Online Appendix A: Supplementary Evidence

Appendix Table OA1: Balance Test in the Full sample

This table shows the mean value of the control variables within each value range of $S\_\Delta EPS_{as}$ in the left three columns. In the last two columns, we report the result of discontinuity tests. In particular, we use the sample of deals with $S\_\Delta EPS_{as}$ in the range of [-0.002, 0.002], and regress each variable on the if-stock dilutive dummy, $S\_\Delta EPS_{as}$, and their interaction, controlling for the other control variables, and industry and year fixed effects. The regression setting resembles Column 6 of Table 2. The estimate of the coefficient on the indicator of if-stock dilution and its t-statistic (using robust standard errors clustered on years) are reported in the last two columns, respectively.

	$S\_\Delta EPS_{as}$			RD Test	
	[-0.002, 0)	0	(0, 0.002]	Coeff.	T-stat
Deal Value/Acq Mktcap	0.178	0.156	0.303	-0.078**	(-2.49)
Deal Premium	0.328	0.303	0.294	0.041	(1.39)
MTB Acq	1.874	1.930	2.308	-0.007	(-0.04)
Leverage Acq	0.186	0.179	0.173	0.028	(1.67)
Cash Holding Acq	0.195	0.184	0.242	0.006	(0.22)
Tangibility Acq	0.134	0.156	0.158	0.006	(0.40)
Firm Size Tar	5.928	5.564	5.803	0.120	(1.13)
MTB Tar	1.682	1.587	1.711	0.006	(0.00)
Leverage Tar	0.137	0.175	0.161	-0.027	(-1.45)
Cash Holding Tar	0.228	0.201	0.234	-0.023	(-1.06)
Tangibility Tar	0.132	0.158	0.155	0.008	(0.80)
Num. Obs.	583	106	248	825	

Appendix Table OA2: Robustness of Results to Different Minimum Deal Values

This table reports the robustness for Table 2 results using the sample of deals with transaction value no less than 10 million (Panel A) or 50 million US dollars (Panel B). The regression settings resemble Table 2, and all the control variables in Table 2 are included though not reported for brevity. T-statistics are reported in parentheses, using robust standard errors clustered on years. *, **, and *** indicate statistical significance at 10%, 5%, and 1% level, respectively.

Panel A: Sample of deals with transaction value no less than 10 million dollars

Sample:	Full Sample				$S\_\Delta EPS_{as}$ in [-0.002, 0.002]		
	1	2	3	4	5	6	7
	Proportion of Cash in Deal Consideration						
$Dilutive_{AS}$	0.125***	0.094***	0.048**	0.066**	0.174***	0.132***	0.138***
	(4.69)	(3.87)	(2.52)	(2.68)	(3.98)	(2.89)	(3.06)
Observations	2269	1953	1741	1605	932	824	791
	Dummy Indicator of Paying Cash						
$Dilutive_{AS}$	0.112***	0.092***	0.051	0.062**	0.120***	0.091*	0.099**
	(4.04)	(3.24)	(1.70)	(2.09)	(2.80)	(1.86)	(2.15)
Observations	2269	1953	1741	1605	932	824	791
Polynomials of $S\_\Delta EPS_{as}$	3-order with interactions				1-order with interaction		
Firm & Deal Characteristics	NO	YES	YES	YES	NO	YES	YES
P/E Ratio	NO	NO	NO	YES	NO	NO	YES
Industry FE and Year FE	YES	YES	NO	YES	YES	YES	YES
AcqSIC1 x TarSIC1 x Year	NO	NO	YES	NO	NO	NO	NO

Panel B: Sample of deals with transaction value no less than 50 million dollars

Sample:	Full Sample				$S\_\Delta EPS_{as}$ in [-0.002, 0.002]		
	1	2	3	4	5	6	7
	Proportion of Cash in Deal Consideration						
$Dilutive_{AS}$	0.108***	0.071**	0.007	0.067**	0.194***	0.134**	0.141***
	(3.26)	(2.45)	(0.31)	(2.11)	(4.03)	(2.69)	(2.90)
Observations	1955	1702	1505	1457	840	752	727
	Dummy Indicator of Paying Cash						
$Dilutive_{AS}$	0.090**	0.065*	0.001	0.068*	0.132**	0.093*	0.101**
	(2.40)	(1.90)	(0.03)	(1.75)	(2.74)	(1.79)	(2.06)
Observations	1955	1702	1505	1457	840	752	727
Polynomials of $S\_\Delta EPS_{as}$	3-order with interactions				1-order with interaction		
Firm & Deal Characteristics	NO	YES	YES	YES	NO	YES	YES
P/E Ratio	NO	NO	NO	YES	NO	NO	YES
Industry FE and Year FE	YES	YES	NO	YES	YES	YES	YES
AcqSIC1 x TarSIC1 x Year	NO	NO	YES	NO	NO	NO	NO

Appendix Table OA3: Robustness to Local Estimation of Discontinuity

Panel A shows the OLS regression results using a sample of deals with $S\_\Delta EPS_{as}$ in the small range of [-0.001, 0.001]. The regression setting resembles the last three columns of Table 2. Panel B reports the non-parametric estimator of the RD effects. In particular, we follow Calonico, Cattaneo and Titiunik (2014) to choose the optimal bandwidths and estimate the local-polynomial regressions with triangular kernels on each side of zero $S\_\Delta EPS_{as}$. We control for the deal and firm characteristics, and report the bias-corrected point estimate of the RD effect and the corresponding z-statistics. The standard errors are clustered on year level using the nearest-neighbor method following Abadie and Imbens (2008). All variables are winsorized at 1 percentile on both sides. *, **, and *** indicate statistical significance at 10%, 5%, and 1% levels, respectively.

Panel A: OLS regression

	Paying Cash Dummy			Cash Percent		
Sample:	$S\_\Delta EPS_{as}$ in [-0.001, 0.001]					
	1	2	3	4	5	6
Dilutive$_{AS}$	0.14**	0.11	0.11*	0.18***	0.15**	0.15**
	(2.55)	(1.68)	(1.77)	(3.29)	(2.55)	(2.59)
$S\_\Delta EPS_{as}$	-8.86	127.7	155.4	9.15	150.4	176.1
	(-0.07)	(1.10)	(1.36)	(0.07)	(1.43)	(1.66)
Dilutive$_{AS}$ x $S\_\Delta EPS_{as}$	65.8	-166.2	-204.3	66.1	-152.7	-177.5
	(0.41)	(-0.96)	(-1.23)	(0.40)	(-0.97)	(-1.20)
Deal Value/Acq Mktcap		-0.47***	-0.47***		-0.53***	-0.52***
		(-4.78)	(-4.69)		(-6.00)	(-5.74)
Deal Premium		0.024	0.028		0.058	0.073
		(0.36)	(0.43)		(0.85)	(1.08)
P/E Ratio (Tar/Acq)			0.026			0.041**
			(1.48)			(2.42)
MTB Acq		-0.022	-0.022		-0.020	-0.017
		(-1.21)	(-1.24)		(-1.09)	(-0.90)
Leverage Acq		0.043	0.027		0.10	0.079
		(0.25)	(0.14)		(0.62)	(0.47)
Cash Holding Acq		0.14*	0.18***		0.066	0.087*
		(1.77)	(3.01)		(0.93)	(1.88)
Tangibility Acq		0.25	0.24		0.21	0.18
		(1.54)	(1.40)		(1.22)	(1.03)
Firm Size Tar		-0.0042	-0.0083		-0.014	-0.017
		(-0.31)	(-0.53)		(-0.93)	(-1.13)
MTB Tar		-0.029*	-0.033*		-0.024*	-0.030*
		(-1.90)	(-1.83)		(-1.71)	(-1.89)
Leverage Tar		0.15	0.21**		0.20**	0.27***
		(1.50)	(2.10)		(2.31)	(2.96)
Cash Holding Tar		0.12	0.13		0.12	0.14
		(1.12)	(1.18)		(1.18)	(1.30)
Tangibility Tar		-0.016	-0.088		-0.078	-0.13
		(-0.09)	(-0.43)		(-0.36)	(-0.56)
Constant	0.42***	0.46***	0.44***	0.34***	0.45***	0.41***
	(12.18)	(4.16)	(3.75)	(9.39)	(4.17)	(3.75)
Polynomials of $S\_\Delta EPS_{as}$			1-order			
Industry FE and Year FE	YES	YES	YES	YES	YES	YES
Observations	584	523	506	584	523	506
Adjusted R-squared	0.264	0.333	0.341	0.280	0.376	0.386

