

Internet Appendix to
“The Role of Data Providers as Information Intermediaries”

Table IA1: Sample Selection

Table IA1 summarizes the procedure used to select the final samples in First Call and the Institutional Brokers' Estimate System (IBES).

	First Call	IBES
Quarterly earnings announcements in the initial database	254,972	150,956
Missing activation date	-2,292	-1,276
Negative time lag	-331	0
Time lag > 61	-6,616	-4,486
Missing EPS	-19	-3,233
Missing consensus forecast	-51,157	-27,225
Consensus forecast older than 60 calendar days	-65,806	-2,949
Non-ordinary share or missing share price	-19,436	-13,227
EPS > Share price	-54	-18
Consensus forecast > Share price	-9	-1
Share price < 1	-755	-961
Missing abnormal returns (missing book-to-market ratio)	-5,738	-3,511
Final sample	102,759	94,069
Observations unique to IBES	NM	30,761

Table IA2: Determinants of Delayed Disseminations

Table IA2 reports marginal effects from logit regressions. The dependent variable is a dummy variable that equals 1 if First Call disseminates the earnings news with a delay of at least one trading day (i.e., if the time lag between the activation date and the announcement date is positive), and 0 if First Call disseminates the earnings news immediately on the day of the earnings announcement (i.e., if the time lag is zero). In column 2, I focus on a subsample after propensity score matching. Appendix C provides detailed descriptions of earnings, firm, and market characteristics. Standard errors are clustered at the firm level. *t*-statistics are provided in parentheses. *, **, *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	DELAYED	
	Matched Sample	
	(1)	(2)
SUE_DECILE	-0.006*** (-11.65)	-0.001 (-1.03)
ABS_SUE_DECILE	0.016*** (21.94)	0.001 (0.73)
EXTRA_ITEMS	0.036*** (6.33)	-0.008 (-0.76)
SIZE_DECILE	-0.005*** (-3.82)	0.000 (0.12)
BM_DECILE	-0.001 (-0.82)	-0.001 (-0.30)
INSTITUTIONAL	0.008 (0.92)	0.004 (0.25)
SHARE_TURNOVER	0.061*** (3.89)	-0.021 (-0.67)
LOG_ANALYSTS	-0.043*** (-7.93)	0.010 (0.84)
DISPERSION	0.037*** (9.47)	0.013 (1.47)
EPS_VOLATILITY	-0.004 (-0.60)	-0.002 (-0.13)
EPS_PERSISTENCE	0.019*** (3.10)	-0.008 (-0.66)
REPORTING_LAG	0.001*** (5.52)	-0.000 (-0.68)
ANNOUNCEMENTS_DECILE	0.004*** (5.07)	-0.000 (-0.15)
Pseudo R ²	0.044	0.000
N	79,986	28,740

Table IA3: Determinants of Announcement Returns and the Post-Earnings-Announcement Drift – Matched Sample

