	-0.0763** (-2.474)
Centrality	0.00226** (2.167)	0.00220** (2.209)	0.00316* (1.691)	0.0678*** (3.132)	0.0677*** (3.336)	0.0883** (2.563)
Competition	0.0527*** (4.941)	0.0501*** (4.805)	0.0671*** (4.372)	1.323*** (4.912)	1.265*** (4.775)	1.652*** (4.310)
Week 1	0.00242*** (3.372)	0.00235*** (3.126)	0.00250*** (3.192)	0.0580*** (3.112)	0.0571*** (2.922)	0.0611*** (3.089)
Week 2	-0.000695 (-0.766)	-0.000698 (-0.779)	-0.00109* (-1.686)	-0.0180 (-0.791)	-0.0173 (-0.765)	-0.0250 (-1.624)
Week 3	-0.00185* (-1.817)	-0.00179* (-1.864)	-0.00171** (-2.052)	-0.0511* (-1.971)	-0.0493** (-1.991)	-0.0442** (-2.261)
Week 4	-0.00201 (-1.485)	-0.00204 (-1.543)	-0.00206** (-2.134)	-0.0520 (-1.540)	-0.0521 (-1.576)	-0.0489** (-2.088)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Stock FE	No	No	Yes	No	No	Yes
Time FE	No	No	Yes	No	No	Yes
Manager FE	Yes	No	Yes	Yes	No	Yes
Manager-Time FE	No	Yes	No	No	Yes	No
Stock-Time FE	Yes	Yes	No	Yes	Yes	No
Observations	13,952,044	13,930,968	14,050,537	13,913,783	13,892,698	14,012,344
R-squared	0.071	0.086	0.005	0.070	0.086	0.006

**Panel E: Unusual for the Originator, Usual for the Followers**

	(1)	(2)	(3)	(4)	(5)	(6)
	Dummy=1 if follower trades in the same direction as the informed trade			Log of dollar imbalances from followers		
Competition	0.0313*** (3.940)	0.0295*** (3.790)	0.0486*** (3.439)	0.816*** (4.147)	0.775*** (4.032)	1.193*** (3.368)
Week 1	0.00241 (0.894)	0.00444 (1.633)	-0.000103 (-0.0610)	0.0571 (0.860)	0.108 (1.585)	-0.00534 (-0.120)
Week 2	-0.00358 (-1.305)	-0.000334 (-0.139)	-0.00537** (-2.049)	-0.0848 (-1.339)	-0.0105 (-0.196)	-0.118* (-1.834)
Week 3	-0.00341 (-0.659)	-0.00182 (-0.399)	-0.00345 (-1.066)	-0.0870 (-0.792)	-0.0497 (-0.520)	-0.0969 (-1.334)
Week 4	-0.00272 (-0.441)	-8.25e-05 (-0.0148)	-0.00658** (-2.068)	-0.0828 (-0.611)	-0.0216 (-0.176)	-0.180** (-2.345)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Stock FE	No	No	Yes	No	No	Yes
Time FE	No	No	Yes	No	No	Yes
Manager FE	Yes	No	Yes	Yes	No	Yes
Manager-Time FE	No	Yes	No	No	Yes	No
Stock-Time FE	Yes	Yes	No	Yes	Yes	No
Observations	1,155,994	1,134,580	1,212,866	1,152,378	1,130,947	1,209,260
R-squared	0.226	0.305	0.026	0.228	0.309	0.025

**Panel F: Central vs. Peripheral**

	(1)	(2)	(3)	(4)	(5)	(6)
	Dummy=1 if follower trades in the same direction as the informed trade			Log of dollar imbalances from followers		
Centrality × Competition	-0.00733 (-1.601)	-0.00832* (-1.737)	-0.00253 (-0.288)	-0.176 (-1.470)	-0.196 (-1.570)	-0.106 (-0.434)
Centrality × Week 1	-0.00813*** (-2.685)	-0.00854*** (-2.884)	-0.00328 (-1.157)	-0.173** (-2.443)	-0.184*** (-2.718)	-0.0784 (-1.156)
Centrality × Week 2	-0.00621* (-1.935)	-0.00702** (-2.442)	-0.00176 (-0.818)	-0.123* (-1.700)	-0.145** (-2.261)	-0.0413 (-0.806)
Centrality × Week 3	-0.00529 (-1.058)	-0.00663 (-1.310)	0.000626 (0.279)	-0.112 (-1.012)	-0.142 (-1.302)	0.0140 (0.281)
Centrality × Week 4	-0.00110 (-0.329)	-0.00367 (-1.015)	0.000300 (0.137)	-0.0220 (-0.282)	-0.0815 (-1.027)	0.00843 (0.166)
Centrality	0.00331 (0.946)	0.00593* (1.706)	0.00338 (1.283)	0.0934 (1.139)	0.153* (1.906)	0.0882* (1.675)
Competition	0.0318*** (6.927)	0.0301*** (7.026)	0.0485*** (3.439)	0.826*** (7.007)	0.786*** (7.028)	1.190*** (3.366)
Week 1	0.00272 (0.958)	0.00490* (1.740)	-0.000160 (-0.0832)	0.0636 (0.979)	0.117* (1.762)	-0.00674 (-0.144)
Week 2	-0.00320 (-1.052)	0.000143 (0.0507)	-0.00538** (-2.174)	-0.0778 (-1.112)	-0.00143 (-0.0211)	-0.119** (-2.001)
Week 3	-0.00307 (-0.789)	-0.00138 (-0.388)	-0.00345 (-1.131)	-0.0808 (-0.942)	-0.0413 (-0.508)	-0.0967 (-1.401)
Week 4	-0.00254 (-0.590)	0.000217 (0.0522)	-0.00654** (-2.332)	-0.0799 (-0.822)	-0.0160 (-0.168)	-0.178*** (-2.594)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Stock FE	No	No	Yes	No	No	Yes
Time FE	No	No	Yes	No	No	Yes
Manager FE	Yes	No	Yes	Yes	No	Yes
Manager-Time FE	No	Yes	No	No	Yes	No
Stock-Time FE	Yes	Yes	No	Yes	Yes	No
Observations	1,155,994	1,134,580	1,212,866	1,152,378	1,130,947	1,209,260
R-squared	0.226	0.305	0.026	0.228	0.309	0.025