Panel B: Non-parametric estimation

	Paying Cash Dummy		Cash Percent	
Dilutive~AS~	0.137*	0.145*	0.133*	0.146*
	(1.765)	(1.760)	(1.900)	(1.864)
Deal and Firm Characteristics	YES	YES	YES	YES
Order Local Polynomial terms(p)	1	2	1	2
Order bias(q)	2	3	2	3
BW est. left(h)	0.011	0.014	0.011	0.013
BW est. right(h)	0.008	0.010	0.011	0.011
Num. Obs.	1610	1610	1610	1610
Effective Num. Obs. left	970	1023	972	1008
Effective Num. Obs. right	443	446	453	453

Appendix Table OA4: Deal and Acquirer Characteristics of the Cash Deals vs. Mixed Deals

This table reports the mean values of each variable for the cash deals in column (1) and for the mixed deals in column (2). The last two columns report the average difference between column (1) and (2), and the T-statistics of the difference. *Firm Size* is the natural logarithm of the total assets before deal announcement. The *HP (WW) index* are the financial constraint index following Hadlock and Pierce (2010) (Whited and Wu (2006)). *Financial Constrained%* refers to the proportion of the acquirers that are associated with the financial constraint index value higher than the median level for the SIC two-digit industry in the year before the deal announcement. *[Excess Cash>0]%* is the proportion of deals with the acquirer having a positive level of excess cash holding before the deal announcement. All variables are winsorized at 1 percentile on both sides. *, **, and *** indicate statistical significance at 10%, 5%, and 1% levels, respectively.

	Cash Deals	Mixed Deals	Difference	
	1	2	1 - 2	T-stat
Deal Value/Acq Mktcap	0.189	0.393	-0.205***	(-11.328)
Acquirer Firm Size	7.925	7.614	0.311***	(2.810)
Target Firm Size	5.469	6.470	-1.000***	(-8.652)
Financial Constrained% (HP Index)	22.3%	33.1%	-10.8%***	(-4.205)
Financial Constrained% (WW Index)	15.9%	31.5%	-15.6%***	(-6.116)
[Excess Cash>0]%	37.6%	36.0%	1.6%	(0.597)
Observations	1007	459	1466	

Appendix Table OA5: Deal Completion and Shareholder Voting

This table shows the regression of deal completion dummy on the indicator of registered share issuance exceeding 20%, controlling for up to the second-order polynomial terms of the gap between share issuance and 0.2, and their interactions with the dummy indicator of share issuance exceeding 20%. We also control for the same set of deal and firm characteristics and fixed effects as in Table 2. The sample includes the stock deals for which we could find information on the number of shares registered with stock exchanges from S-4 filings and proxy statements. The left (right) two columns use the sample of dilutive (accretive) stock deals according to our combined EPS measure. T-statistics are reported in parentheses, using robust standard errors clustered on years. *, **, and *** indicate statistical significance at 10%, 5%, and 1% level, respectively.

		Completion			
	Sample:	*Dilutive Stock Deals*		*Accretive Stock Deals*	
D[Registered Share>20%]		-0.095*	-0.084*	0.00072	-0.019
		(-1.79)	(-1.81)	(0.02)	(-0.48)
Deal Value/Acq Mktcap			0.048		-0.032
			(1.41)		(-0.39)
Deal Premium			0.034		0.019
			(1.46)		(0.60)
MTB Acq			-0.0053		0.012
			(-1.10)		(1.72)
Leverage Acq			0.14***		0.084*
			(3.01)		(1.78)
Cash Holding Acq			0.015		-0.0083
			(0.47)		(-0.58)
Tangibility Acq			-0.032		0.098
			(-0.41)		(1.01)
Firm Size Tar			0.000033		-0.0097
			(0.00)		(-1.54)
MTB Tar			0.0091		-0.0033
			(1.21)		(-0.48)
Leverage Tar			0.024		0.10
			(0.35)		(1.67)
Cash Holding Tar			-0.023		0.017
			(-0.29)		(0.45)
Tangibility Tar			0.070		-0.11
			(0.61)		(-0.96)
Constant		1.06***	1.00***	0.98***	0.99***
		(29.66)	(17.76)	(26.96)	(19.04)
Polynomials of (Registered Share Pct minus 20%)		2-order with interaction terms			
Industry FE and Year FE		YES	YES	YES	YES
Observations		595	516	325	279
Adjusted R-squared		0.047	0.053	0.034	0.090

Appendix Table OA6: Balance Test for Stock Deals

This table shows the mean values of the control variables within each value range of $S\_\Delta EPS_{as}$ in the left three columns. The last two columns report the discontinuity test results for each variable. In particular, for these tests, we use the sample of stock deals with $S\_\Delta EPS_{as}$ in the range of [-0.002, 0.002], and regress each variable on the if-stock dilutive dummy, $S\_\Delta EPS_{as}$, and their interaction, controlling for the other control variables, and industry and year fixed effects. The regression setting resembles column 6 of Table 2. The estimate of the coefficient on the indicator of if-stock dilution and its t-statistic (using robust standard errors clustered on years) are reported in the last two columns, respectively.

	$S\_\Delta EPS_{as}$			RD Test	
	[-0.002, 0)	0	(0, 0.002]	Coeff.	T-stat
Deal Value/Acq Mktcap	0.235	0.167	0.363	-0.068	(-1.54)
Deal Premium	0.299	0.266	0.305	0.043	(1.03)
MTB Acq	2.120	2.113	2.839	0.023	(0.07)
Leverage Acq	0.175	0.165	0.168	0.011	(0.48)
Cash Holding Acq	0.226	0.165	0.257	0.11*	(1.99)
Tangibility Acq	0.117	0.146	0.146	0.015*	(1.73)
Firm Size Tar	6.153	5.678	5.705	0.10	(0.72)
MTB Tar	1.642	1.593	2.101	-0.017	(-0.07)
Leverage Tar	0.139	0.142	0.146	0.0038	(0.25)
Cash Holding Tar	0.177	0.202	0.251	-0.022	(-0.94)
Tangibility Tar	0.121	0.150	0.134	0.016	(1.25)
Observations	265	64	156	417	

Appendix Table OA7: Summary of If-stock Accretive/Dilutive Deals in Two Sub-periods

This table reports the number and fraction of if-stock dilutive (accretive/neutral) deals that are paid in cash, stock, and a mixture of these during the periods before and after 2001. (Since we have rounded EPS numbers to the nearest cent, there are some deals with zero change in the all-stock EPS, which are referred to as the if-stock neutral deals.) The numbers in the parentheses are the row percentages, and the numbers in the brackets are the column percentages.

Panel A: 1991-2001

	If-stock Accretive/Neutral	If-stock Dilutive	Total
Cash	78	227	305
	(25.57%)	(74.43%)	
	[17.61%]	[26.09%]	
Mix	78	227	305
	(25.57%)	(74.43%)	
	[17.61%]	[26.09%]	
Stock	341	585	926
	(36.83%)	(63.17%)	
	[76.98%]	[67.24%]	
Total	443	870	1313
	(33.74%)	(66.26%)	

Panel B: 2002-2017

	If-stock Accretive/Neutral	If-stock Dilutive	Total
Cash	68	397	465
	(14.62%)	(85.38%)	
	[31.78%]	[51.42%]	
Mix	48	163	211
	(22.75%)	(77.25%)	
	[22.43%]	[21.11%]	
Stock	98	212	310
	(31.61%)	(68.39%)	
	[45.79%]	[27.46%]	
Total	214	772	986
	(21.70%)	(78.30%)	

Appendix Table OA8: Summary of High-buys-Low/ Low-buys-High in Two Sub-periods

This table reports the number and proportion of cash, mixed, and stock deals based on the relative P/E ratio of acquirer and target during the periods before and after 2001. P/E is measured as the ratio of stock price two days before the deal announcement date and the median forecast of annual EPS before the announcement. When both the target and acquirer have a positive P/E, we separate them into two groups according to their relative levels. The numbers in the brackets are the column percentages.

