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Green acquisitions☆

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ABSTRACT

Prior research suggests that investors value green firms at a premium. We add to this line of research and show that the acquirer's cumulative abnormal return after the announcement of an acquisition is increasing in the "greenness" of the target. We find tentative evidence suggesting that this pattern is more pronounced after the 2015 Paris agreement, and is more pronounced for the first acquisition of a green target by the same acquirer.

1. Introduction

Recently, we have seen a surge in the prices of "green" stocks relative to those of "brown" stocks. Pastor et al. (2022) report that green stocks outperformed their brown counterparts by 174% between 2012 and 2020. Consequently, "greening" a firm is a corporate policy by which managers can attempt to increase firm value. One way of greening a firm is through the acquisition of a green target. If investors believe that the announcement of such an acquisition is a credible signal of a greening of the acquirer, the share price should react favorably. We analyze whether the share price reactions to merger announcements depend on the "greenness" of the target and/or the acquirer.

We investigate acquisitions involving listed acquirers and targets. We use two measures of greenness, the sensitivity of the stock return to the Pastor et al. (2022) green factor and to the Ardia et al. (2023) media climate change concerns index. We perform event studies and cross-sectional regressions and find that target greenness, but not acquirer greenness, is positively related to the announcement date return of the acquirer. Further analysis provides tentative evidence that the "green target effect" is stronger after the 2015 Paris agreement and is stronger for the first green acquisition than for further green deals by the same acquirer.

2. Data and methodology

We download data from SDC on deals with US-based acquirers and targets for the period 2010 to 2024. We extract deals where both acquirer and target were listed at least 24 months before the announcement date but exclude deals where the same acquirer acquired more than one target on the same day.[1] The resulting data set contains 1531 deals initiated by 1138 acquirers.

For our event study, we source share price data from CRSP and estimate expected excess returns using the Fama and French (1993) three-factor model from 252 days of daily data, ending 10 days before the announcement date. We use a 20-day event window centered on the announcement date and require non-missing return observations for the acquirer for each day of the event window. Price data is available for 490 deals that involve 363 acquirers. Details of the sample selection procedure are described in Panel A of Table 1.

We use two measures of greenness. The *green beta* is the slope on the Pastor et al. (2022) green factor obtained in a regression of the excess return of a stock on the Pastor et al. (2022) green factor[2] and the three Fama and French (1993) factors. We estimate that regression for acquirers and targets using up to 36 months of data ending with the month prior to the announcement. To estimate the second measure,

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[1] We also exclude deals involving banks. We further require that the deal value exceeds 1 million USD and accounts for at least 1% of the acquirer's market value. Finally, we only include deals where the acquirer held less than 50% before the acquisition and 100% after completion of the deal.

[2] The data is available on the homepage of Lubos Pastor, see https://faculty.chicagobooth.edu/lubos-pastor/data.

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Table 1
Overview.

Panel a	# Merger deals	# Acquirors		
Completed non-bank deals	37,523	10,916		
Public targets	2201	1459		
...Only single	2069	1415		
...Deal characteristics	1531	1138		
...Acq stock prices	731	523		
...Tar stock prices	490	363		
Panel b	**Mean**	**Std. dev.**	**Min**	**Max**
Tar green beta (m-1)	−0.019	1.504	−4.751	4.635
Acq green beta (m-1)	−0.088	1.122	−6.111	4.997
Tar green news (d-10)	0.022	0.960	−3.724	14.829
Acq green news (d-10)	0.006	0.407	−1.703	1.839
Days completion	130.713	116.343	29.000	1019.000
Paid in cash %	0.677	0.400	0.000	1.000
Tender offer	0.214	0.411	0.000	1.000
Divest deal	0.036	0.187	0.000	1.000
Same industry	0.497	0.501	0.000	1.000
Deal value relative to acq MV	0.355	0.504	0.010	6.047
Acq Tobins Q (y-1)	2.182	1.339	0.580	9.432
Acq firm value (y-1)	9.356	1.992	2.742	14.617
Acq ROA (y-1)	2.869	16.304	−186.409	28.978
Acq leverage (y-1)	0.592	0.236	0.065	1.668
Tar Tobins Q (y-1)	2.265	1.706	0.580	10.717
Tar firm value (y-1)	7.206	1.724	2.768	11.426
Tar ROA (y-1)	−6.617	27.552	−186.409	28.978
Tar leverage (y-1)	0.546	0.310	0.047	1.668
Panel c				
Green beta	Acquiror			
Target	Low	High	Total	
Low	125	98	223	
High	96	119	215	
Total	221	217	438	
News beta	Acquiror			
Target	Low	High	Total	
Low	123	106	229	
High	103	127	230	
Total	226	233	459	

