

**Internet Appendix for**  
**“Earnings growth and acquisition returns: Do investors gamble in the takeover market?”**

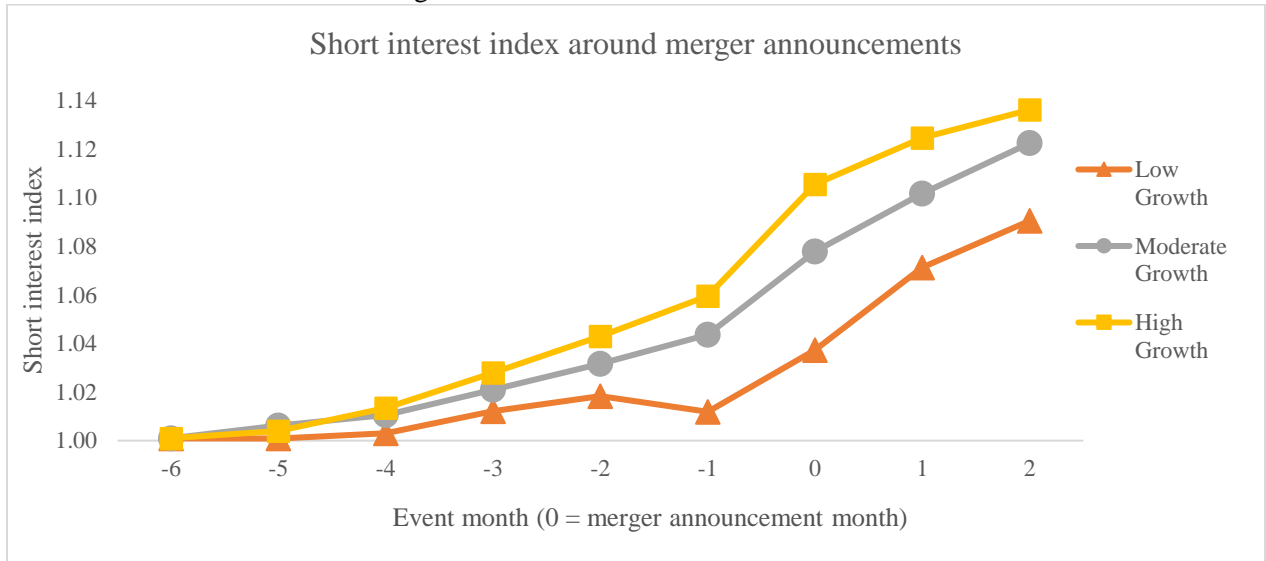
Abstract

This online appendix provides results for robustness tests and additional analyses described in “Earnings growth and acquisition returns: Do investors gamble in the takeover market?”

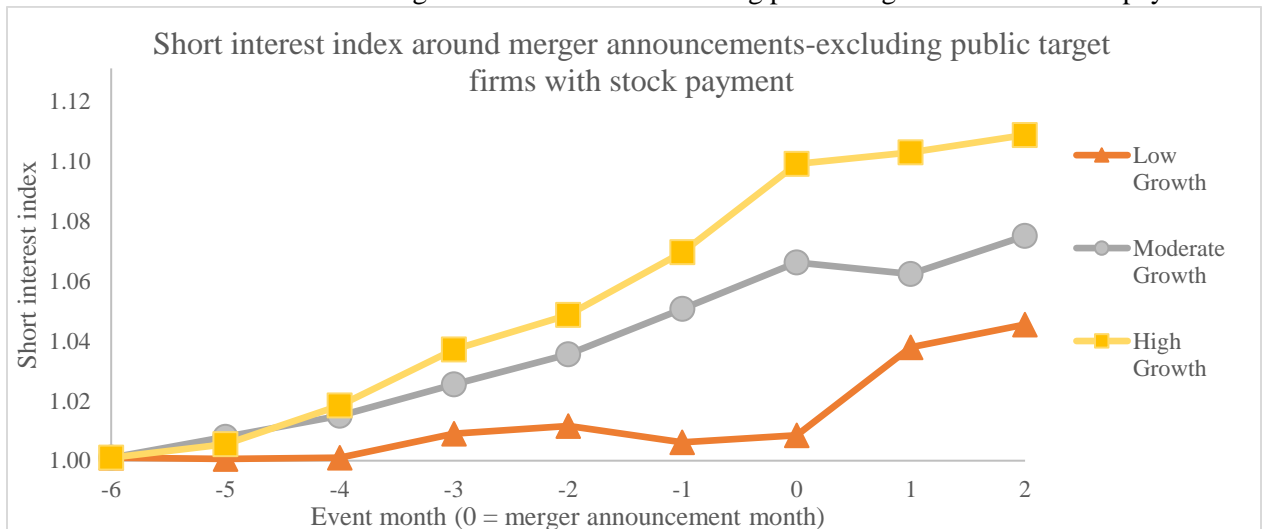
### Internet Appendix Figure 1. Bidder short interest around merger announcement