**Table A.9 Big Trades Split by Manager Size**

This table displays the specification found in Table for different cuts based on manager size, trade size and relative importance of the trade to the manager. In Panel A, we focus on the sub-sample of big trades for which the originator's average trade size, measured over the six months leading up to the month of the big trade, is above median across managers, for that month. We further limit the sample to big trades, as a share of daily dollar volume traded on the stock, are in the top quartile of big trades for that month. As the definition of a big trade is that it comes from the top quartile of the distribution for the originator, this is an implicit cut. In Panel B, we focus on the sub-sample of big trades for which the originator's average trade size over the past six months is below median across managers, for that month. We further limit the sample to big trades as a share of daily volume that are from the bottom quartile of big trades for that month. Finally, as the definition of a big trade is that it comes from the top quartile of the distribution for the originator, this is an implicit cut. Columns 1-3 correspond to Table 5, Panel A. Columns 4-6 correspond to Table 5, Panel B. The centrality measure is standardized to mean zero, unit variance. T-stats based on robust standard errors, double-clustered at both the month and the manager level, are reported in parentheses. Asterisks denote significance levels (\*\*=1%, \*\*\*=5%, \*=10%).

**Panel A. Trades by Large Managers**

	(1)	(2)	(3)	(4)	(5)	(6)
	Log of Follower Imbalances			Log of Follower Imbalances		
Centrality × Competition				0.472***	0.479***	0.725***
				(4.376)	(4.450)	(4.615)
Centrality × Week 1				0.122***	0.127***	0.108*
				(2.801)	(2.647)	(1.759)
Centrality × Week 2				-0.00674	-0.0132	-0.0358
				(-0.160)	(-0.303)	(-0.604)
Centrality × Week 3				-0.0795**	-0.0793*	-0.123**
				(-2.014)	(-1.811)	(-2.238)
Centrality × Week 4				-0.110**	-0.104**	-0.189***
				(-2.535)	(-2.474)	(-2.894)
Centrality				0.251***	0.215***	0.246***
				(5.176)	(3.692)	(4.649)
Competition	1.768***	1.620***	2.667***	1.495***	1.336***	2.264***
	(5.214)	(4.708)	(5.688)	(3.300)	(2.976)	(4.720)
Week 1	0.00834	0.0457	0.0237	-0.0479	-0.0137	-0.00232
	(0.0883)	(0.479)	(0.287)	(-0.598)	(-0.173)	(-0.0312)
Week 2	-0.126	-0.0942	-0.0989	-0.121	-0.0864	-0.0888
	(-1.084)	(-0.764)	(-1.201)	(-1.111)	(-0.678)	(-1.146)
Week 3	-0.331***	-0.340***	-0.155**	-0.302**	-0.309**	-0.125*
	(-2.942)	(-2.765)	(-2.092)	(-2.529)	(-2.448)	(-1.666)
Week 4	-0.330**	-0.323**	-0.240***	-0.291	-0.283	-0.195**
	(-2.355)	(-2.098)	(-2.748)	(-1.336)	(-1.273)	(-2.418)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Stock FE	No	No	Yes	No	No	Yes
Time FE	No	No	Yes	No	No	Yes
Manager FE	Yes	No	Yes	Yes	No	Yes
Manager-Time FE	No	Yes	No	No	Yes	No
Stock-Time FE	Yes	Yes	No	Yes	Yes	No
Observations	969,630	945,242	1,030,585	969,630	945,242	1,030,585
R-squared	0.340	0.431	0.056	0.340	0.431	0.057

**Panel B. Trades by Small Managers**

	(1)	(2)	(3)	(4)	(5)	(6)
	Log of Follower Imbalances			Log of Follower Imbalances		
Centrality × Competition				-0.0261	-0.0187	-0.0205
				(-0.260)	(-0.203)	(-0.164)
Centrality × Week 1				-0.0288	-0.0288	-0.0464
				(-0.563)	(-0.637)	(-1.169)
Centrality × Week 2				-0.0532	-0.0337	-0.0304
				(-1.044)	(-0.660)	(-0.957)
Centrality × Week 3				-0.0400	-0.0407	-0.00631
				(-0.885)	(-0.948)	(-0.209)
Centrality × Week 4				-0.0426	-0.0381	0.00372
				(-0.959)	(-0.931)	(0.101)
Centrality				-0.0508	-0.0313	-0.0334
				(-1.057)	(-0.953)	(-1.041)
Competition	0.772***	0.689***	1.014***	0.767***	0.685***	1.010***
	(4.475)	(4.132)	(4.153)	(4.610)	(4.366)	(4.257)
Week 1	0.0173	0.0141	0.0216	0.0120	0.00893	0.0129
	(0.499)	(0.403)	(0.599)	(0.367)	(0.288)	(0.425)
Week 2	-0.0846*	-0.0804	-0.0658	-0.0940*	-0.0865*	-0.0712**
	(-1.707)	(-1.626)	(-1.595)	(-1.742)	(-1.659)	(-2.167)
Week 3	-0.0938*	-0.101**	-0.0784**	-0.101**	-0.109**	-0.0797***
	(-1.816)	(-2.143)	(-2.184)	(-2.083)	(-2.404)	(-2.586)
Week 4	-0.0326	-0.0437	-0.0701*	-0.0406	-0.0508	-0.0696**
	(-0.538)	(-0.785)	(-1.793)	(-0.945)	(-1.388)	(-2.033)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Stock FE	No	No	Yes	No	No	Yes
Time FE	No	No	Yes	No	No	Yes
Manager FE	Yes	No	Yes	Yes	No	Yes
Manager-Time FE	No	Yes	No	No	Yes	No
Stock-Time FE	Yes	Yes	No	Yes	Yes	No
Observations	3,695,137	3,668,290	3,755,389	3,695,137	3,668,290	3,755,389
R-squared	0.124	0.168	0.007	0.124	0.168	0.007