Table IA3 presents the results from panel regressions. The dependent variable is either the 2-day announcement cumulative abnormal return (CAR) of quarterly earnings announcements (columns 1, 3, and 5) or the 60-day post-earnings-announcement CAR (columns 2, 4, and 6). I focus on a subsample after propensity score matching. CARs are calculated as the difference between the buy-and-hold return of the respective stock and that of a size and book-to-market matching portfolio. The dummy variable DELAYED equals 1 if First Call disseminates the earnings news with a delay of at least one trading day (i.e., if the time lag between the activation date and the announcement date is positive), and 0 if First Call disseminates the earnings news immediately on the day of the earnings announcement (i.e., if the time lag is zero). Earnings announcements are sorted into SUE_DECILE every calendar quarter based on the earnings surprise. In columns 3 to 6, the variables EXTRA_ITEMS, SIZE_DECILE, BM_DECILE, INSTITUTIONAL, SHARE_TURNOVER, LOG_ANALYSTS, DISPERSION, EPS_VOLATILITY, EPS_PERSISTENCE, REPORTING_LAG, and ANNOUNCEMENTS_DECILE are included as controls but not reported. All controls are also interacted with SUE_DECILE (not reported). Appendix C provides detailed descriptions of all control variables used throughout the study. Standard errors are clustered at the firm level. *t*-statistics are provided in parentheses. *, **, *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	CAR [0,+1] (%)	CAR [+2,+61] (%)	CAR [0,+1] (%)	CAR [+2,+61] (%)	CAR [0,+1] (%)	CAR [+2,+61] (%)
	(1)	(2)	(3)	(4)	(5)	(6)
DELAYED	0.947*** (4.33)	-0.559 (-0.90)	0.921*** (4.27)	-0.586 (-0.95)	0.916*** (3.60)	-0.180 (-0.24)
SUE_DECILE	0.808*** (28.24)	0.133* (1.78)	0.953*** (9.12)	0.810*** (2.87)	1.023*** (8.47)	0.214 (0.63)
DELAYED × SUE_DECILE	-0.223*** (-6.19)	0.220** (2.25)	-0.224*** (-6.34)	0.222** (2.27)	-0.214*** (-5.34)	0.221* (1.94)
Constant	-4.239*** (-24.63)	-0.775* (-1.67)	-4.618*** (-7.34)	-7.697*** (-4.32)	-3.709*** (-3.96)	10.571*** (3.70)
Controls	No	No	Yes	Yes	Yes	Yes
Firm fixed effects	No	No	No	No	Yes	Yes
Year fixed effects	No	No	No	No	Yes	Yes
Month fixed effects	No	No	No	No	Yes	Yes
Day-of-week fixed effects	No	No	No	No	Yes	Yes
Adj. R ²	0.080	0.002	0.092	0.008	0.146	0.079
N	28,740	28,313	28,740	28,313	28,740	28,313

Table IA4: Determinants of Announcement Returns and the Post-Earnings-Announcement Drift – Alternative Event and Postevent Windows

Table IA4 presents the results from panel regressions. The dependent variable is either the abnormal announcement return of quarterly earnings announcements (columns 1, 3, and 5) or the 61-day post-earnings-announcement cumulative abnormal return (CAR) (columns 2, 4, and 6). CARs (abnormal returns) are calculated as the difference between the buy-and-hold return of the respective stock and that of a size and book-to-market matching portfolio. The dummy variable DELAYED equals 1 if First Call disseminates the earnings news with a delay of at least one trading day (i.e., if the time lag between the activation date and the announcement date is positive), and 0 if First Call disseminates the earnings news immediately on the day of the earnings announcement (i.e., if the time lag is zero). Earnings announcements are sorted into SUE_DECILE every calendar quarter based on the earnings surprise. In columns 3 to 6, the variables EXTRA_ITEMS, SIZE_DECILE, BM_DECILE, INSTITUTIONAL, SHARE_TURNOVER, LOG_ANALYSTS, DISPERSION, EPS_VOLATILITY, EPS_PERSISTENCE, REPORTING_LAG, and ANNOUNCEMENTS_DECILE are included as controls but not reported. All controls are also interacted with the variable SUE_DECILE (not reported). Appendix C provides detailed descriptions of all control variables. Standard errors are clustered at the firm level. *t*-statistics are provided in parentheses. *, **, *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Abnormal return [0] (%)	CAR [+1,+61] (%)	Abnormal return [0] (%)	CAR [+1,+61] (%)	Abnormal return [0] (%)	CAR [+1,+61] (%)
	(1)	(2)	(3)	(4)	(5)	(6)
DELAYED	1.205*** (10.06)	-1.603*** (-3.55)	1.295*** (10.65)	-1.610*** (-3.55)	1.344*** (9.80)	-0.835* (-1.70)
SUE_DECILE	0.599*** (53.17)	0.283*** (9.01)	0.592*** (11.53)	0.839*** (4.94)	0.642*** (11.43)	0.554*** (3.06)
DELAYED × SUE_DECILE	-0.256*** (-13.07)	0.321*** (4.49)	-0.265*** (-13.36)	0.315*** (4.38)	-0.269*** (-12.40)	0.233*** (3.06)
Constant	-3.111*** (-48.44)	-1.129*** (-5.99)	-2.727*** (-9.05)	-6.385*** (-6.05)	-2.069*** (-4.99)	12.641*** (8.29)
Controls	No	No	Yes	Yes	Yes	Yes
Firm fixed effects	No	No	No	No	Yes	Yes
Year fixed effects	No	No	No	No	Yes	Yes
Month fixed effects	No	No	No	No	Yes	Yes
Day-of-week fixed effects	No	No	No	No	Yes	Yes
Adj. R ²	0.068	0.003	0.076	0.007	0.091	0.056
N	79,986	79,210	79,986	79,210	79,986	79,210