This figure displays bidder short interest as a fraction of short interest measured 6 months prior to the merger announcement for three different earnings growth groups. We place bidders into three groups: low, moderate, and high growth. We define bidders as low growth bidders if their growth deciles are 3 or lower. We define bidders as high growth bidders if their growth deciles are 8 or higher. We define the rest of the bidders as moderate growth bidders. Panel A shows short interest fraction around merger announcements for the full sample. Panel B shows the short interest fraction around merger announcement for the subsample excluding public target firms with stock payment. The sample includes deals announced between 1981 and 2017.

Panel A. Short interest around merger announcements

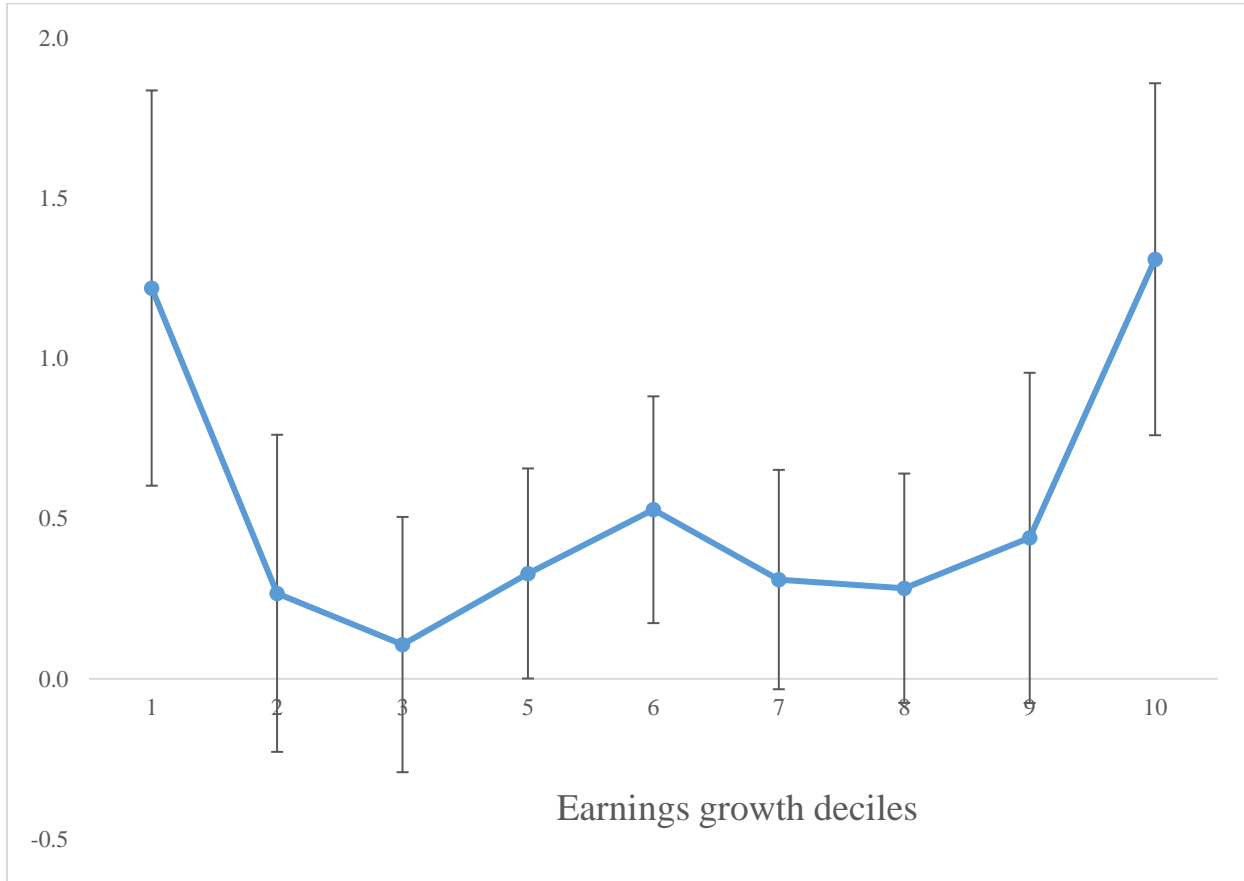


Panel B. Short interest around merger announcements excluding public target firms with stock payment