Notes: This table shows the total number of acquisitions and the filters we applied to obtain our final sample (Panel a), descriptive statistics (Panel b), and the number of acquisitions where both acquirers and targets are green ("high"), both are brown ("low"), or one is green and the other brown (Panel c). A detailed description of all variables is provided in Table 8.

the *climate news beta*, we first obtain the residuals of a full sample AR1 model of the Ardia et al. (2023) media climate change concerns index. We then regress excess returns on these residuals plus the three Fama and French (1993) factors. The slope estimates on the AR1 residuals are our estimates of the climate news betas. We estimate that regression using 504 trading days ending 10 days before the announcement. We are aware that other greenness measures, such as ESG ratings or the "E" score of such a rating, are available. However, the coverage of ESG ratings is too small, particularly among targets (which are significantly smaller on average than the acquirers) and in the earlier years of the sample period.[3]

Panel B of Table 1 shows descriptive statistics. Table 8 in the Appendix provides a detailed description of all variables. The average green beta is slightly negative, and more so for the acquirers than for the targets. The dispersion, as measured by the standard deviation, is greater for the targets. The average climate news betas are small and positive. Again, the average is smaller for the acquirers, and the dispersion is larger for the targets.

Panel C of Table 1 reports the number of acquisitions in which both acquirer and target are green, both are brown, or one is green and the other brown. There are more deals "among equals" (i.e. green–green and brown–brown) than would be expected if the target and acquirer greenness were independent. A χ^2 test rejects the null hypothesis of independence at the 5% [10%] level when greenness is measured by the green beta [climate news beta].

3. Results

Panel A of Table 2 shows the event study results. We report the t-statistic and the test statistics of the modified standardized cross-sectional test (Kolari and Pynnönen, 2010) and the generalized rank test (Kolari and Pynnönen, 2011). The acquirer average CARs are negative for all event windows except [−10;−1], and often significantly so. This finding is consistent with Eckbo et al. (2024) who also report (in their Table 2) negative average CARs for acquisitions of listed targets. We show in Panels B and C of Table 2 separate results when splitting the sample by the green beta and the climate news beta, respectively.[4]

[3] To illustrate this point, we obtain data on the MSCI E pillar scores for our sample period. There are only 286 announcements for which acquirer and target scores are available, as compared to 438 [459] when we use the green beta [climate news beta]. Still, and consistent with the findings presented below, we find that acquirer CARs are significantly larger when the target's E pillar score is in the top tercile of the E pillar score distribution.

[4] We split at the respective median values across all targets. Note that the number of observations (438 [459] for the green beta [the climate news beta]) is lower than the 490 in Panel A because there are observations for which only one of the two greenness measures is available.

Table 2
Event study results.

Panel a: Full sample (# = 490)								
Window	CAAR	t test	Kolari	Grankt				
[−1;1]	−0.608%	***						
[−2;2]	−0.836%	***						
[−3;3]	−0.843%	***						
[−10;10]	−1.013%	*		**				
[−10;−1]	0.015%							
[1;10]	−0.363%							
[0;1]	−0.662%	***		**				
Panel b: Greenness measured with green beta								
Window	High greenness (# = 219)				Low greenness (# = 219)			
	CAAR	t test	Kolari	Grankt	CAAR	t test	Kolari	Grankt
[−1;1]	0.167%			*	−0.707%	**		***
[−2;2]	0.036%				−0.807%	*		*
[−3;3]	0.018%				−0.852%			***
[−10;10]	0.188%				−1.447%			
[−10;−1]	0.429%				−0.523%			
[1;10]	0.212%				−0.268%			
[0;1]	0.087%				−0.674%	**		***
Panel c: Greenness measured with news beta								
Window	High greenness (# = 230)				Low greenness (# = 229)			
	CAAR	t test	Kolari	Grankt	CAAR	t test	Kolari	Grankt
[−1;1]	−0.002%				−0.772%	**		
[−2;2]	−0.070%				−1.116%	***		
[−3;3]	−0.069%				−1.118%	**		
[−10;10]	−0.873%			***	−0.669%			
[−10;−1]	−0.157%			*	0.144%			*
[1;10]	−0.316%				0.119%			
[0;1]	−0.066%				−0.797%	***		*

Notes: The table shows event study results for the full sample (Panel a) and high and low greenness subsamples split at the median of the green beta (Panel b) and the climate news beta (Panel c). ***, ** and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

When using the green beta, we obtain unambiguous results. The average CARs are all positive (but insignificant) for acquirers of green targets and all negative (and significantly so for short event windows) for acquirers of brown targets. The climate news beta delivers more ambiguous results. Most average CARs are negative. Those for green targets are less negative (and never significant) for short event windows but more negative for longer event windows. Overall, the results suggest that target greenness, at least when measured by the green beta, has a systematic impact on how investors assess an acquisition.