Panel A: 1991-2001

	Non-positive or missing P/E	Both Positive P/E		Total
	P/E Acq ≤ 0 and/or P/E Tar ≤ 0	High-buys-Low (P/E Acq > P/E Tar)	Low-buys-High (P/E Acq ≤ P/E Tar)	
Cash	166 [19.28%]	124 [20.03%]	127 [25.25%]	417
Mix	82 [9.52%]	34 [5.49%]	27 [5.37%]	143
Stock	613 [71.20%]	461 [74.47%]	349 [69.38%]	1423
Total	861	619	503	1983

Panel B: 2002-2017

	Non-positive or missing P/E	Both Positive P/E		Total
	P/E Acq ≤ 0 and/or P/E Tar ≤ 0	High-buys-Low (P/E Acq > P/E Tar)	Low-buys-High (P/E Acq ≤ P/E Tar)	
Cash	209 [39.43%]	122 [39.35%]	259 [52.22%]	590
Mix	126 [23.77%]	80 [25.81%]	110 [22.18%]	316
Stock	195 [36.79%]	108 [34.84%]	127 [25.60%]	430
Total	530	310	496	1336

Appendix Table OA9: Premium for Stock Deals Involving "High-Buys-Low" in Two Sub-periods

This table reports the subsample results for Column 3 and 6 of Table 9. The sample (of pure stock deals with acquirer's P/E ratio higher than the target's P/E) is split into two according whether the deal announcement was before or after 2001. T-statistics are reported in parentheses, using robust standard errors clustered on years. *, **, and *** indicate statistical significance at 10%, 5%, and 1% level, respectively.

	Premium		Tar CAR [-1, +1]	
Subsample:	1991-2001	2002-2017	1991-2001	2002-2017
	1	2	3	4
Accretive	-0.13***	-0.13**	-0.092***	-0.042
	(-5.70)	(-2.78)	(-4.31)	(-0.78)
Deal Value/Acq Mktcap	0.12**	-0.033	-0.00019	-0.073
	(2.78)	(-0.55)	(-0.01)	(-1.72)
P/E Ratio (Tar/Acq)	-0.67***	-0.81***	-0.45***	-0.37**
	(-11.00)	(-4.19)	(-8.11)	(-2.82)
MTB Acq	-0.0078	0.033	-0.0035	0.019
	(-0.59)	(0.84)	(-0.57)	(1.52)
Leverage Acq	-0.13**	0.22	-0.18**	0.086
	(-2.57)	(1.45)	(-2.39)	(0.96)
Cash Holding Acq	-0.028	-0.12	-0.032	0.013
	(-0.46)	(-0.97)	(-0.85)	(0.13)
Tangibility Acq	-0.16	-0.53**	-0.20*	-0.34**
	(-1.57)	(-2.52)	(-1.94)	(-2.77)
Firm Size Tar	-0.019**	0.013	-0.00043	-0.0051
	(-2.66)	(0.64)	(-0.05)	(-0.48)
MTB Tar	-0.013	-0.092**	-0.0069	-0.036
	(-1.76)	(-2.50)	(-0.68)	(-1.49)
Leverage Tar	0.076	-0.14	0.028	0.050
	(1.03)	(-0.88)	(0.67)	(0.56)
Cash Holding Tar	0.094	0.19*	-0.016	0.13
	(1.54)	(1.91)	(-0.42)	(1.20)
Tangibility Tar	0.17*	0.44***	0.20**	0.22**
	(2.05)	(3.38)	(2.24)	(2.40)
Constant	1.04***	0.99***	0.68***	0.63***
	(10.32)	(11.71)	(8.14)	(8.83)
Polynomials of S_ΔEPS	3-order with interactions			
Industry FE and Year FE	YES	YES	YES	YES
Observations	358	95	360	95
Adjusted R-squared	0.284	0.633	0.254	0.560

Appendix Table OA10: Acquirers' Market Reaction for Pure Stock Deals in Two Sub-periods

This table reports the subsample results for Column 6 of Table 5. Acquirer market reaction to deal announcements is regressed on the dummy indicator of EPS accretion, controlling for up to the third polynomial terms of $S\_\Delta EPS$ and their interactions with the accretion dummy. T-statistics are reported in parentheses, using robust standard errors clustered on years. *, **, and *** indicate statistical significance at 10%, 5%, and 1% level, respectively.
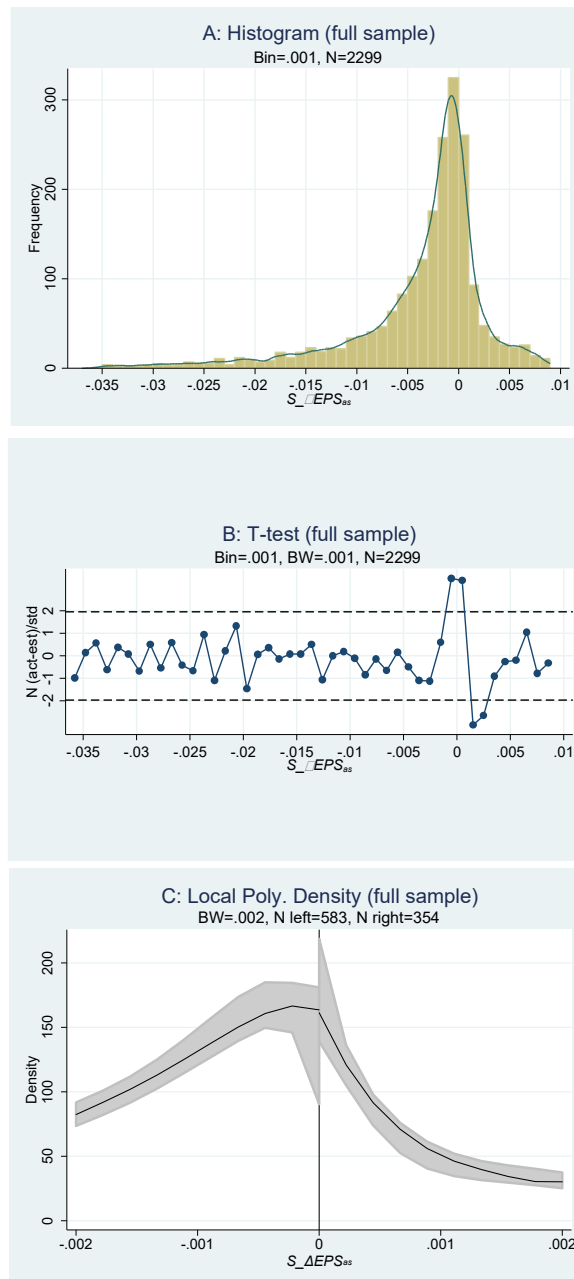
		Acquirer CAR [-1, +1]		Acquirer CAR [-1, C]	
	Subsample:	1991-2001	2002-2017	1991-2001	2002-2017
		1	2	3	4
Accretive		0.020**	-0.0087	-0.051	-0.033
		(2.51)	(-0.63)	(-1.41)	(-0.71)
Deal Premium		-0.030**	-0.047**	-0.019	-0.28**
		(-2.55)	(-2.33)	(-0.42)	(-2.28)
High Buys Low		-0.014**	-0.021**	-0.00057	0.074
		(-2.52)	(-2.51)	(-0.03)	(1.39)
Deal Value/Acq Mktcap		-0.029*	0.037**	-0.12***	-0.074
		(-2.15)	(2.20)	(-5.05)	(-1.04)
P/E Ratio (Tar/Acq)		0.0066***	-0.0067	-0.023	-0.022
		(4.97)	(-0.99)	(-1.45)	(-1.51)
MTB Acq		0.00019	-0.0055	0.013	-0.035
		(0.13)	(-0.80)	(1.46)	(-0.83)
Leverage Acq		0.0010	0.024	0.037	0.12
		(0.04)	(0.64)	(0.76)	(0.69)
Cash Holding Acq		-0.021	-0.022	-0.038	-0.13
		(-1.39)	(-0.50)	(-1.01)	(-0.86)
Tangibility Acq		-0.056**	-0.0019	-0.072	-0.066
		(-2.51)	(-0.02)	(-0.64)	(-0.20)
Firm Size Tar		-0.00084	-0.0025	0.0074	-0.010
		(-0.40)	(-0.72)	(0.91)	(-0.54)
MTB Tar		-0.0013	0.0034	-0.030	0.040
		(-0.62)	(0.42)	(-1.81)	(1.01)
Leverage Acq		0.0031	-0.030	0.041	-0.32***
		(0.33)	(-1.14)	(0.65)	(-3.04)
Cash Holding Tar		-0.036	0.0037	0.0011	-0.30**
		(-1.44)	(0.09)	(0.02)	(-2.29)
Tangibility Tar		0.042*	0.046	0.059	-0.24
		(2.11)	(1.01)	(0.41)	(-1.12)
Constant		0.0049	0.025	-0.012	0.15
		(0.31)	(0.66)	(-0.14)	(0.92)
Polynomials of $S\_\Delta EPS$		3-order with interactions			
Industry FE and Year FE		YES	YES	YES	YES
Observations		615	207	615	207
Adjusted R-squared		0.121	0.150	0.121	0.057

Appendix Table OA11: Total Shareholder Gains in Two Sub-periods

This table reports the subsample results for Table 6. CAR [-42, C] is regressed on an indicator for an if-stock dilutive deal, the proportion of cash in deal consideration (or the indicator of cash and mixed deals), and the respective interaction terms. All the control variables in Table 9 are included but omitted for brevity. T-statistics are reported in parentheses, using robust standard errors clustered on years. *, **, and *** indicate statistical significance at 10%, 5%, and 1% levels, respectively.