**Internet Appendix Figure 2. Bidder CARs and earnings growth deciles: Plots of regression coefficients**

This figure shows the effect of bidder CAR (-2, 2) for different deciles earnings group. We repeat the regression from Table 2 Model (4) which controls deal and firm characteristics and industry and year fixed effects, replacing the two continuous variables,  $|EG|^-$  and  $|EG|^+$ , with 10 earnings growth decile indicator variables. The resulting coefficients on these indicators are plotted with vertical bars indicating 95% confidence intervals. The decile group with the most neutral earnings growth is omitted (i.e., decile 4). The sample includes deals announced between 1981 and 2017.



## Internet Appendix Table 1. Sample selection and characteristics

The sample consists of 37,004 deals announced between 1981 and 2017. Panel A describes the formation of our sample from the Thomson One Banker SDC. Panel B presents the temporal distribution for the full sample.

### Panel A. Sample selection

Sample filters	# of deals
Date announced: January 1, 1981, to December 31, 2017, and US acquirer	284,467
Acquirer public status: P	137,866
Form of the deal: AA, AM, M	100,362
Deal value (\$ mil): 1	48,159
Percentage of shares held at announcement: less than 50%	48,098
Return data on CRSP and at least two year accounting data on Compustat	37,004

Panel B: Sample distribution over time

Year	Number of deals	Percent
1981	306	0.83%
1982	337	0.91%
1983	494	1.33%
1984	605	1.63%
1985	402	1.09%
1986	505	1.36%
1987	475	1.28%
1988	522	1.41%
1989	605	1.63%
1990	474	1.28%
1991	543	1.47%
1992	756	2.04%
1993	1,062	2.87%
1994	1,298	3.51%
1995	1,437	3.88%
1996	1,847	4.99%
1997	2,528	6.83%
1998	2,564	6.93%
1999	1,865	5.04%
2000	1,590	4.30%
2001	1,185	3.20%
2002	1,129	3.05%
2003	1,122	3.03%
2004	1,234	3.33%
2005	1,319	3.56%
2006	1,310	3.54%
2007	1,200	3.24%
2008	820	2.22%
2009	559	1.51%
2010	769	2.08%
2011	758	2.05%
2012	881	2.38%
2013	857	2.32%
2014	1,047	2.83%
2015	971	2.62%
2016	796	2.15%
2017	832	2.25%
<b>Total</b>	<b>37,004</b>	<b>100.00%</b>

## Internet Appendix Table 2. Correlation matrix

This table shows the correlation matrix. The sample consists of 37,004 deals announced between 1981 and 2017. Definitions of all variables are provided in Appendix A. \*\*\*, \*\*, and \* correspond to statistical significance at the 1%, 5%, and 10% levels, respectively.

Var.	(1) EG	(2) B/M	(3) Bidder size	(4) Stock payment	(5) Cash payment	(6) Private target	(7) Relative size	(8) Lever- age	(9) Same industry	(10) Tender offer	(11) Toe- hold	(12) Hostile	(13) Prior return	(14) With- drawn
(1)	1													
(2)	-0.053***	1												
(3)	-0.007	0.033***	1											
(4)	-0.003	-0.097***	0.016***	1										
(5)	0.012**	-0.026***	0.059***	-0.263***	1									
(6)	-0.003	-0.028***	-0.151***	-0.245***	-0.012**	1								
(7)	-0.012**	0.077***	-0.027***	0.028***	-0.026***	-0.039***	1							
(8)	-0.002	-0.023***	-0.054***	-0.192***	-0.016***	0.072***	0.024***	1						
(9)	-0.006	-0.066***	-0.019***	0.085***	-0.008	-0.071***	-0.003	-0.059***	1					
(10)	0.000	0.025***	0.036***	-0.072***	0.158***	-0.318***	0.014***	-0.006	-0.015***	1				
(11)	0.004	0.028***	0.027***	-0.004	0.020***	-0.143***	0.012**	0.037***	-0.020***	0.110***	1			
(12)	0.005	0.032***	0.005	-0.016***	0.040***	-0.210***	0.064***	0.016***	0.007	0.236***	0.149***	1		
(13)	0.054***	-0.099***	-0.042***	0.088***	-0.033***	0.017***	0.031***	-0.018***	0.032***	-0.018***	-0.013**	-0.014***	1	
(14)	0.003	0.060***	-0.002	0.071***	-0.017***	-0.220***	0.057***	-0.007	0.002	0.071***	0.072***	0.397***	-0.024***	1