**Table A.10 Large Trade – Exclude Earnings Announcements and Recommendation Changes**

This table relates the trading behavior of *followers* after a large trade. In this case we exclude large trades initiated during a window of four weeks (two weeks before and two weeks after) around earnings announcements or changes in analyst recommendations. As before, the *followers* are all the managers, different from the one who generates the large trade (i.e. the *originator*), who trade the stock with the same broker who intermediates the large trade. We divide the sample in three sub-periods: the two trading weeks preceding the week in which the large trade was made (*before*); the period in which the large trade has started, but the originator is still trading in the same direction at a sustained pace (*competition*); and the period after the originator has stopped trading, up to four weeks after the large trade week in which he initiated the trade sequence (week 1 to 4). When we refer to week one after the large trade, we identify the period that ranges from end of the competition period to the end of the first week after the large trade week; in a similar way, when we refer to week two to four. In the first two Columns, the dependent variable is a dummy that takes value one if the follower trades in the same direction as the originator and zero otherwise, while in Columns 3-4 it is the log of the net dollar volume of the followers. Panel B reports the same specification but interacting the time dummies with the centrality measure. The centrality measure is standardized to unit variance in these regressions. We include as a control the natural logarithm of the dollar trade volume intermediated by each broker in the last six months and the natural logarithm of the large trade volume, taken in absolute value (as before, scaled by the trading volume in CRSP). The most conservative specifications include stock-time and manager-time fixed effects. T-stats based on robust standard errors, double-clustered at both the month and the manager level, are reported in parentheses. Asterisks denote significance levels (\*\*=1%, \*\*\*=5%, \*=10%).

**Panel A**

	(1)	(2)	(3)	(4)
	Dummy=1 if follower trades in the same direction as the informed trade		Log of dollar imbalances from followers	
Competition	0.0633*** (5.142)	0.0595*** (4.852)	1.531*** (5.031)	1.447*** (4.764)
Week 1	0.00300*** (2.766)	0.00308*** (2.799)	0.0711*** (2.683)	0.0720*** (2.714)
Week 2	-0.000770 (-0.600)	-0.000480 (-0.383)	-0.0138 (-0.472)	-0.00782 (-0.274)
Week 3	-0.00193 (-1.306)	-0.00180 (-1.213)	-0.0402 (-1.233)	-0.0380 (-1.154)
Week 4	-0.00206 (-1.226)	-0.00187 (-1.122)	-0.0446 (-1.171)	-0.0418 (-1.091)
Controls	Yes	Yes	Yes	Yes
Manager FE	Yes	No	Yes	No
Manager-Time FE	No	Yes	No	Yes
Stock-Time FE	Yes	Yes	Yes	Yes
Observations	8,510,854	8,485,503	8,487,772	8,462,404
R-squared	0.114	0.138	0.111	0.136

**Panel B: Central vs Peripheral**

	(1)	(2)	(3)	(4)
	Dummy=1 if follower trades in the same direction as the informed trade		Log of dollar imbalances from followers	
Centrality × Competition	0.0248*** (7.438)	0.0245*** (7.256)	0.628*** (7.143)	0.620*** (6.981)
Centrality × Week 1	0.00115 (1.213)	0.00126 (1.279)	0.0304 (1.372)	0.0337 (1.488)
Centrality × Week 2	-0.00119 (-1.214)	-0.00127 (-1.303)	-0.0278 (-1.223)	-0.0298 (-1.326)
Centrality × Week 3	-0.00283*** (-2.771)	-0.00278*** (-2.728)	-0.0782*** (-3.323)	-0.0769*** (-3.281)
Centrality × Week 4	-0.00298** (-2.527)	-0.00278** (-2.382)	-0.0827*** (-2.982)	-0.0786*** (-2.857)
Centrality	0.00429*** (2.758)	0.00393** (2.321)	0.117*** (4.308)	0.110*** (4.164)
Competition	0.00539 (0.420)	0.00237 (0.189)	0.0667 (0.206)	0.00240 (0.00759)
Week 1	0.000472 (0.216)	0.000312 (0.143)	0.00444 (0.0870)	-0.00190 (-0.0375)
Week 2	0.00184 (0.734)	0.00231 (0.909)	0.0473 (0.822)	0.0580 (0.992)
Week 3	0.00422 (1.552)	0.00427 (1.533)	0.130** (2.111)	0.130** (2.061)
Week 4	0.00442 (1.574)	0.00419 (1.437)	0.135** (2.089)	0.130* (1.926)
Controls	Yes	Yes	Yes	Yes
Manager FE	Yes	No	Yes	No
Manager-Time FE	No	Yes	No	Yes
Stock-Time FE	Yes	Yes	Yes	Yes
Observations	8,510,854	8,485,503	8,487,772	8,462,404
R-squared	0.114	0.138	0.111	0.136