Panel A: 1991-2001

	CAR[-42, C] Combined		CAR[-42,C] Acquirer		CAR[-42,C] Target	
	1	2	3	4	5	6
$Dilutive_{AS}$	0.025	0.015	0.0061	-0.0045	0.069**	0.056*
	(1.08)	(0.65)	(0.24)	(-0.18)	(2.55)	(1.89)
Cash%	0.087*		0.085*		-0.041	
	(1.83)		(1.83)		(-0.86)	
$Dilutive_{AS}$ x Cash%	-0.075		-0.070		0.044	
	(-1.28)		(-1.24)		(0.70)	
Paying Cash		0.024		0.018		-0.089*
		(0.64)		(0.43)		(-2.06)
$Dilutive_{AS}$ x Paying Cash		-0.019		-0.010		0.096
		(-0.44)		(-0.23)		(1.60)
Firm and Deal Characteristics	YES	YES	YES	YES	YES	YES
Year FE and Industry FE	YES	YES	YES	YES	YES	YES
Observations	859	859	860	860	883	883
Adjusted R-squared	0.070	0.066	0.068	0.064	0.116	0.119

Panel B: 2002-2017

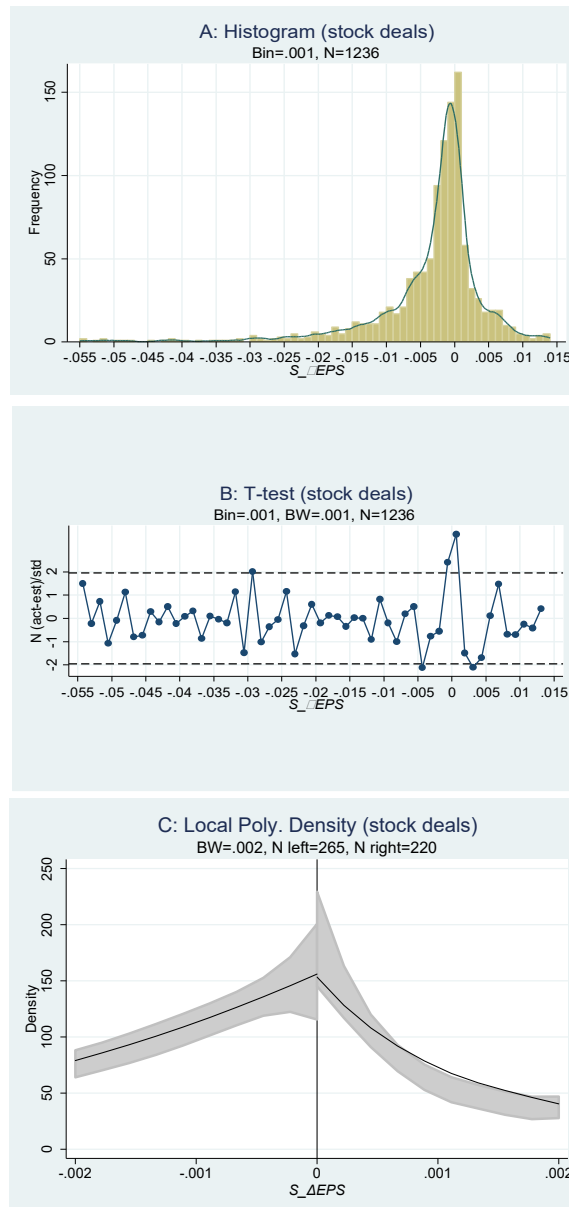|	CAR[-42,C] Combined		CAR[-42,C] Acquirer		CAR[-42,C] Target	
	1	2	3	4	5	6
$Dilutive_{AS}$	0.023	0.037	0.021	0.033	-0.0016	0.024
	(0.63)	(0.98)	(0.55)	(0.81)	(-0.03)	(0.45)
Cash%	0.15***		0.15***		0.10	
	(4.27)		(3.67)		(1.42)	
$Dilutive_{AS}$ x Cash%	-0.093**		-0.10*		0.036	
	(-2.13)		(-2.11)		(0.53)	
Paying Cash		0.094***		0.091**		0.064
		(3.04)		(2.49)		(1.14)
$Dilutive_{AS}$ x Paying Cash		-0.087**		-0.093**		-0.0014
		(-2.47)		(-2.19)		(-0.03)
Firm and Deal Characteristics	YES	YES	YES	YES	YES	YES
Year FE and Industry FE	YES	YES	YES	YES	YES	YES
Observations	721	721	722	722	729	729
Adjusted R-squared	0.075	0.065	0.053	0.045	0.110	0.099

Appendix Figure OA1: Distribution of $S\_\Delta EPS_{as}$ in the full sample

This figure shows the distribution of $S\_\Delta EPS_{as}$ in the full sample. In Panel A, we choose the optimal bin size following Bollen and Pool (2009) and report the histogram and a fitted smooth density function. In Panel B, we report the t-statistics for the difference between the actual number of observations in each bin and the estimated number of observations from the smooth density curve as shown in Panel A. The dashed lines indicate the 95% confidence interval for the t-tests. In Panel C, we show the local-polynomial density estimation following Cattaneo, Jansson, and Ma (2019). We report in the subtitle the bandwidth used for estimation and the number of observations within the bandwidth on both sides of zero. The shaded area indicates the 95% confidence interval calculated using the bias-corrected robust errors. For the histogram, the running variable has been truncated at 5 percentile on both sides; for the tests, the running variable is winsorized at 2.5 percentile on both sides but the outlier bins are not shown in the graph.

A: Histogram (full sample)
Bin=.001, N=2299

B: T-test (full sample)
Bin=.001, BW=.001, N=2299

C: Local Poly. Density (full sample)
BW=.002, N left=583, N right=354

Appendix Figure OA2: Distribution of $S\_\Delta EPS_{as}$ among stock deals

This figure shows the distribution of $S\_\Delta EPS_{as}$ among pure stock deals. In Panel A, we choose the optimal bin size following Bollen and Pool (2009) and report the histogram and a fitted smooth density function. In Panel B, we report the t-statistics for the difference between the actual number of observations in each bin and the estimated number of observations from the smooth density curve as shown in Panel A. The dashed lines indicate the 95% confidence interval for the t-tests. In Panel C, we show the local-polynomial density estimation following Cattaneo, Jansson, and Ma (2019). We report in the subtitle the bandwidth used for estimation and the number of observations within the bandwidth on both sides of zero. The shaded area indicates the 95% confidence interval calculated using the bias-corrected robust errors. For the histogram, the running variable has been truncated at 5 percentile on both sides; for the tests, the running variable is winsorized at 2.5 percentile on both sides but the outlier bins are not shown in the graph.