### Internet Appendix Table 3. Including industry\*year fixed effects

This table replicates our baseline regression results by including industry\*year fixed effects. *Controls* include all the control variables in Tables 2 & 3. Definitions of all variables are provided in the Appendix A. Heteroskedasticity-consistent standard errors are reported in parentheses. \*\*\*, \*\*, \* correspond to statistical significance at the 1%, 5% and 10% levels, respectively. Returns are in percent.

	(1)	(2)	(3)
Dep. Var.	CAR(-2, +2)	CAR(3, 23)	CAR(3, 44)
EG  <sup>-</sup>	2.658*** (4.00)	-1.197** (-2.23)	-2.482*** (-3.30)
EG  <sup>+</sup>	1.948*** (3.99)	0.316 (0.76)	0.788 (1.36)
Controls	Yes	Yes	Yes
Industry*Year FE	Yes	Yes	Yes
Observations	35,202	35,201	35,201
R-squared	0.079	0.066	0.086

#### Internet Appendix Table 4. Earnings growth and firm characteristics

This table compares bidder main characteristics among different earnings growth groups. We report three statistics: mean, median, and standard deviation. The last two columns present the tests of differences in means and medians between the subsamples of bidders with high and low earnings growth. We define bidders as low growth bidders if their growth deciles are 3 or lower. We define bidders as high growth bidders if their growth deciles are 8 or higher. We define the rest of the bidders as moderate growth bidders. Definitions of all variables are provided in Appendix A. \*\*\*, \*\*, \* correspond to statistical significance at the 1%, 5% and 10% levels, respectively.

	Low growth bidders			Moderate growth bidders			High growth bidders			Test of difference	
	Mean (1)	Median (2)	St.Dev (3)	Mean (4)	Median (5)	St.Dev (6)	Mean (7)	Median (8)	St.Dev (9)	t-test (7)-(1)	Wilcoxon test (8)-(2)
EG	-0.193	-0.070	0.315	0.022	0.023	0.018	0.259	0.113	0.386	0.452***	0.183***
B/M	0.630	0.535	0.470	0.593	0.532	0.345	0.490	0.387	0.402	-0.140***	-0.148***
Bidder size	4589.47	505.72	15097.19	7218.77	1155.93	19075.52	4242.02	431.84	13586.26	-347.45*	-73.88***
Log(bidder size)	6.225	6.226	2.204	7.101	7.053	2.000	6.139	6.068	2.189	-0.086***	-0.158***
Private target	0.806	1.000	0.395	0.769	1.000	0.422	0.806	1.000	0.396	-0.001	-0.000
Prior return	9.016	-2.082	59.256	9.435	3.389	40.496	22.108	7.755	64.320	13.092***	9.837***
Max return	0.162	0.116	0.205	0.101	0.08	0.083	0.156	0.117	0.197	-0.006**	0.001
Return volatility	0.034	0.027	0.025	0.023	0.020	0.013	0.033	0.028	0.022	-0.001***	0.001**
Retail holdings	0.588	0.609	0.326	0.564	0.555	0.318	0.563	0.566	0.322	-0.025***	-0.043***
Lottery index	74.111	73.000	28.825	59.206	57.000	24.229	71.565	69.000	27.797	-2.546***	-4.000***
Analyst coverage	7.159	4.417	7.785	8.609	5.917	8.34	7.621	5.000	7.956	0.463***	0.583***



### Internet Appendix Table 5. Target volatility and acquisition returns

This table reports OLS regression results on the relationship between the bidders' earnings growth and bidder CARs in subsamples split based on target firms' expected volatility. Target firm's expected volatility is defined as the annualized median idiosyncratic volatility in the target's FF48 industry, calculated from the residual of a Fama and French (1993) three-factor model estimated on daily data over the three months prior to the month of the merger announcement. All control variables in Tables 2 & 3 are included but not reported for brevity. Tests of differences in coefficients between the two subsamples are performed and p-values from the chi-square test are reported. Definitions of all variables are provided in Appendix A. Heteroskedasticity-consistent standard errors are reported in parentheses. \*\*\*, \*\*, \* correspond to statistical significance at the 1%, 5% and 10% levels, respectively. Returns are in percent.