**Table A.11 Excluding Stocks followed by Brokers' Analysts**

This table relates the trading behavior of *followers* after a large trade. In this case we exclude large trades on stocks for which the broker has analyst coverage. Specifically, we exclude any stock for which an analyst at a broker has *ever* logged an earnings forecast. As before, the *followers* are all the managers, different from the one who generates the large trade (i.e. the *originator*), who trade the stock with the same broker who intermediates the large trade. We divide the sample in three sub-periods: the two trading weeks preceding the week in which the large trade was made (*before*); the period in which the large trade has started, but the originator is still trading in the same direction at a sustained pace (*competition*); and the period after the originator has stopped trading, up to four weeks after the large trade week in which he initiated the trade sequence (week 1 to 4). When we refer to week one after the large trade, we identify the period that ranges from end of the competition period to the end of the first week after the large trade week; in a similar way, when we refer to week two to four. In the first two Columns, the dependent variable is a dummy that takes value one if the follower trades in the same direction as the originator and zero otherwise, while in Columns 3-4 it is the log of the net dollar volume of the followers. Panel B reports the same specification but interacting the time dummies with the centrality measure. The centrality measure is standardized to unit variance in these regressions. We include as a control the natural logarithm of the dollar trade volume intermediated by each broker in the last six months and the natural logarithm of the large trade volume, taken in absolute value (as before, scaled by the trading volume in CRSP). The most conservative specifications include stock-time and manager-time fixed effects. T-stats based on robust standard errors, double-clustered at both the month and the manager level, are reported in parentheses. Asterisks denote significance levels (\*\*=1%, \*\*\*=5%, \*=10%).

**Panel A**

	(1)	(2)	(3)	(4)
	Dummy=1 if follower trades in the same direction as the informed trade		Log of dollar imbalances from followers	
Competition	0.0689*** (5.400)	0.0649*** (5.077)	1.662*** (5.225)	1.575*** (4.936)
Week 1	0.00239** (2.526)	0.00242** (2.479)	0.0557** (2.473)	0.0565** (2.440)
Week 2	-0.00111 (-1.165)	-0.000955 (-1.051)	-0.0298 (-1.409)	-0.0255 (-1.272)
Week 3	-0.00126 (-1.010)	-0.00116 (-0.950)	-0.0355 (-1.328)	-0.0322 (-1.236)
Week 4	-0.00258* (-1.859)	-0.00242* (-1.832)	-0.0631** (-2.006)	-0.0601** (-1.997)
Controls	Yes	Yes	Yes	Yes
Manager FE	Yes	No	Yes	No
Manager-Time FE	No	Yes	No	Yes
Stock-Time FE	Yes	Yes	Yes	Yes
Observations	13,147,242	13,125,224	13,101,228	13,079,204
R-squared	0.109	0.128	0.107	0.128

**Panel B: Central vs. Peripheral**

	(1)	(2)	(3)	(4)
	Dummy=1 if follower trades in the same direction as the informed trade		Log of dollar imbalances from followers	
Centrality X Competition	0.0268*** (7.901)	0.0265*** (7.791)	0.670*** (7.641)	0.663*** (7.555)
Centrality X Week 1	0.000623 (0.727)	0.000577 (0.667)	0.0162 (0.817)	0.0154 (0.772)
Centrality X Week 2	-0.00220*** (-2.979)	-0.00210*** (-2.884)	-0.0526*** (-3.060)	-0.0501*** (-2.953)
Centrality X Week 3	-0.00306*** (-3.412)	-0.00317*** (-3.506)	-0.0805*** (-3.947)	-0.0830*** (-4.020)
Centrality X Week 4	-0.00434*** (-3.819)	-0.00426*** (-3.769)	-0.110*** (-4.092)	-0.108*** (-4.042)
Centrality	0.00380** (2.422)	0.00304* (1.692)	0.107*** (4.435)	0.0902*** (3.644)
Competition	0.00685 (0.504)	0.00371 (0.278)	0.107 (0.312)	0.0403 (0.120)
Week 1	0.00108 (0.556)	0.00119 (0.601)	0.0218 (0.502)	0.0238 (0.542)
Week 2	0.00346** (1.981)	0.00340** (1.975)	0.0795** (2.011)	0.0786** (2.015)
Week 3	0.00504** (2.253)	0.00537** (2.367)	0.131*** (2.745)	0.139*** (2.885)
Week 4	0.00635*** (2.593)	0.00633** (2.582)	0.163*** (2.965)	0.163*** (2.952)
Controls	Yes	Yes	Yes	Yes
Manager FE	Yes	No	Yes	No
Manager-Time FE	No	Yes	No	Yes
Stock-Time FE	Yes	Yes	Yes	Yes
Observations	13,147,242	13,125,224	13,101,228	13,079,204
R-squared	0.109	0.128	0.107	0.128

**Table A.12 Placebo: Shift of Timeline and Behavior with other Brokers**

In this table we present the results of two placebo tests. In the first (Panel A and B) we analyze the trading behavior of followers, shifting the timeline by eight weeks *before* the original large trade week (our *shifted large trade week*). As before, the followers are all the managers, different from the one who generates the large trade (i.e. the originator), who trade the stock with the same broker who intermediates the large trade. In the second placebo test (Panel C and D), instead, we keep the original timeline without any shift, but in this case we analyze the trading behavior of followers when trading with brokers different from the one who intermediated the large trade. Our definition of *follower* does not change from the usual one, therefore the composition of the followers group is unchanged. The structure of both tests is still the same that we adopt in the baseline analysis. We divide the sample in three sub-periods: the two trading weeks preceding the (shifted) large trade week (before); the (shifted) large trade week (competition); and the period up to four weeks after the (shifted) large trade week (week 1 to 4). In the first two Columns, the dependent variable is a dummy that takes value one if the follower trades in the same direction as the originator and zero otherwise, while in Columns 3-4 it is the log of the net dollar volume of the followers. The centrality measure is standardized to unit variance in these regressions. We include as a control the natural logarithm of the dollar trade volume intermediated by each broker in the last six months and the natural logarithm of the large trade volume, taken in absolute value (as before, scaled by the trading volume in CRSP). The most conservative specifications include stock-time and manager-time fixed effects. T-stats based on robust standard errors, double-clustered at both the month and the manager level, are reported in parentheses. Asterisks denote significance levels (\*\*\*=1%, \*\*=5%, \*=10%).