Table IA5: Determinants of Announcement Returns and the Post-Earnings-Announcement Drift – Additional Tests

Table IA5 presents the results from panel regressions. The dependent variable is either the 2-day announcement cumulative abnormal return (CAR) of quarterly earnings announcements (columns 1, 3, 5, 7, and 9) or the 60-day post-earnings-announcement CAR (columns 2, 4, 6, 8, and 10). CARs are calculated as the difference between the buy-and-hold return of the respective stock and that of a size and book-to-market matching portfolio. The dummy variable DELAYED equals 1 if First Call disseminates the earnings news with a delay of at least 1 (2) trading day(s), and 0 otherwise. Earnings announcements are sorted into SUE_DECILE every calendar quarter based on the earnings surprise. The variables EXTRA_ITEMS, SIZE_DECILE, BM_DECILE, INSTITUTIONAL, SHARE_TURNOVER, LOG_ANALYSTS, DISPERSION, EPS_VOLATILITY, EPS_PERSISTENCE, REPORTING_LAG, and ANNOUNCEMENTS_DECILE are included as controls in every regression but not reported. All controls are also interacted with the variable SUE_DECILE (not reported). Appendix C provides detailed descriptions of all control variables. Standard errors are clustered at the firm level. *t*-statistics are provided in parentheses. *, **, *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Earnings classified as delayed if time lag ≥ 2		SUE > 0		SUE < 0		January 1995– August 2009		September 2009– June 2011	
	CAR [0,+1] (%)	CAR [+2,+61] (%)	CAR [0,+1] (%)	CAR [+2,+61] (%)	CAR [0,+1] (%)	CAR [+2,+61] (%)	CAR [0,+1] (%)	CAR [+2,+61] (%)	CAR [0,+1] (%)	CAR [+2,+61] (%)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
DELAYED	1.158*** (4.94)	-1.274* (-1.94)	1.202*** (2.77)	-1.828 (-1.47)	1.145*** (3.26)	-0.067 (-0.07)	0.890*** (4.82)	-0.496 (-0.94)	0.086 (0.09)	-4.118** (-2.55)
SUE_DECILE	0.905*** (13.01)	0.251 (1.44)	1.058*** (8.15)	0.406 (1.05)	1.094*** (3.05)	-1.060 (-0.98)	0.415*** (15.32)	0.201** (2.56)	0.372*** (7.02)	0.103 (1.28)
DELAYED \times SUE_DECILE	-0.250*** (-6.57)	0.348*** (3.21)	-0.235*** (-4.11)	0.352** (2.05)	-0.285** (-2.13)	-0.014 (-0.04)	-0.194*** (-6.58)	0.148* (1.83)	-0.069 (-0.42)	0.643** (2.33)
Constant	-2.849*** (-5.50)	13.575*** (9.23)	-4.812*** (-4.71)	14.869*** (4.73)	-1.899* (-1.72)	15.124*** (4.48)	0.366 (0.80)	14.630*** (10.64)	-1.712*** (-2.66)	-2.337** (-2.28)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Day-of-week fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R ²	0.112	0.051	0.088	0.060	0.088	0.072	0.121	0.056	0.149	0.005
N	79,986	79,210	53,199	52,750	26,787	26,460	59,834	59,196	10,823	10,741

Table IA6: Descriptive Statistics on IBES Data

Table IA6 presents the distribution of earnings announcements in the Institutional Brokers' Estimate System (IBES) sample. I restrict the sample to earnings announcements that are unique to the IBES database. The time lag is the difference in trading days between the activation date and the announcement date in IBES. The announcement date refers to the date on which the earnings announcement is made. The activation date refers to the date on which the information is entered into the IBES database. I eliminate observations with missing time lags, observations with negative time lags, and observations with time lags that exceed 61 trading days.