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. Var.	CAR (-2,+2)		CAR (3, 23)		CAR (3, 44)	
Sample	Low Volatility	High	Low	High	Low	High
EG  <sup>-</sup>	2.480*** (3.21)	2.187** (2.25)	-0.402 (-0.55)	-1.487** (-2.12)	-0.647 (-0.61)	-2.848*** (-2.86)
EG  <sup>+</sup>	1.812*** (2.91)	1.803*** (2.67)	0.884* (1.72)	0.238 (0.41)	0.746 (1.06)	1.254 (1.58)
P-values from chi-square test of differences in coefficients						
EG  <sup>-</sup>	0.81		0.28		0.13	
EG  <sup>+</sup>	0.99		0.40		0.63	
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	17,593	17,609	17,592	17,609	17,592	17,609
R-squared	0.051	0.048	0.019	0.013	0.029	0.021

## Internet Appendix Table 6. Short interest around acquisition announcements

This table presents results on short selling activities around merger announcements. Panel A reports univariate statistics of short interest around merger announcement dates. We sort bidders into three groups, low growth, moderate growth, and high growth firms, based on their earnings growths, and compare the short interest pre- and post-merger announcement. The last two columns present the tests of differences in means and medians, respectively. We define bidders as low growth bidders if their growth deciles are 3 or lower. We define bidders as high growth bidders if their growth deciles are 8 or higher. We define the rest of bidders as moderate growth bidders. Panel B is similar to Panel A except that we exclude deals that involve public targets and are also financed by stock. Panel C compares statistics of short interest pre-merger announcement and one-month after the merger announcement. \*\*\*, \*\*, \* correspond to statistical significance at the 1%, 5% and 10% levels, respectively.

Panel A. Short interest pre- and post- merger announcement

Full sample	Pre-announcement		Post-announcement		Post-pre	
	Mean	Median	Mean	Median	t-test	Wilcoxon test
Bidders growth type	(1)	(2)	(3)	(4)	(3)-(1)	(4)-(2)
Low growth	0.0190	0.0014	0.0195	0.0016	0.0005***	0.0002***
Moderate	0.0180	0.0037	0.0187	0.0043	0.0007***	0.0006***
High growth	0.0203	0.0023	0.0214	0.0028	0.0011***	0.0005***

Panel B. Short interest pre- and post- merger announcement excluding public targets with stock

	Pre-announcement		Post-announcement		Post-pre	
	Mean	Median	Mean	Median	t-test	Wilcoxon test
Bidders growth type	(1)	(2)	(3)	(4)	(3)-(1)	(4)-(2)
Low growth	0.0190	0.0014	0.0192	0.0015	0.0002	0.0001
Moderate	0.0185	0.0038	0.0187	0.0042	0.0003***	0.0004***
High growth	0.0205	0.0023	0.0211	0.0027	0.0006***	0.0004***

Panel C. Short interest before and one-month after merger announcement

Full sample	Pre-announcement		Post one-month		Post one-month-pre	
	Mean	Median	Mean	Median	t-test	Wilcoxon test
Bidders growth type	(1)	(2)	(3)	(4)	(3)-(1)	(4)-(2)
Low growth	0.0190	0.0014	0.0195	0.0016	0.0004***	0.0002***
Moderate	0.0180	0.0037	0.0189	0.0043	0.0004***	0.0005***
High growth	0.0203	0.0023	0.0212	0.0027	0.0007***	0.0004***

### Internet Appendix Table 7. Robustness tests: Excluding withdrawn deals

This table replicates our baseline regression results by excluding withdrawn deals. *Controls* include all the control variables in Tables 2 & 3. Definitions of all variables are provided in the Appendix A. Heteroskedasticity-consistent standard errors are reported in parentheses. \*\*\*, \*\*, \* correspond to statistical significance at the 1%, 5% and 10% levels, respectively. Returns are in percent.