Online Appendix B: EPS-friendly Cash

Consider a deal that offers "c dollars and x shares of the combined firm per target firm's common stock." An all-stock (all-cash) deal could be regarded as having $c = 0$ ($x = 0$). The intended EPS is as follows.

$$(1) \quad e_{int} = \frac{e_T n + e_B m - (1-\tau)E(R)C}{n \cdot x + m}$$

where C refers to the total amount of cash payment ($C = c \cdot n$), x is the *actual* exchange ratio of the deal, τ refers to the tax rate (0.34 for our sample period), and $E(R)$ is the estimated interest rate for financing the cash. Since it is unclear which interest rate the shareholders and/or managers consider relevant in determining the EPS impact of cash, we use two alternative measures. The first is the three-month treasury bill rate, which arguably captures the investors' perceived interest cost for financing the cash payment. As a robustness check, we also construct an alternative measure that considers the individual acquirer's borrowing cost if the deal is financed with cash.[1]

One way to understand the EPS impact of cash payment is to regard an M&A deal as if it were done in two steps. In the first step, stock is issued to target investors and two firms are merged. The combined EPS is exactly the e_{as} as constructed in the previous section. In the second step, the combined firm repurchases a fraction of the shares issued in the first

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[1] In particular, we assume that if the acquirer holds excess cash benchmarked to the average level of comparable firms, the opportunity cost of paying out the excess cash is the three-month treasury rate; for the component of cash consideration that exceeds the acquirer's excess cash holding, the interest rate is the same as the ratio of acquirer's interest expense and total lagged debt before the deal announcement. The excess cash holding is estimated using the residual term of OLS regression of the firm's cash holding on firm characteristics and industry and year fixed effects following Pinkowitz, Stulz, and Williamson (2015).

step. The "post-repurchase" EPS is e_{int} as constructed above. When the expected cost of paying cash is relatively high, repurchasing cannot improve EPS, i.e., $e_{int} < e_{as}$.[2]

When $e_{int} > e_{as}$ ($e_{int} < e_{as}$) we denote the deal's cash payment as *EPS-friendly* (*EPS-unfriendly*). Since both e_{int} and e_{as} are rounded to the nearest cent before comparison, there will also be some deals with $e_{int} = e_{as}$, which are referred to as *EPS-neutral* cash. We will examine whether the cash and mixed deals with *S_ΔEPS_as* slightly below zero are indeed "EPS-friendly," and whether the discontinuity around zero *S_ΔEPS_as* is driven by EPS-friendly cash payments. Moreover, if the firm proceeds with a mixed deal, deal consideration (i.e., C and x) should be adjusted for the intended EPS to appear just accretive, but not deeply accretive since cash payment is costly.

If cash is indeed paid to alleviate dilution for these deals, we should find the majority of these deals having an intended EPS higher than the all-stock EPS. In Panel A of Appendix Table OB1, we find that only 5.2 percent of the deals with *S_ΔEPS_as* in the range of [-0.002, 0) are paid with EPS-unfriendly cash, namely, having an intended EPS (using Treasury rate to proxy the cost of financing cash payment through debt) smaller than the all-stock EPS. On the other hand, the fraction of EPS-unfriendly cash is larger in the other ranges of *S_ΔEPS_as*.[3] Overall, only 12 percent of cash and mixed deals involve EPS-unfriendly cash. These combined results strongly suggest that the disproportional fraction of cash and mixed deals

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[2] $e_{int} < e_{as}$ is equivalent to $\frac{e_{as}}{p_r} < (1-\tau)E(R)$, where p_r is the price per share paid to repurchase the stocks.

[3] In particular, 20.9 percent of deals with *S_ΔEPS_as* in the range of (0, +0.002] are associated with EPS-unfriendly cash, suggesting that for accretive deals, there is room to accommodate EPS-unfriendly cash payments if there are reasons for either party to prefer not doing a deal entirely in stock. For example, fluctuations in the acquirer's price between deal announcement and completion would have a smaller effect on the premium if the deal is done partially in cash, reducing the likelihood of renegotiation and delay.

with $S\_\Delta EPS_{as}$ right below zero are likely motivated by the need to mitigate EPS dilution, even after we consider the interest expenses of financing the cash.

We further investigate whether the discontinuity in the baseline result is driven by the cash payments that improve EPS even accounting for interest costs. In Panel B of Table OB1, we replace the independent variable in Table 2 with the indicator of EPS-friendly cash or mixed deals, and find confirming evidence. In contrast, we find no discontinuity around the zero value of $S\_\Delta EPS_{as}$ for the propensity of doing an EPS-unfriendly cash or mixed deals relative to equity deals.

We further show in Appendix Table OB2 that these results are robust to using the acquirer's implied interest cost, rather than the Treasury-bill rate, to calculate the intended EPS.

Appendix Table OB1: EPS-friendly and EPS-unfriendly Cash

For each cash or mixed deal, we compare the all-stock EPS with the intended EPS (according to actual deal terms and using the treasury rate to proxy the interest cost of financing cash), and denote the cash payment as EPS-friendly (EPS-unfriendly) if the all-stock EPS is smaller than (larger than) the intended EPS. Since both EPS numbers are rounded to the nearest cent before comparison, there are some deals with intended EPS equal to the all-stock EPS, which are referred to as the EPS-neutral cash/mixed deals. Panel A shows the number and fraction of each type of deal within each range of $S\_\Delta EPS_{as}$. In Panel B, we examine the discontinuous propensity of paying cash that is EPS friendly/unfriendly. We replace the dependent variable in Table2 with (1) the indicator of EPS-friendly cash and mixed deals, (2) the indicator EPS-unfriendly cash and mixed deals (leaving the EPS-friendly cash and mixed deals out of the sample). The specification resembles Panel B of Table 2. The control variables are included but not reported.

Panel A: Distribution of cash and mixed deals

$S\_\Delta EPS_{as}$	EPS-unfriendly $e_{int} < e_{as}$	EPS-neutral $e_{int} = e_{as}$	EPS-friendly $e_{int} > e_{as}$	Total Num. of cash and mixed deals
<-0.002	49	22	438	509
	(9.63%)	(4.32%)	(86.05%)	
[-0.002, 0.000)	16	22	269	307
	(5.21%)	(7.17%)	(87.62%)	
0	3	9	30	42
	(7.14%	(21.43%)	(71.43%)	
(0.000, 0.002]	19	5	67	91
	(20.88%)	(5.49%)	(73.63%	
>0.002	28	4	48	80
	(35.00%	(5.00%	(60.00%	
Total	115	62	852	1029
	(11.18%)	(6.03%)	(82.80%)	

Panel B: Propensity of paying cash that is friendly and unfriendly to EPS

Sample:	Full Sample				$S\_\Delta EPS_{as}$ in [-0.002, 0.002]		
	(1) Dummy of EPS-friendly Cash (vs. the Other Deals)						
$Dilutive_{AS}$	0.13***	0.090***	0.042*	0.068**	0.12***	0.082*	0.076*
	(5.00)	(3.46)	(1.76)	(2.61)	(3.60)	(1.87)	(1.77)
Observations	2294	1969	1969	1607	934	825	792
	(2) Dummy of EPS-unfriendly Cash (vs. Equity Deals)						
$Dilutive_{AS}$	-0.011	0.008	0.005	-0.010	-0.031	-0.016	-0.000
	(-0.50)	(0.37)	(0.21)	(-0.52)	(-1.29)	(-0.63)	(-0.01)
Observations	1381	1159	1159	914	533	460	448
Polynomials of $S\_\Delta EPS_{as}$	3-order with interactions				1-order with interaction		
Firm & Deal Characteristics	NO	YES	YES	YES	NO	YES	YES
P/E Ratio	NO	NO	NO	YES	NO	NO	YES
Industry FE and Year FE	YES	YES	NO	YES	YES	YES	YES
AcqSIC1 x TarSIC1 x Year	NO	NO	YES	NO	NO	NO	NO

Appendix Table OB2: Robustness of EPS-friendly Cash

This is a robustness check for Table OB1 using the acquirer's implied interest cost to measure the intended EPS. In particular, the implied interest rate is assumed to be the treasury rate if the acquirer's excess cash holding exceeds the deal's cash amount; for the (component of) cash consideration that exceeds the acquirer's excess cash holding, the interest rate is the same as the ratio of acquirer's interest expense and total lagged debt during the year before the deal announcement. We denote the cash payment as EPS-friendly (EPS-unfriendly) if the all-stock EPS is smaller than (larger than) the intended EPS. Before the comparison, both EPS metrics have been rounded to the nearest cent. Panel A shows the number and fraction of each type of deal within each range of $S\_\Delta EPS_{as}$. In Panel B, we examine the discontinuous propensity of paying cash that is EPS friendly/unfriendly. We replace the dependent variable in Table2 with (1) the indicator of EPS-friendly cash and mixed deals, (2) the indicator EPS-unfriendly cash and mixed deals (leaving the EPS-friendly cash and mixed deals out of the sample). The specification resembles Panel B of Table 2. Control variables and fixed effects are included but not reported.