**Panel A: Timeline Shift**

	(1)	(2)	(3)	(4)
	Dummy=1 if follower trades in the same direction as the informed trade		Log of dollar imbalances from followers	
Competition	-0.000285 (-0.494)	-0.000177 (-0.304)	-0.00887 (-0.712)	-0.00646 (-0.515)
Week 1	-0.000550 (-0.576)	-0.000425 (-0.455)	-0.0118 (-0.565)	-0.00899 (-0.438)
Week 2	0.000378 (0.399)	0.000398 (0.432)	0.00755 (0.355)	0.00766 (0.371)
Week 3	7.18e-05 (0.0783)	-5.20e-05 (-0.0574)	0.000200 (0.0103)	-0.00277 (-0.145)
Week 4	0.000123 (0.101)	0.000132 (0.111)	0.00397 (0.154)	0.00322 (0.128)
Controls	Yes	Yes	Yes	Yes
Manager FE	Yes	No	Yes	No
Manager-Time FE	No	Yes	No	Yes
Stock-Time FE	Yes	Yes	Yes	Yes
Observations	22,271,277	22,251,239	22,214,272	22,194,225
R-squared	0.071	0.084	0.069	0.082

**Panel B: Timeline Shift - Central vs Peripheral**

	(1)	(2)	(3)	(4)
	Dummy=1 if follower trades in the same direction as the informed trade		Log of dollar imbalances from followers	
Centrality × Competition	0.000957* (1.785)	0.000871* (1.658)	0.0176 (1.441)	0.0163 (1.352)
Centrality × Week 1	0.000749 (1.331)	0.000710 (1.294)	0.0150 (1.129)	0.0143 (1.097)
Centrality × Week 2	0.00188*** (3.325)	0.00175*** (3.187)	0.0388*** (2.901)	0.0366*** (2.820)
Centrality × Week 3	0.00160** (2.149)	0.00159** (2.185)	0.0390** (2.254)	0.0391** (2.328)
Centrality × Week 4	0.00140** (2.158)	0.00145** (2.233)	0.0299** (1.996)	0.0315** (2.102)
Centrality	-0.00137 (-1.576)	-0.00102 (-1.018)	-0.0197 (-1.580)	-0.0114 (-0.971)
Competition	-0.00247* (-1.939)	-0.00217* (-1.750)	-0.0491* (-1.719)	-0.0437 (-1.575)
Week 1	-0.00226 (-1.560)	-0.00205 (-1.447)	-0.0460 (-1.437)	-0.0416 (-1.328)
Week 2	-0.00391*** (-2.591)	-0.00360** (-2.455)	-0.0809** (-2.434)	-0.0758** (-2.351)
Week 3	-0.00359** (-2.289)	-0.00369** (-2.407)	-0.0887** (-2.496)	-0.0920*** (-2.671)
Week 4	-0.00307* (-1.663)	-0.00318* (-1.696)	-0.0641 (-1.601)	-0.0687* (-1.688)
Controls	Yes	Yes	Yes	Yes
Manager FE	Yes	No	Yes	No
Manager-Time FE	No	Yes	No	Yes
Stock-Time FE	Yes	Yes	Yes	Yes
Observations	22,271,277	22,251,239	22,214,272	22,194,225
R-squared	0.071	0.084	0.069	0.082

**Table A.13 Affiliation**

This table relates the trading behavior of followers after a large trade. We split the sample between large trades for which the originator and the broker intermediating the trade are affiliated, i.e. they belong to the same financial conglomerate, and large trades for which this is not true. We further split each of these two sub-sample in two parts: large trades intermediated by central brokers (centrality above the median) and large trades intermediated by peripheral brokers (centrality below the median). The structure of the tests is the same as in Panel A of Table 5. In Panel A the dependent variable is a dummy that takes value one if the follower trades in the same direction as the originator and zero otherwise; in Panel B it is the log of the net dollar volume of the followers multiplied by the sign of the trading direction. T-stats based on robust standard errors, double-clustered at both the month and the manager level, are reported in parentheses. Asterisks denote significance levels (\*\*\*=1%, \*\*=5%, \*=10%).

**Panel A**

Dependent Variable: Dummy equal to one if follower trades in the same direction as the informed trade								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	<b>Originator is AFFILIATED with the Broker</b>				<b>Originator is NOT AFFILIATED with the Broker</b>			
	CENTRAL Brokers		PERIPHERAL Brokers		CENTRAL Brokers		PERIPHERAL Brokers	
Competition	0.0187 (0.241)	0.0176 (0.381)	0.179 (0.790)	-0.113 (-1.063)	0.0748*** (5.096)	0.0719*** (4.887)	0.0390*** (4.456)	0.0352*** (4.101)
Week 1	0.0354 (1.114)	0.0200 (0.685)	0.177 (0.783)	-0.120 (-1.126)	0.00318*** (3.646)	0.00320*** (3.589)	0.000852 (0.837)	0.00105 (1.022)
Week 2	0.0511 (1.346)	0.0292 (0.903)	0.357 (1.375)	0.140 (0.816)	-0.00198** (-2.001)	-0.00190** (-1.970)	-0.000153 (-0.129)	0.000180 (0.154)
Week 3	0.0296 (0.661)	0.0120 (0.297)	0.358 (1.377)	0.421* (1.944)	-0.00253* (-1.957)	-0.00259** (-2.045)	-0.000909 (-0.787)	-0.000477 (-0.410)
Week 4	0.0506 (1.266)	0.0181 (0.514)	0.539 (1.130)	0.438*** (3.238)	-0.00375** (-2.234)	-0.00377** (-2.302)	-0.000655 (-0.481)	-0.000230 (-0.172)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Manager FE	Yes	No	Yes	No	Yes	No	Yes	No
Manager-Time FE	No	Yes	No	Yes	No	Yes	No	Yes
Stock-Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,264	2,058	1,394	1,613	13,454,833	13,435,350	7,439,591	7,415,781
R-squared	0.755	0.816	0.564	0.553	0.097	0.113	0.128	0.153