	(1)	(2)	(3)
Dep. Var.	CAR(-2, +2)	CAR(3, 23)	CAR(3, 44)
EG  <sup>-</sup>	2.248*** (3.42)	-1.086** (-2.02)	-2.195*** (-2.85)
EG  <sup>+</sup>	2.129*** (4.29)	0.770* (1.83)	1.010* (1.74)
Controls	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Observations	33,316	33,315	33,315
R-squared	0.037	0.010	0.014

**Internet Appendix Table 8. Robustness tests: Excluding deals announced shortly after an earnings announcement**

This table replicates our baseline regression results by excluding merger announcements that occur within a month following an earnings announcement. *Controls* include all the control variables in Tables 2 & 3. Definitions of all variables are provided in the Appendix A. Heteroskedasticity-consistent standard errors are reported in parentheses. \*\*\*, \*\*, \* correspond to statistical significance at the 1%, 5% and 10% levels, respectively. Returns are in percent.

	(1)	(2)	(3)
Dep. Var.	CAR(-2, +2)	CAR(3, 23)	CAR(3, 44)
EG  <sup>-</sup>	2.960*** (4.04)	-1.709*** (-2.81)	-2.315*** (-2.65)
EG  <sup>+</sup>	1.655*** (3.07)	0.354 (0.74)	1.276* (1.95)
Controls	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Observations	25,231	25,230	25,230
R-squared	0.042	0.012	0.017

### Internet Appendix Table 9. Robustness tests: Using alternative measures for firm performance

This table repeats the main regression results by using alternative measures for the main independent variable. In Panel A, we measure earnings growth (*EG1*) as the change in income before extraordinary items divided by the book value of equity. In Panel B, we use an alternative scaler and measure the earnings growth (*EG2*) as the change in net income divided by the book value of total assets. In Panel C, we use analysts' earnings forecasts (instead of the previous year's earnings) as an alternative benchmark and measure the earnings surprise (*ES*) as the difference between bidders' actual earnings and analyst forecast earnings, scaled by the stock price. In Panel D, we use cash flows to measure recent firm's recent performance and compute the cash flow growth (*CFG*) as the change in the operating cash flows divided by the book value of total assets. In Panel E and F, we use bidders' past six-month and twelve-month return prior to the merger announcement to measure firm's recent performance, respectively. *Controls* include all the control variables in Tables 2 & 3. Definitions of all variables are provided in Appendix A. Heteroskedasticity-consistent standard errors are reported in parentheses. \*\*\*, \*\*, \* correspond to statistical significance at the 1%, 5% and 10% levels, respectively. Returns are in percent.

#### Panel A. EG1

	(1)	(2)	(3)
Dep. Var.	CAR (-2,+2)	CAR (3, 23)	CAR (3, 44)
EG1  <sup>-</sup>	2.584*** (3.54)	-1.478** (-2.48)	-2.831*** (-3.34)
EG1  <sup>+</sup>	2.210*** (4.14)	0.520 (1.09)	0.761 (1.17)
Controls	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Observations	33,316	33,315	33,315
R-squared	0.037	0.010	0.014

#### Panel B. EG2

	(1)	(2)	(3)
Dep. Var.	CAR (-2,+2)	CAR (3, 23)	CAR (3, 44)
EG2  <sup>-</sup>	6.425*** (3.37)	-6.420*** (-3.95)	-12.879*** (-5.63)
EG2  <sup>+</sup>	4.960*** (3.35)	-0.203 (-0.15)	-0.076 (-0.04)
Controls	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Observations	35,200	35,199	35,199
R-squared	0.038	0.011	0.017

Panel C. Analysts' earnings forecast as an alternative benchmark

	(1)	(2)	(3)
Dep. Var.	CAR (-2,+2)	CAR (3, 23)	CAR (3, 44)
ES  <sup>-</sup>	46.552*** (2.66)	-44.790*** (-2.68)	-64.306*** (-2.80)
ES  <sup>+</sup>	22.516 (1.09)	-18.309 (-0.75)	-12.486 (-0.36)
Controls	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Observations	27,185	27,184	27,184
R-squared	0.034	0.011	0.014

Panel D. Growth in the operating cash flows

	(1)	(2)	(3)
Dep. Var.	CAR (-2,+2)	CAR (3, 23)	CAR (3, 44)
CFG  <sup>-</sup>	7.833*** (3.00)	-9.407*** (-4.15)	-19.506*** (-6.29)
CFG  <sup>+</sup>	5.393*** (2.75)	1.553 (0.83)	4.856* (1.80)
Controls	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Observations	28,644	28,643	28,643
R-squared	0.035	0.012	0.019

Panel E. Past six-month return

	(1)	(2)	(3)
Dep. Var.	CAR (-2,+2)	CAR (3, 23)	CAR (3, 44)
Past_6m  <sup>-</sup>	4.323*** (4.66)	-3.357*** (-4.04)	-5.501*** (-4.82)
Past_6m  <sup>+</sup>	0.604** (1.96)	-0.253 (-0.74)	-0.461 (-0.95)
Controls	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Observations	35,169	35,168	35,168
R-squared	0.038	0.010	0.015