Panel A: Distribution of cash and mixed deals

$S\_\Delta EPS_{as}$	EPS-unfriendly $e_{int} < e_{as}$	EPS-neutral $e_{int} = e_{as}$	EPS-friendly $e_{int} > e_{as}$	Total Num. of cash and mixed deals
<-0.002	125	26	334	485
	(25.77%)	(5.36%)	(68.87%)	
[-0.002, 0.000)	64	30	204	298
	(21.48%)	(10.07%)	(68.46%)	
0	11	8	21	40
	(27.50%)	(20.00%)	(52.50%)	
(0.000, 0.002]	41	3	45	89
	(46.07%)	(3.37%)	(50.56%)	
>0.002	42	3	27	72
	(58.33%)	(4.17%)	(37.50%)	
Total	283	70	631	984
	(28.76%)	(7.11%)	(64.13%)	

Panel B: Propensity of paying cash that is friendly/unfriendly to EPS

Sample:	Full Sample				$S\_\Delta EPS_{as}$ in [-0.002, 0.002]		
	1. Dummy of EPS-friendly Cash (vs. the Other Deals)						
$Dilutive_{AS}$	0.13***	0.091***	0.049**	0.063**	0.11**	0.059	0.054
	(4.77)	(3.62)	(2.10)	(2.26)	(2.60)	(1.24)	(1.21)
Observations	2294	1969	1969	1607	934	825	792
	2. Dummy of EPS-unfriendly Cash (vs. Equity Deals)						
$Dilutive_{AS}$	0.027	0.034	0.015	0.012	0.027	0.044	0.063*
	(1.28)	(1.43)	(0.60)	(0.54)	(0.87)	(1.30)	(1.90)
Observations	1593	1339	1339	1060	623	544	525
Polynomials of $S\_\Delta EPS_{as}$	3-order with interactions				1-order with interaction		
Firm & Deal Characteristics	NO	YES	NO	YES	NO	YES	YES
P/E Ratio	NO	NO	NO	YES	NO	NO	YES
Industry FE and Year FE	YES	YES	NO	YES	YES	YES	YES
AcqSIC1 x TarSIC1 x Year	NO	NO	YES	NO	NO	NO	NO

Online Appendix C: Perturbations in the Offer Price

We implicitly assume that the offer price is not sensitive to the form of payment when we convert the offer price in a deal involving cash to an all-stock exchange ratio, creating the hypothetical all-stock EPS. Such an assumption is appropriate when target shareholders are focused on the deal premium *per se*, and largely ignore deal synergies.[4] However, we show that our results remain unchanged even when we accommodate random perturbations in the offer price within a $\pm 5\%$ range as deal composition changes from one involving cash to an all-stock offer. To do so, the ratio of each offer price divided by the acquirer's price (which is the all-stock exchange ratio) is multiplied by one plus a number that is randomly drawn within a $\pm 5\%$ range, and this latter number replaces the original all-stock exchange ratio. The all-stock exchange ratio for pure stock deals is not changed. This procedure allows for perturbations in not only the offer price, but also the acquirer's stock price before the deal announcement. We recalculate the all-stock change in EPS using the perturbed number. Such differences in the offer price or exchange ratio in the $\pm 5\%$ range are salient for the target; however, our intuition is that since the targets are typically much smaller firms than the acquirers, such perturbations do not produce significant changes in the all-stock combined EPS compared to the one calculated under the assumption that the offer price remains unchanged.[5] As a result, deals that are classified as slightly accretive or

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[4] The widely reported acquisition premium is $xP_B + c - P_T$, where x is the exchange ratio, c is the cash payment per target share, and P_B and P_T are the acquirer and target share prices prior to deal announcement. Different combinations of x and c offering the same premium are not value-neutral for the target and the acquirer when deal synergy is considered.

[5] To see this, recall that the combined EPS for an all-stock deal is $\frac{ne_T + me_B}{nx + m}$. The all-stock offer price is nxP_B. To accommodate a perturbation in the offer price, the exchange ratio x needs to adjust. The market value of the target is nP_T while that of the acquirer is mP_B. If the acquirer is much larger than the target, either P_B is much larger than P_T, or m is much larger than n, or both. In the former case, the required adjustment in x to

dilutive if done in stock would largely remain in these respective bins even after such a perturbation.

Panel A in Online Appendix Table OC1 confirms this intuition. The percentage of deals that do not change their status (as represented in the diagonal cells of the table) is 90 percent or higher. In Panel B, we report our main discontinuity results from Tables 2 and OB1 for 100 replications of these regressions on samples where the offer price of each sample deal is randomly perturbed within the $\pm 5\%$ range. The results are robust to the perturbations.

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accommodate the perturbation is small, and in the latter case, the first term in the denominator of the expression for the combined EPS is small compared to the second term. In either case, the combined EPS changes little.

Appendix Table OC1: Robustness of Discontinuity Results to 5% Perturbations of the Offer Price/the All-stock Exchange Ratio

This table shows the robustness of the discontinuity results in Table 2 and Table OB1 (Panel B) by assigning a 5% random perturbation to the offer price per share when constructing the all-stock exchange ratio. In particular, for cash and mixed deals, after taking the ratio of offer price per share and acquirer share price, we multiply this ratio with one plus a number that is randomly drawn from the uniform distribution from -5% to +5%; for stock deals, the all-stock exchange ratio remains as the actual exchange ratio in deal consideration. Then we measure the all-stock change in EPS using the perturbed number. In Panel A, we report the distribution of $S\_\Delta EPS_{as}$ based on our baseline measure and $S\_\Delta EPS_{as}$ using the perturbed numbers. The sample excludes the deals with *both* $S\_\Delta EPS_{as}$ value outside the [-0.002, +0.002] range. The diagonal items show that a high fraction of slightly accretive (dilutive) deals remain slightly accretive (dilutive) after the random perturbation. In Panel B, we estimate the regressions in Table 2 and Panel B of Table OB1 using $S\_\Delta EPS_{as}$ after perturbation. We repeat the process 100 times for different vectors of random numbers for the sample deals. We report the average estimate of the if-stock dilutive dummy, as well as the 1 and 99 percentile confidence intervals of all the estimates.

Panel A: Distribution of deals with $S\_\Delta EPS_{as}$ close to zero

	$S\_\Delta EPS_{as}$ after 5% perturbation of x_{as}				
$S\_\Delta EPS_{as}$	[-0.002, 0)	0	(0, 0.002]	<-0.002 OR >0.002	Total
[-0.002, 0)	**567**	5	3	10	585
	96.92%	0.85%	0.51%	1.71%	
0	6	**95**	5	0	106
	5.66%	**89.62%**	4.72%	0.00%	
(0, 0.002]	2	4	**234**	8	248
	0.81%	1.61%	**94.35%**	3.23%	
<-0.002 OR >0.002	10	0	1	0	11
	90.91%	0.00%	9.09%	0.00%	
Total	585	104	243	18	950
	61.58%	10.95%	25.58%	0	

Panel B: Regressions using the perturbed $S\_\Delta EPS_{as}$ measure

Sample	Full Sample				$S\_\Delta EPS_{as}$ in [-0.002, 0.002]		
	Proportion of Cash in Deal Consideration						
Dilutive$_{AS}$	0.128	0.092	0.043	0.059	0.147	0.105	0.109
	[0.112, 0.139]	[0.076, 0.105]	[0.027, 0.058]	[0.040, 0.074]	[0.103, 0.195]	[0.061, 0.145]	[0.064, 0.151]
	Dummy of Paying Cash						
Dilutive$_{AS}$	0.114	0.090	0.047	0.055	0.098	0.066	0.072
	[0.099, 0.126]	[0.075, 0.104]	[0.029, 0.068]	[0.039, 0.072]	[0.063, 0.132]	[0.015, 0.098]	[0.020, 0.109]
	Dummy of Paying EPS-friendly Cash						
Dilutive$_{AS}$	0.126	0.087	0.040	0.064	0.098	0.063	0.057
	[0.108, 0.139]	[0.070, 0.100]	[0.019, 0.059]	[0.045, 0.080]	[0.051, 0.140]	[0.021, 0.103]	[0.015, 0.100]
Polynomials of $S\_\Delta EPS_{as}$	3-order				1-order		
Control Variables	NO	YES	YES	YES	NO	YES	YES
PE ratio	NO	NO	NO	YES	NO	NO	YES
Industry FE and Year FE	YES	YES	NO	YES	YES	YES	YES
AcqSIC1 x TarSIC1 x Year FE	NO	NO	YES	NO	NO	NO	NO