	N	Mean	Time lag between activation date and announcement date									
			0	% of N	1	% of N	2-5	% of N	6-10	% of N	11-61	% of N
2002	3,469	1.288	2,165	62.4%	891	25.7%	292	8.4%	29	0.8%	92	2.7%
2003	3,606	1.771	2,270	63.0%	754	20.9%	378	10.5%	65	1.8%	139	3.9%
2004	3,501	0.965	2,243	64.1%	791	22.6%	341	9.7%	82	2.3%	44	1.3%
2005	3,509	1.030	2,250	64.1%	795	22.7%	343	9.8%	59	1.7%	62	1.8%
2006	3,192	1.129	1,980	62.0%	666	20.9%	414	13.0%	77	2.4%	55	1.7%
2007	3,261	0.920	1,841	56.5%	866	26.6%	495	15.2%	40	1.2%	19	0.6%
2008	2,787	1.557	1,053	37.8%	980	35.2%	631	22.6%	77	2.8%	46	1.7%
2009	2,690	1.306	1,407	52.3%	794	29.5%	365	13.6%	72	2.7%	52	1.9%
2010	3,317	0.453	2,992	90.2%	204	6.2%	62	1.9%	17	0.5%	42	1.3%
2011	1,429	0.374	1,288	90.1%	104	7.3%	21	1.5%	5	0.3%	11	0.8%
Total	30,761	1.116	19,489	63.4%	6,845	22.3%	3,342	10.9%	523	1.7%	562	1.8%

Table IA7: Determinants of Announcement Returns and the Post-Earnings-Announcement Drift Using IBES Data

Table IA7 presents the results from panel regressions. The dependent variable is either the 2-day announcement cumulative abnormal return (CAR) of quarterly earnings announcements (columns 1, 3, and 5) or the 60-day post-earnings-announcement CAR (columns 2, 4, and 6). I restrict the sample to earnings announcements that are unique to the Institutional Brokers' Estimate System (IBES) database. CARs are calculated as the difference between the buy-and-hold return of the respective stock and that of a size and book-to-market matching portfolio. The dummy variable DELAYED equals 1 if IBES disseminates the earnings news with a delay of at least one trading day (i.e., if the time lag between the activation date and the announcement date is positive), and 0 if IBES disseminates the earnings news immediately on the day of the earnings announcement (i.e., if the time lag is zero). Earnings announcements are sorted into SUE_DECILE every calendar quarter based on the earnings surprise. In columns 3 to 6, the variables EXTRA_ITEMS, SIZE_DECILE, BM_DECILE, INSTITUTIONAL, SHARE_TURNOVER, LOG_ANALYSTS, DISPERSION, EPS_VOLATILITY, EPS_PERSISTENCE, REPORTING_LAG, and ANNOUNCEMENTS_DECILE are included as controls but not reported. All controls are also interacted with the variable SUE_DECILE (not reported). Appendix C provides detailed descriptions of all control variables. Standard errors are clustered at the firm level. *t*-statistics are provided in parentheses. *, **, *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	CAR [0,+1] (%)	CAR [+2,+61] (%)	CAR [0,+1] (%)	CAR [+2,+61] (%)	CAR [0,+1] (%)	CAR [+2,+61] (%)
	(1)	(2)	(3)	(4)	(5)	(6)
DELAYED	0.090 (0.31)	-0.196 (-0.26)	0.247 (0.85)	-0.384 (-0.51)	0.682* (1.88)	0.126 (0.14)
SUE_DECILE	1.007*** (32.94)	0.313*** (4.45)	1.179*** (8.39)	0.527 (1.56)	1.229*** (7.19)	0.559 (1.39)
DELAYED × SUE_DECILE	-0.076 (-1.57)	0.008 (0.07)	-0.094** (-1.96)	0.032 (0.27)	-0.126** (-2.18)	-0.023 (-0.16)
Constant	-5.360*** (-29.51)	-1.127*** (-2.67)	-6.149*** (-7.36)	-3.627* (-1.83)	-2.450* (-1.86)	9.929*** (3.12)
Controls	No	No	Yes	Yes	Yes	Yes
Firm fixed effects	No	No	No	No	Yes	Yes
Year fixed effects	No	No	No	No	Yes	Yes
Month fixed effects	No	No	No	No	Yes	Yes
Day-of-week fixed effects	No	No	No	No	Yes	Yes
Adj. R ²	0.123	0.002	0.135	0.007	0.164	0.058
N	16,425	16,214	16,425	16,214	16,425	16,214