Panel F. Past twelve-month return

	(1)	(2)	(3)
Dep. Var.	CAR (-2,+2)	CAR (3, 23)	CAR (3, 44)
Past_12m  <sup>-</sup>	4.843*** (5.96)	-3.794*** (-5.65)	-5.368*** (-5.74)
Past_12m  <sup>+</sup>	0.494*** (3.30)	0.075 (0.42)	0.296 (1.17)
Controls	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Observations	35,169	35,168	35,168
R-squared	0.040	0.012	0.016

**Internet Appendix Table 10. Robustness tests: Using a quadratic regression analysis**

This table presents results using a quadratic regression analysis of bidder CARs on bidder earnings growth. *Controls* include all the control variables in Tables 2 & 3. Definitions of all variables are provided in Appendix A. Heteroskedasticity-consistent standard errors are reported in parentheses. \*\*\*, \*\*, \* correspond to statistical significance at the 1%, 5% and 10% levels, respectively. Returns are in percent.

	(1)	(2)	(3)
Dep. Var.	CAR(-2, +2)	CAR(-2, +2)	CAR(-2, +2)
EG	-0.659*	-0.539	-0.498
	(-1.91)	(-1.47)	(-1.36)
(EG) <sup>2</sup>	1.978***	1.549***	1.478***
	(7.37)	(5.14)	(4.84)
Controls	No	Yes	Yes
Year FE	No	No	Yes
Industry FE	No	No	Yes
Observations	36,343	35,202	35,202
R-squared	0.005	0.033	0.039



### Internet Appendix Table 11. Alternative explanation: Stock visibility and investor attention

This table reports OLS regression results on the relationship between the bidders' earnings growth and bidder CARs over different event windows in subsamples split based on proxies for investor attention. Panel A reports results for bidders with high/low residual analyst coverage. The residual analyst coverage is obtained by running the following regression and getting the residual.

$$\ln(1 + numest_{i,t}) = \alpha_i + \beta_i \ln(\text{bidder size}_{i,t}) + \varepsilon_{i,t}$$

where  $numest_{i,t}$  is the number of analysts following firm  $i$  in month  $t$ . Panel B presents results for deals that are announced on Monday and Tuesday and for deals that are announced on Wednesday through Sunday. Panel C separates bidders based on whether they are in the S&P 500 index when they have merger announcements. All control variables in Tables 2 & 3 are included but not reported for brevity. Tests of differences in coefficients between the two subsamples are performed and p-values from the chi-square test are reported. Definitions of all variables are provided in Appendix A. Heteroskedasticity-consistent standard errors are reported in parentheses. \*\*\*, \*\*, \* correspond to statistical significance at the 1%, 5% and 10% levels, respectively. Returns are in percent.

Panel A. OLS regression analysis for bidders with high/low residual analyst coverage

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. Var.	CAR (-2,+2)		CAR (3, 23)		CAR (3, 44)	
Sample	Low analyst coverage	High	Low	High	Low	High
EG  <sup>-</sup>	2.860*** (3.33)	0.697 (0.99)	-1.369** (-2.15)	0.410 (0.45)	-2.050** (-2.22)	-1.265 (-0.98)
EG  <sup>+</sup>	2.368*** (3.83)	-0.183 (-0.41)	0.611 (1.20)	1.056* (1.68)	1.239* (1.76)	1.847** (2.05)
P-values from chi-square test of differences in coefficients						
EG  <sup>-</sup>	0.05**		0.11		0.62	
EG  <sup>+</sup>	<0.01***		0.58		0.59	
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	17,338	17,864	17,337	17,864	17,337	17,864
R-squared	0.043	0.032	0.021	0.009	0.027	0.012

Panel B. Deals announced on Monday and Tuesday vs. deals announced on Wednesday through Sunday