Online Appendix D: Distortions to Financial and Investment Policies

As shown in Panel A of Table OD1, during the two quarters before announcing cash and mixed deals, the acquirers' cash holding increases and external financing decreases; however, there is no significant change in cash holding and external financing before the announcements of the all-stock deals. Next, we break down the cash and mixed deals into the if-stock dilutive deals and the other deals. As shown in Column 3, a larger amount of cash paid for the if-stock dilutive deals is associated with a significantly larger increase in cash holding, while the increase in cash holding before the if-stock non-dilutive deals is insignificant. These findings suggest that in planning to pay for an upcoming deal with cash to counter EPS dilution, the acquirer preserves financial capacity by increasing cash holdings. However, cash payments for if-stock non-dilutive deals are likely only made if the acquirer is not cash-constrained, and so there is no evidence that in this situation the acquirer builds up a cash reserve. In Panel B of Table OD1, we examine how financial policies change during the quarter of, and quarter after, deal announcements. We find that while cash holdings do not change, debt and equity issues increase after the announcement of large deals paid in cash, and the magnitude of debt issue increase is much larger than that of equity issue, as would be the case if cash payments are also financed through debt. We also find in Column 6 that there is a larger increase in debt issue for the cash paid to if-stock dilutive deals than the other deals. Taken together, the evidence is consistent with EPS-sensitivity affecting acquirer's financial policies around the deal, which could have long-term influence on the firm's financial flexibility after mergers (Harford, Klasa, and Walcott (2009)).

Next, we examine whether the need to preserve financial capacity before announcing the EPS-driven cash deals is associated with distortions of other firm decisions. In Table OD2, we regress capital expenditures and R&D on known determinants of investment opportunities. We treat R&D separately because R&D is expensed and so directly affects earnings growth and EPS. We find in the left three columns that capital expenditures are significantly lower in the two quarters before announcement for cash and mixed deals, but not for stock deals. When the amount of cash is broken down to payments to the if-stock dilutive and if-stock non-dilutive deals, we find the former has a larger and more significant coefficient. This suggests that the need to preserve financial flexibility for the cash payment to counter EPS dilution is associated with costs in terms of forgone investment. Turning to R&D investment, as shown in the right three columns of Table OD2, while R&D increases before stock deals, it decreases prior to the cash deals.[6]

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[6] Although we find that the decreased R&D is primarily driven by the cash paid to if-stock non-dilutive deals in the full sample period, when we focus on the period since 1995 during which R&D has become more important, the cash paid to if-stock dilutive deals has been equally important (see Column 3 of Table OD3).

Appendix Table OD1: Financial Policies around Deal Announcement

This table reports the OLS regression results using quarterly data. The dependent variables are the change in cash holding, net debt issuance, and net equity issuance for the acquirer. The main independent variables are the total value of each type of deal announced during the future two quarters, i.e., quarter $q+1$ and $q+2$, in Panel A, and the total value of deals announced during the current quarter and the previous quarter, i.e., quarter q and $q-1$, in Panel B. In particular, for column 1, 4, and 7, we measure the total value of stock payment for deals announced during the two quarters; for column 2, 4, and 6, we measure the total value of cash payment for deals announced in the two quarters; for column 3, 6, and 9, we separately measure the total value of cash payment for the if-stock dilutive deals and the value of cash payment for other deals during the corresponding quarters. These payment values are scaled by the acquirer's total assets at the end of quarter q, and the dependent variables are scaled by the acquirer's total assets at the beginning of quarter q. T-statistics are reported in parentheses, using robust standard errors clustered on firms. *, **, and *** indicate statistical significance at 10%, 5%, and 1% levels, respectively.

Panel A: The financial policies before deal announcement

	Cash Increase or Decrease [q]			Net Debt Issue [q]			Net Equity Issue [q]		
	1	2	3	4	5	6	7	8	9
Stock Payment [q+1, q+2]	0.001			0.001			0.001		
	(0.38)			(0.98)			(0.43)		
Cash Payment [q+1, q+2]		0.006**			-0.006*			-0.004*	
		(2.10)			(-1.73)			(-1.86)	
Cash Payment (if-stock dilutive deals)			0.007**			-0.005			-0.003
			(1.96)			(-1.29)			(-1.41)
Cash Payment (if-stock non-dilutive)			0.003			-0.008			-0.009
			(0.74)			(-1.19)			(-1.33)
Tobin's Q [q-1]	0.005***	0.005***	0.005***	0.001***	0.001***	0.001***	0.008***	0.008***	0.008***
	(17.02)	(17.08)	(17.08)	(3.03)	(3.11)	(3.11)	(18.40)	(18.43)	(18.43)
Ln(MktCap) [q-1]	-0.004***	-0.004***	-0.004***	0.002***	0.002***	0.002***	-0.005***	-0.005***	-0.005***
	(-15.13)	(-15.16)	(-15.16)	(6.08)	(6.06)	(6.05)	(-17.17)	(-17.20)	(-17.20)
Excess Ret [q-1]	0.008***	0.008***	0.008***	-0.001**	-0.001**	-0.001**	0.014***	0.014***	0.014***
	(10.48)	(10.49)	(10.49)	(-2.48)	(-2.49)	(-2.49)	(20.05)	(20.04)	(20.04)
Cash Flow [q-1]	0.126***	0.125***	0.125***	0.032	0.032	0.032	0.079***	0.080***	0.080***
	(3.82)	(3.81)	(3.81)	(1.10)	(1.12)	(1.12)	(3.24)	(3.26)	(3.26)
Book Leverage [q-1]	0.002	0.002	0.002	-0.078***	-0.078***	-0.078***	0.023***	0.023***	0.023***
	(1.53)	(1.57)	(1.57)	(-35.37)	(-35.33)	(-35.33)	(14.45)	(14.42)	(14.41)
Tangibility [q-1]	0.040***	0.040***	0.040***	0.033***	0.033***	0.033***	0.000	0.000	0.000
	(17.04)	(17.04)	(17.04)	(12.59)	(12.57)	(12.57)	(0.15)	(0.14)	(0.14)
Sales Growth [q-1]	0.007***	0.007***	0.007***	-0.008***	-0.008***	-0.008***	0.002***	0.002***	0.002***
	(5.49)	(5.49)	(5.49)	(-5.97)	(-5.97)	(-5.97)	(4.78)	(4.78)	(4.78)
ROA [q-1]	-0.083**	-0.083**	-0.083**	-0.062**	-0.062**	-0.062**	-0.099***	-0.100***	-0.100***

	(-2.48)	(-2.47)	(-2.47)	(-2.05)	(-2.06)	(-2.06)	(-4.09)	(-4.11)	(-4.11)
Firm FE and Year FE	YES	YES	YES	YES	YES	YES	YES	YES	YES
SIC2 x Quarter FE	YES	YES	YES	YES	YES	YES	YES	YES	YES
Observations	208,049	208,049	208,049	206,452	206,452	206,452	206,920	206,920	206,920
Adjusted R-squared	0.020	0.020	0.020	0.062	0.062	0.062	0.103	0.103	0.103