**Panel B**

Dependent Variable: Log of dollar imbalances from the follower								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Originator is AFFILIATED with the Broker				Originator is NOT AFFILIATED with the Broker			
	CENTRAL Brokers		PERIPHERAL Brokers		CENTRAL Brokers		PERIPHERAL Brokers	
Competition	0.749 (0.409)	0.692 (0.642)	5.585 (1.130)	-3.045 (-1.460)	1.822*** (5.040)	1.760*** (4.849)	0.935*** (4.262)	0.851*** (3.937)
Week 1	0.807 (1.031)	0.357 (0.492)	6.539 (1.341)	-2.176 (-1.011)	0.0772*** (3.615)	0.0779*** (3.577)	0.0197 (0.832)	0.0230 (0.968)
Week 2	1.194 (1.273)	0.601 (0.774)	10.55* (1.913)	4.447 (1.210)	-0.0435* (-1.907)	-0.0414* (-1.861)	-0.00322 (-0.125)	0.00335 (0.131)
Week 3	0.850 (0.760)	0.332 (0.324)	10.59* (1.916)	8.006* (1.830)	-0.0664** (-2.268)	-0.0678** (-2.351)	-0.0140 (-0.563)	-0.00521 (-0.209)
Week 4	1.276 (1.254)	0.354 (0.401)	16.11 (1.570)	7.944*** (2.676)	-0.0879** (-2.240)	-0.0891** (-2.309)	-0.0121 (-0.425)	-0.00386 (-0.138)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Manager FE	Yes	No	Yes	No	Yes	No	Yes	No
Manager-Time FE	No	Yes	No	Yes	No	Yes	No	Yes
Stock-Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,264	2,058	1,392	1,611	13,418,173	13,398,696	7,421,039	7,397,217
R-squared	0.751	0.816	0.585	0.563	0.093	0.111	0.126	0.154



**Table A.14 NPV of Club Membership**

This table presents empirical estimates of the equilibrium gains and losses of large-trade club membership. Panel A presents estimates of the distribution of follower and originator probabilities for manager-broker pairs. To construct probabilities of being a follower or originator within a manager-broker pair, we designate as club members managers who have been both a follower and an originator with a broker at any point in the history of their relationship. We count the number of trades that the manager executes as a follower and as an originator with the broker and divide those figures by the total number of trades executed with the broker. Equal-weighted performance is simply the average return for trades made within the window for a manager with a broker across the entire sample. For value-weighted performance, we first compute the trading-volume-weighted return within each large trade event for a follower, and then take the equal-weighted average across each manager-broker pair. Performance figures are displayed in basis points. The NPV is computed at the manager-broker level and is the returns from trades as a follower times the frequency of trading as a follower less the loss from price impact times the frequency of trades as an originator. Here, price impact from followers is taken as the average across specifications of the coefficients on *Follower Volume* in Table 8. Panel B displays aggregate estimates of dollar performance on trades as followers and on all trades at the manager-broker-month level. To compute Returns per Dollar Invested, we aggregate dollar performance as a follower and dollar performance on all stocks and then divide these figures by the dollar volume invested as a follower and on all stocks, respectively. For all performance variables, we set a 5-day holding period. To compute the ratio *Share of Profits*, we aggregate performance on profitable follower trades and all trades and compute the ratio between the two. We limit the focus to profitable trades as interpreting a ratio is not possible when the manager has had either negative returns as a follower, or negative returns overall, or both.

**Panel A: NPV Computation**

	N	mean	sd	p25	p50	p75
P(Follower)	2,126	0.139	0.129	0.050	0.101	0.186
P(Originator)	2,126	0.074	0.069	0.023	0.054	0.102
Value-weighted Performance	2,126	11.322	191.791	-59.944	10.387	86.008
Equal-weighted Performance	2,126	18.425	389.592	-99.186	14.171	145.304
NPV Value-weighted	2,126	1.017	21.118	-6.484	-0.274	6.737
NPV Equal-weighted	2,126	2.089	39.303	-10.056	0.020	12.493

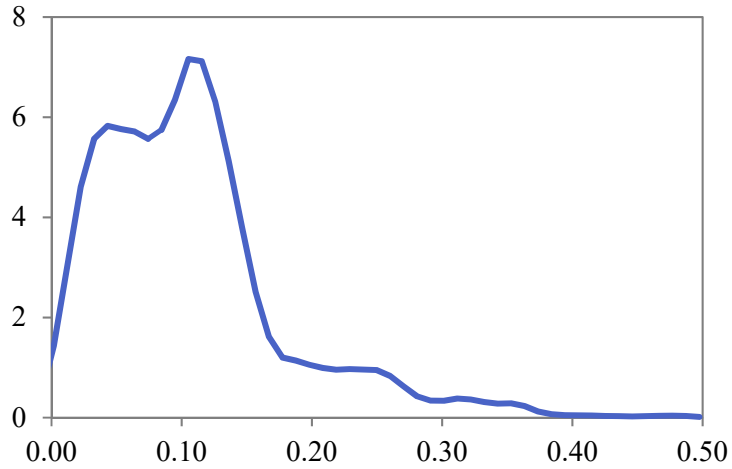
**Panel B: Aggregate Monthly Performance**