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. Var.	CAR (-2,+2)		CAR (3, 23)		CAR (3, 44)	
Sample	Wed, Thu, Fri, Sat, Sun	Mon, Tues	Wed, Thu, Fri, Sat, Sun	Mon, Tues	Wed, Thu, Fri, Sat, Sun	Mon, Tues
EG  <sup>-</sup>	3.193*** (3.47)	1.804** (2.38)	-1.716** (-2.45)	-0.706 (-0.90)	-2.361** (-2.36)	-2.270** (-2.02)
EG  <sup>+</sup>	1.716*** (2.88)	2.161*** (2.95)	0.517 (0.99)	0.258 (0.40)	1.024 (1.40)	0.846 (0.96)
P-values from chi-square test of differences in coefficients						
EG  <sup>-</sup>	0.24		0.33		0.95	
EG  <sup>+</sup>	0.64		0.75		0.88	
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	18,927	16,275	18,926	16,275	18,926	16,275
R-squared	0.048	0.041	0.012	0.015	0.017	0.020

Panel C. SP500 bidders vs. Non-SP500 bidders

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. Var.	CAR (-2,+2)		CAR (3, 23)		CAR (3, 44)	
Sample	Not SP500	SP500	Not SP500	SP500	Not SP500	SP500
EG  <sup>-</sup>	2.776*** (4.07)	-0.950 (-1.43)	-1.229** (-2.21)	0.879 (0.85)	-2.375*** (-2.98)	1.243 (0.75)
EG  <sup>+</sup>	2.123*** (4.19)	-0.853 (-1.49)	0.450 (1.03)	1.363 (1.37)	0.951 (1.58)	2.833* (1.95)
P-values from chi-square test of differences in coefficients						
EG  <sup>-</sup>	<0.01***		0.07*		0.05**	
EG  <sup>+</sup>	<0.01***		0.39		0.23	
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	29,040	6,162	29,039	6,162	29,039	6,162
R-squared	0.040	0.041	0.013	0.017	0.019	0.022

## Internet Appendix Table 12. Alternative explanation: Investor overconfidence

This table reports OLS regression results on the relationship between the bidders' earnings growth and bidder CARs over different event windows in subsamples split based on proxies for investor overconfidence. Panel A reports results for bidders with high/low abnormal trading in the year prior to the merger announcement. We estimate abnormal trading as the residual from the regression of daily turnover on the market value-weighted daily return.

$$\text{Daily turnover}_{i,t} = \alpha_i + \beta_i(\text{Vwret}_t) + \varepsilon_{i,t}$$

Panel B presents results for bidders with high/low past returns in the year prior to the merger announcement. Tests of differences in coefficients between the two subsamples are performed and p-values from the chi-square test are reported. All control variables in Tables 2 & 3 are included but not reported for brevity. Definitions of all variables are provided in Appendix A. Heteroskedasticity-consistent standard errors are reported in parentheses. \*\*\*, \*\*, \* correspond to statistical significance at the 1%, 5% and 10% levels, respectively. Returns are in percent.

Panel A. OLS regression analysis for bidders with high/low abnormal trading

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. Var.	CAR (-2,+2)		CAR (3, 23)		CAR (3, 44)	
Sample	Low abnormal turnover	High	Low	High	Low	High
EG  <sup>-</sup>	2.259*** (3.32)	2.628** (2.32)	-1.493** (-2.09)	-0.986 (-1.30)	-3.256*** (-3.11)	-1.390 (-1.31)
EG  <sup>+</sup>	1.982*** (3.00)	1.723** (2.51)	0.143 (0.25)	0.685 (1.19)	0.268 (0.34)	1.584** (1.96)
P-values from chi-square test of differences in coefficients						
EG  <sup>-</sup>	0.78		0.63		0.21	
EG  <sup>+</sup>	0.79		0.50		0.24	
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	17,441	17,655	17,441	17,654	17,441	17,654
R-squared	0.043	0.056	0.012	0.016	0.018	0.018

Panel B. OLS regression analysis for bidders with high/low past returns

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. Var.	CAR (-2,+2)		CAR (3, 23)		CAR (3, 44)	
Sample	Low past return	High	Low	High	Low	High
EG  <sup>-</sup>	2.756*** (2.75)	1.486** (2.27)	-1.282* (-1.77)	-0.020 (-0.03)	-2.867*** (-2.79)	0.039 (0.04)
EG  <sup>+</sup>	3.232*** (3.82)	0.330 (0.85)	-0.066 (-0.11)	1.352** (2.41)	0.704 (0.86)	1.875** (2.42)
P-values from chi-square test of differences in coefficients						
EG  <sup>-</sup>	0.29		0.23		0.05**	
EG  <sup>+</sup>	<0.01***		0.08*		0.30	
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	17,550	17,652	17,550	17,651	17,550	17,651
R-squared	0.050	0.039	0.020	0.013	0.031	0.019