Panel B: Financial policies after deal announcement

	Cash Increase or Decrease [q]			Net Debt Issue [q]			Net Equity Issue [q]		
	1	2	3	4	5	6	7	8	9
Stock Payment [q-1, q]	0.002			-0.004**			-0.001		
	(0.58)			(-2.51)			(-0.56)		
Cash Payment [q-1, q]		0.000			0.064***			0.008**	
		(0.02)			(6.16)			(2.27)	
Cash Payment (if-stock dilutive deals)			0.002			0.067***			0.004*
			(0.52)			(5.73)			(1.73)
Cash Payment (if-stock non-dilutive deals)			-0.013			0.048***			0.029
			(-0.85)			(2.73)			(1.58)
Tobin's Q [q-1]	0.005***	0.005***	0.005***	0.001***	0.001***	0.001***	0.008***	0.008***	0.008***
	(17.02)	(17.09)	(17.09)	(3.17)	(3.23)	(3.24)	(18.41)	(18.44)	(18.43)
Ln(MktCap) [q-1]	-0.004***	-0.004***	-0.004***	0.002***	0.002***	0.002***	-0.005***	-0.005***	-0.005***
	(-15.15)	(-15.17)	(-15.17)	(6.06)	(5.77)	(5.77)	(-17.21)	(-17.23)	(-17.23)
Excess Ret [q-1]	0.008***	0.008***	0.008***	-0.001**	-0.001**	-0.001**	0.014***	0.014***	0.014***
	(10.50)	(10.48)	(10.48)	(-2.53)	(-2.44)	(-2.44)	(20.05)	(20.05)	(20.05)
Cash Flow [q-1]	0.125***	0.126***	0.126***	0.033	0.027	0.027	0.079***	0.079***	0.079***
	(3.81)	(3.82)	(3.82)	(1.13)	(0.92)	(0.93)	(3.25)	(3.22)	(3.21)
Book Leverage [q-1]	0.002	0.002	0.002	-0.078***	-0.078***	-0.078***	0.023***	0.023***	0.023***
	(1.53)	(1.54)	(1.53)	(-35.37)	(-35.59)	(-35.60)	(14.45)	(14.43)	(14.43)
Tangibility [q-1]	0.040***	0.040***	0.040***	0.033***	0.033***	0.033***	0.000	0.000	0.000
	(17.04)	(17.03)	(17.03)	(12.58)	(12.80)	(12.80)	(0.14)	(0.18)	(0.19)
Sales Growth [q-1]	0.007***	0.007***	0.007***	-0.008***	-0.008***	-0.008***	0.002***	0.002***	0.002***
	(5.49)	(5.49)	(5.49)	(-5.96)	(-6.00)	(-6.00)	(4.78)	(4.77)	(4.76)
ROA [q-1]	-0.083**	-0.083**	-0.083**	-0.063**	-0.057*	-0.057*	-0.100***	-0.099***	-0.099***
	(-2.47)	(-2.48)	(-2.48)	(-2.09)	(-1.88)	(-1.88)	(-4.11)	(-4.07)	(-4.07)
Firm FE and Year FE	YES	YES	YES	YES	YES	YES	YES	YES	YES
SIC2 x Quarter FE	YES	YES	YES	YES	YES	YES	YES	YES	YES
Observations	208,049	208,049	208,049	206,452	206,452	206,452	206,920	206,920	206,920
Adjusted R-squared	0.020	0.020	0.020	0.062	0.064	0.064	0.103	0.103	0.103

Appendix Table OD2: Investment and R&D Distortion Prior to If-stock Dilutive Deals

This table reports the OLS regression results using quarterly data. The dependent variable is the acquirer's capital expenditure for columns 1-3, and R&D expenditure for columns 4-6. The main independent variables are the values of each type of payments for deals announced during the next two quarters, i.e., quarter *q+1* and *q+2*. In particular, for column 1&4, we measure the total value of stock payments for deals announced during the two quarters; for column 2&5, we measure the total value of cash paid for deals announced in the two quarters; for column 3&6, we separately measure the total value of cash paid for the if-stock dilutive deals and the value of cash paid for other deals. These payment values are scaled by the acquirer's total assets at the end of quarter *q*, and the dependent variable for columns 1-3 (4-6) is scaled by the acquirer's Property, Plant and Equipment Net (Total Assets) at the beginning of quarter *q*. We control for lagged firm characteristics, firm and year fixed effects, and industry-quarter fixed effects. T-statistics are reported in parentheses, using robust standard errors clustered on firms. *, **, and *** indicate statistical significance at 10%, 5%, and 1% levels, respectively.

	Capex[q]/PPENT[q-1]			R&D[q]/AT[q-1]		
	1	2	3	4	5	6
Stock Payment [q+1, q+2]	0.001			0.001**		
	(0.63)			(2.40)		
Cash Payment [q+1, q+2]		-0.009**			-0.001*	
		(-2.46)			(-1.84)	
Cash Pay (if-stock dil.) [q+1, q+2]			-0.010**			-0.000
			(-2.32)			(-0.90)
Cash Pay (if-stock non-dil.) [q+1, q+2]			-0.006			-0.001**
			(-0.90)			(-2.02)
Tobin's Q [q-1]	0.013***	0.013***	0.013***	0.001***	0.001***	0.001***
	(21.13)	(21.19)	(21.19)	(10.92)	(10.88)	(10.88)
Ln(MktCap) [q-1]	0.000	0.000	0.000	-0.001***	-0.001***	-0.001***
	(0.08)	(0.07)	(0.08)	(-8.95)	(-8.98)	(-8.98)
Excess Ret [q-1]	0.000	0.000	0.000	-0.000	-0.000	-0.000
	(0.32)	(0.30)	(0.30)	(-0.25)	(-0.26)	(-0.25)
Cash Holding [q-1]	0.065***	0.065***	0.065***	-0.004***	-0.004***	-0.004***
	(16.36)	(16.36)	(16.36)	(-7.13)	(-7.13)	(-7.13)
Book Leverage [q-1]	-0.038***	-0.038***	-0.038***	-0.004***	-0.004***	-0.004***
	(-12.15)	(-12.16)	(-12.16)	(-10.40)	(-10.39)	(-10.39)
ROA [q-1]	0.190***	0.190***	0.190***	-0.005***	-0.005***	-0.005***
	(16.42)	(16.44)	(16.44)	(-2.69)	(-2.66)	(-2.66)
Constant	0.044***	0.044***	0.044***	0.013***	0.013***	0.013***
	(12.36)	(12.37)	(12.36)	(20.30)	(20.34)	(20.34)
Firm FE and Year FE	YES	YES	YES	YES	YES	YES
SIC2 x Quarter FE	YES	YES	YES	YES	YES	YES
Observations	211636	211636	211636	212916	212916	212916
Adjusted R-squared	0.322	0.322	0.322	0.644	0.644	0.644

Appendix Table OD3: R&D Distortion Prior to If-stock Dilutive Deals for the 1995 – 2017 Period

This table reports the OLS regression results using quarterly data that spans from 1995 to 2017. The dependent variable is the acquirer's R&D expenditure. The main independent variables are the values of each type of payments for deals announced during the next two quarters, i.e., quarter *q+1* and *q+2*. In particular, for column 1, we measure the total value of stock payments for deals announced during the two quarters; for column 2, we measure the total value of cash paid for deals announced in the two quarters; for column 3, we separately measure the total value of cash paid for the if-stock dilutive deals and the value of cash paid for other deals. These payment values are scaled by the acquirer's total assets at the end of quarter *q*, and the dependent variable are scaled by the acquirer's total assets at the beginning of quarter *q*. We control for lagged firm characteristics, firm and year fixed effects, and industry-quarter fixed effects. T-statistics are reported in parentheses, using robust standard errors clustered on firms. *, **, and *** indicate statistical significance at 10%, 5%, and 1% levels, respectively.

		R&D[q]/AT[q-1]	
Sample:		1995-2017	
	1	2	3
Stock Payment [q+1, q+2]	0.001*		
	(1.74)		
Cash Payment [q+1, q+2]		-0.001**	
		(-2.49)	
Cash Payment (if-stock dilutive) [q+1, q+2]			-0.001*
			(-1.74)
Cash Payment (if-stock non-dilutive) [q+1, q+2]			-0.001*
			(-1.89)
Tobin's Q [q-1]	0.001***	0.001***	0.001***
	(10.93)	(10.74)	(10.74)
Ln(MktCap) [q-1]	-0.001***	-0.001***	-0.001***
	(-9.76)	(-9.74)	(-9.74)
Excess Ret [q-1]	-0.000	-0.000	-0.000
	(-0.12)	(-0.12)	(-0.12)
Cash Holding [q-1]	-0.003***	-0.003***	-0.003***
	(-5.77)	(-5.78)	(-5.78)
Book Leverage [q-1]	-0.004***	-0.004***	-0.004***
	(-9.20)	(-9.19)	(-9.19)
ROA [q-1]	-0.003*	-0.003*	-0.003*
	(-1.80)	(-1.76)	(-1.76)
Constant	0.014***	0.014***	0.014***
	(19.89)	(19.87)	(19.87)
Firm FE and Year FE	YES	YES	YES
SIC2 x Quarter FE	YES	YES	YES
Observations	165123	165123	165123
Adjusted R-squared	0.699	0.699	0.699