Table IA8: Determinants of Announcement Returns and the Post-Earnings-Announcement Drift Using IBES Data – Alternative Event and Postevent Windows

Table IA8 presents the results from panel regressions. The dependent variable is either the abnormal announcement return of quarterly earnings announcements (columns 1, 3, and 5) or the 61-day post-earnings-announcement cumulative abnormal return (CAR) (columns 2, 4, and 6). I restrict the sample to earnings announcements that are unique to the Institutional Brokers' Estimate System (IBES) database. CARs (abnormal returns) are calculated as the difference between the buy-and-hold return of the respective stock and that of a size and book-to-market matching portfolio. The dummy variable DELAYED equals 1 if IBES disseminates the earnings news with a delay of at least one trading day (i.e., if the time lag between the activation date and the announcement date is positive), and 0 if IBES disseminates the earnings news immediately on the day of the earnings announcement (i.e., if the time lag is zero). Earnings announcements are sorted into SUE_DECILE every calendar quarter based on the earnings surprise. In columns 3 to 6, the variables EXTRA_ITEMS, SIZE_DECILE, BM_DECILE, INSTITUTIONAL, SHARE_TURNOVER, LOG_ANALYSTS, DISPERSION, EPS_VOLATILITY, EPS_PERSISTENCE, REPORTING_LAG, and ANNOUNCEMENTS_DECILE are included as controls but not reported. All controls are also interacted with the variable SUE_DECILE (not reported). Appendix C provides detailed descriptions of all control variables. Standard errors are clustered at the firm level. *t*-statistics are provided in parentheses. *, **, *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Abnormal return [0] (%)	CAR [+1,+61] (%)	Abnormal return [0] (%)	CAR [+1,+61] (%)	Abnormal return [0] (%)	CAR [+1,+61] (%)
	(1)	(2)	(3)	(4)	(5)	(6)
DELAYED	1.542*** (7.39)	-1.729** (-2.20)	1.620*** (7.76)	-1.861** (-2.38)	1.866*** (7.17)	-1.135 (-1.21)
SUE_DECILE	0.663*** (27.76)	0.658*** (8.75)	0.758*** (7.44)	0.974*** (2.72)	0.751*** (6.11)	1.068** (2.50)
DELAYED × SUE_DECILE	-0.306*** (-9.32)	0.255** (1.97)	-0.314*** (-9.58)	0.271** (2.11)	-0.337*** (-8.54)	0.195 (1.28)
Constant	-3.505*** (-24.48)	-2.953*** (-6.66)	-3.922*** (-6.31)	-5.893*** (-2.86)	-1.179 (-1.27)	9.023*** (2.66)
Controls	No	No	Yes	Yes	Yes	Yes
Firm fixed effects	No	No	No	No	Yes	Yes
Year fixed effects	No	No	No	No	Yes	Yes
Month fixed effects	No	No	No	No	Yes	Yes
Day-of-week fixed effects	No	No	No	No	Yes	Yes
Adj. R ²	0.083	0.013	0.091	0.017	0.117	0.071
N	16,425	16,214	16,425	16,214	16,425	16,214

Table IA9: Descriptive Statistics on Analyst Recommendations

Table IA9 presents the distribution of analyst recommendations. I restrict the sample to recommendation upgrades and downgrades. I characterize an analyst recommendation as an upgrade (e.g., from buy to strong buy) or downgrade (e.g., from buy to hold) by comparing the stock's current with its previous recommendation. The time lag is the difference in trading days between the activation date and the announcement date in First Call. The announcement date refers to the date on which the analyst recommendation is made. The activation date refers to the date on which the information is entered into the First Call database. I eliminate observations with missing time lags, observations with negative time lags, and observations with time lags that exceed 61 trading days.