	N	mean	sd	p25	p50	p75
Return per Dollar as Follower	55,464	5.86	345.60	-154.47	0.56	166.27
Return per Dollar All Stocks	55,464	2.99	148.30	-67.13	1.83	72.48
Share of Profits	33,857	0.261	0.239	0.058	0.191	0.411

**Table A.15 Price Reactions around 13D Filings**

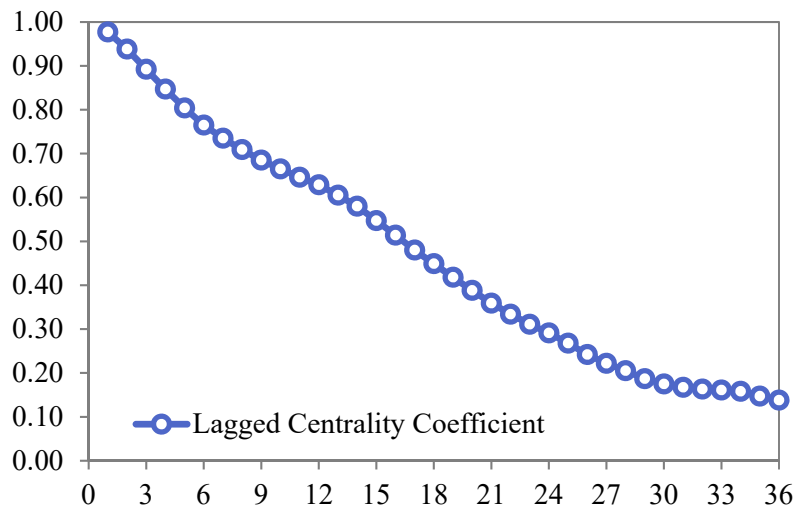
This table relates follower imbalances and price impact around 13D filings. We consider each 13D filing in our main specification and aggregate followers' imbalances in the 10 days leading up to the filing, so observations are at the broker-stock-filing level. In Columns 1-4, the dependent variables are the price change from 10 days before to one day before the filing, the price change from one day before to 25 days after the filing, the price change from one day before to one day after the filing and the difference between the price change from 10 days before to one day before and 10 days before and 25 days after the filing, respectively. Each dependent variable is expressed in basis points. We include as independent variable follower imbalances in the 10 days before the 13D filing. To account for magnitude, imbalances have been converted so that coefficients can be interpreted as the effect of a 1/10<sup>th</sup> standard deviation increase. T-stats based on robust standard errors, clustered at the manager level, are reported in parentheses. Asterisks denote significance levels (\*\*\*=1%, \*\*=5%, \*=10%).

	(1)	(2)	(3)	(4)
	$\Delta P(-10,-1)$	$\Delta P(-1,1)$	$\Delta P(-1,25)$	$\Delta P(-10,-1) - \Delta P(-10,25)$
Follower Imbalance	48.86*** (4.919)	-78.11*** (-4.373)	-51.69*** (-8.445)	79.56*** (4.603)
Stock FE	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes
Broker FE	Yes	Yes	Yes	Yes
Observations	1,378	1,389	1,389	1,378
R-squared	0.994	0.990	0.986	0.991



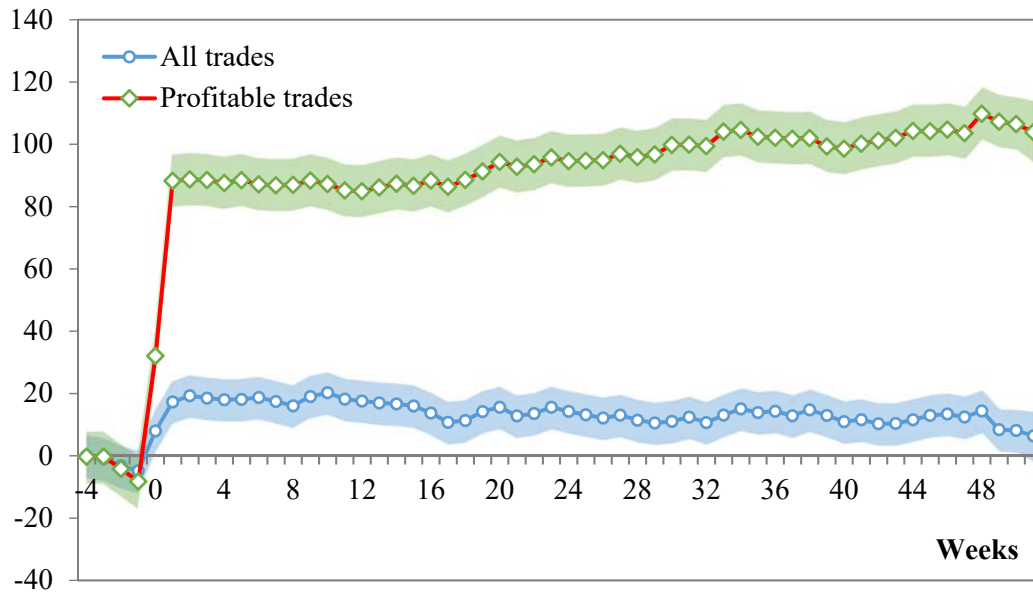
**Figure A.1**

This figure plots the kernel density estimation of eigenvector centrality over the whole time sample, i.e. July 1999 – December 2014.



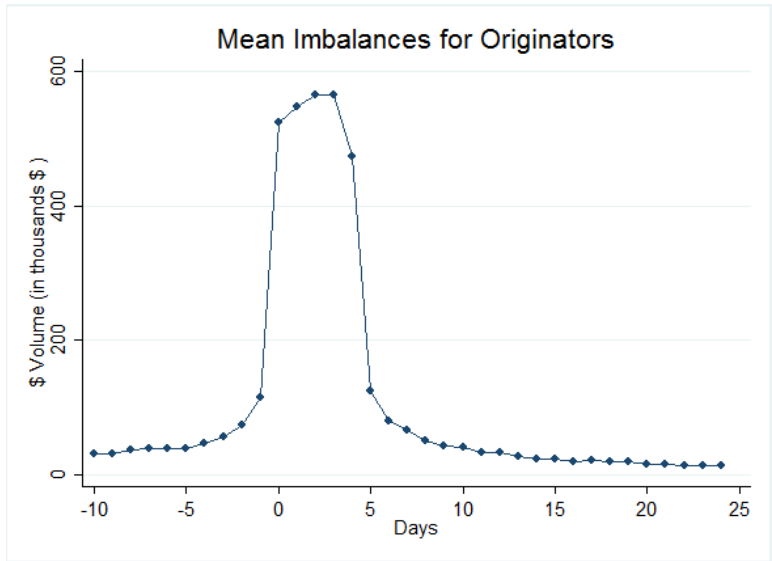
**Figure A.2**

This figure plots coefficients from Eigenvector Centrality regressed on its lags, one at a time, starting from one month and moving up to 36 months.



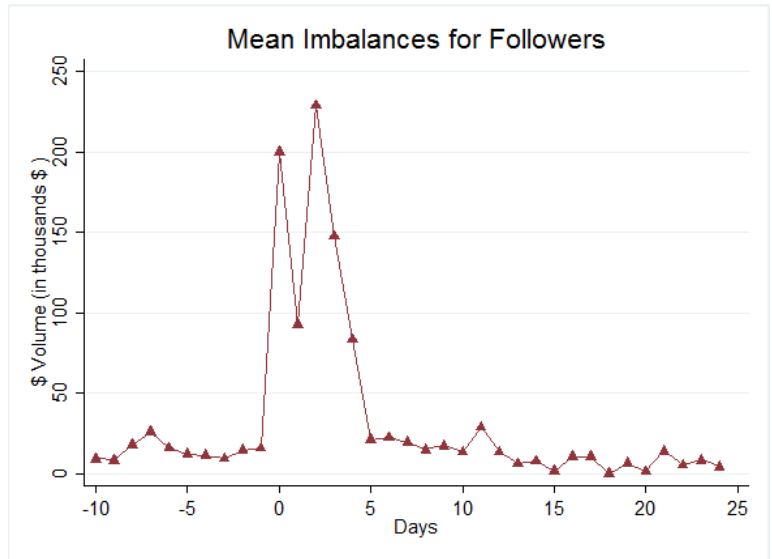
**Figure A.3**

This figure plots cumulative abnormal return (in bps) of the stocks interested by a large trade before, during and after the week in which the large trade is identified (*Week 0*) from week -4 to week 52. *Profitable trades* are all the trades in which the originator has a positive return during *Week 0*.



**Figure A.4**

This figure plots the average imbalances for the originators during the large trade events for the stocks involved in the large trades.



**Figure A.5**

This figure plots the average imbalances for the followers during the large trade events for the stocks involved in the large trades.

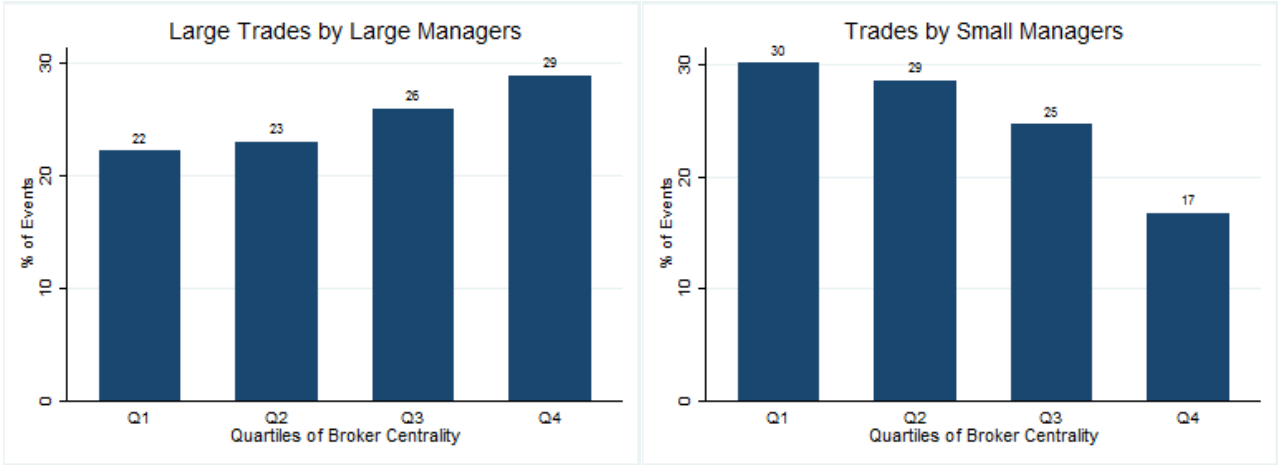


Figure A.6

This figure plots the fraction of large trade events executed by brokers in different centrality quartiles for large trades initiated by large managers (left graph) and by small managers (right graph).