	N	Mean	Time lag between activation date and announcement date									
			0	% of N	1	% of N	2-5	% of N	6-10	% of N	11-61	% of N
1995	10,140	2.040	8,065	79.5%	465	4.6%	318	3.1%	606	6.0%	686	6.8%
1996	10,865	0.287	10,347	95.2%	419	3.9%	12	0.1%	15	0.1%	72	0.7%
1997	12,342	0.287	10,815	87.6%	1,425	11.5%	28	0.2%	13	0.1%	61	0.5%
1998	14,685	0.076	14,230	96.9%	395	2.7%	27	0.2%	12	0.1%	21	0.1%
1999	11,619	0.276	10,273	88.4%	872	7.5%	400	3.4%	52	0.4%	22	0.2%
2000	11,648	0.293	10,462	89.8%	856	7.3%	235	2.0%	46	0.4%	49	0.4%
2001	14,280	0.531	12,529	87.7%	905	6.3%	560	3.9%	116	0.8%	170	1.2%
2002	15,436	1.396	10,980	71.1%	2,552	16.5%	820	5.3%	514	3.3%	570	3.7%
2003	14,442	0.499	11,710	81.1%	2,006	13.9%	527	3.6%	88	0.6%	111	0.8%
2004	13,037	0.357	10,822	83.0%	1,706	13.1%	368	2.8%	79	0.6%	62	0.5%
2005	13,015	0.506	9,953	76.5%	2,600	20.0%	312	2.4%	66	0.5%	84	0.6%
2006	13,708	0.625	9,047	66.0%	3,901	28.5%	585	4.3%	47	0.3%	128	0.9%
2007	14,010	0.495	11,282	80.5%	2,209	15.8%	329	2.3%	56	0.4%	134	1.0%
2008	16,869	0.588	11,527	68.3%	4,352	25.8%	746	4.4%	129	0.8%	115	0.7%
2009	12,542	0.744	7,737	61.7%	3,258	26.0%	1,384	11.0%	120	1.0%	43	0.3%
2010	11,054	0.794	6,339	57.3%	3,015	27.3%	1,609	14.6%	47	0.4%	44	0.4%
2011	5,898	0.971	3,238	54.9%	1,567	26.6%	1,013	17.2%	18	0.3%	62	1.1%
Total	215,590	0.612	169,356	78.6%	32,503	15.1%	9,273	4.3%	2,024	0.9%	2,434	1.1%

Figure IA1: Abnormal Returns around the Day of the Delayed Dissemination Using IBES Data

Figure IA1 shows average abnormal return spreads between the most positive earnings surprises ($SUE_DECILE = 8$, $SUE_DECILE = 9$, or $SUE_DECILE = 10$) and the most negative earnings surprises ($SUE_DECILE = 1$, $SUE_DECILE = 2$, or $SUE_DECILE = 3$) around the day of the delayed dissemination by the Institutional Brokers' Estimate System (IBES). I focus on the 60-day post-earnings-announcement window. Thus, this analysis does not include the earnings announcement date. The sample is restricted to earnings announcements that are unique to the IBES database and that are disseminated with a delay of at least 2 trading days. Moreover, I exclude earnings announcements when there was a forecast issued on the respective stock in the 3-day window around the delayed dissemination by IBES. Day $t = 0$ is the day of the delayed dissemination. Abnormal returns are calculated as the difference between the raw return of the respective stock and that of a size and book-to-market matching portfolio. I show point estimates together with 95% confidence intervals.