To provide further evidence, we estimate cross-sectional regressions. The dependent variable is the CAR(−1;1) of the acquirer.[5] The main independent variables are the target and acquirer green betas (models (1) to (3)) and the climate news betas (models (4) to (6)). Models (2) and (4) additionally include acquirer-specific and merger-specific control variables, as well as industry and year fixed effects, and models (3) and (6) add target-specific controls. The results, shown in Table 3, indicate that investors view acquisitions of green targets favorably. The CARs of the acquirers are significantly positively related to target greenness in all specifications. The effect is also of an economically relevant magnitude, at 0.6% to 1.0%. Acquirer greenness, in contrast, has (with one exception in model (4)) no significant impact on the announcement day CARs.

To analyze the determinants of the higher announcement day CARs of green acquisitions we augment our regression model with interaction effects. Investors may have a particularly positive view of deals where a brown acquirer acquires a green target. We capture this effect in two different ways. First, we interact target greenness with a dummy variable that is set to 1 when the acquirer is in the bottom quartile of all acquirers (models (1) and (2) in Table 4 for the green beta and the climate news beta, respectively). Second, we interact target greenness with a dummy variable that is set to 1 when the difference between the target and acquirer greenness is in the top quartile of all transactions and zero else (models (3) and (4)).

For models (1) and (2) the coefficient estimates for the interaction terms are insignificant while the main effect (the significant coefficient estimate for target greenness) remains. In models (3) and (4) the coefficient estimates for the interaction term as well as for the main effect are insignificant. However, as also reported in the table, the sum of these two coefficients is significantly different from zero. This result implies that the CARs are increasing in target greenness for acquisitions where the target is much greener than the acquirer.

Investors may have a more positive view of a green acquisition when the deal size is large relative to the acquirer's market value. We therefore interact target greenness with a dummy variable that is set to 1 when the relative deal size is in the top quartile. When greenness is measured by the green beta (model (1) in Table 5), the coefficient on the interaction between relative deal size and target greenness is positive and significant, implying that larger transactions are viewed more favorably. The interaction effect dominates the main effect (the target green beta), which turns insignificant. When greenness is measured by the climate news beta (model (2)) the interaction effect is insignificant while the main effect retains its significance.

Acquisitions of more profitable green targets may be evaluated more positively. To capture this effect we interact target greenness with a

[5] We perform two robustness checks. First, we use the CAR(−3;3) instead of the CAR(−1;1) as dependent variable. The results, shown in Table 9 in the Appendix, are fully consistent with those shown above. Second, in some cases the time-series estimates of the green and the climate news betas are very imprecise. We therefore repeat the cross-sectional regression but set the estimates of the greenness and climate news betas to zero whenever the *p*-value for a test of the beta in the time series regression is above 0.2. The results, shown in Table 10 in the Appendix, are fully consistent with those shown above.

Table 3
Baseline regressions.

	(1)	(2)	(3)	(4)	(5)	(6)
Tar green beta (m-1)	0.007***	0.007**	0.006**			
	(0.003)	(0.003)	(0.003)			
Acq green beta (m-1)	−0.001	−0.003	−0.003			
	(0.005)	(0.006)	(0.005)			
Tar news beta (d-10)				0.006**	0.010***	0.009***
				(0.003)	(0.003)	(0.003)
Acq news beta (d-10)				−0.025*	−0.020	−0.022
				(0.014)	(0.015)	(0.015)
Acq Tobins Q (y-1)		−0.005*	−0.005		−0.003	−0.002
		(0.003)	(0.003)		(0.003)	(0.003)
Acq MV (y-1)		0.001	0.003		0.001	0.002
		(0.003)	(0.004)		(0.002)	(0.004)
Acq ROA (y-1)		0.001*	0.001*		0.001*	0.001*
		(0.000)	(0.000)		(0.000)	(0.000)
Acq leverage (y-1)		0.004	−0.005		0.012	0.003
		(0.021)	(0.023)		(0.020)	(0.022)
Days completion		−0.000	−0.000		−0.000	−0.000
		(0.000)	(0.000)		(0.000)	(0.000)
Paid in cash		0.024*	0.025*		0.027**	0.029**
		(0.013)	(0.014)		(0.013)	(0.014)
Tender offer		−0.011	−0.011		−0.011	−0.012
		(0.009)	(0.009)		(0.008)	(0.009)
Divest deal		0.017	0.011		0.026	0.019
		(0.030)	(0.031)		(0.032)	(0.033)
Same industry		0.004	0.007		0.007	0.010
		(0.008)	(0.008)		(0.008)	(0.008)
Deal value/Acq MV		0.005	0.005		0.007	0.007
		(0.010)	(0.010)		(0.010)	(0.010)
Tar Tobins Q (y-1)			−0.006**			−0.005
			(0.003)			(0.003)
Tar MV (y-1)			0.001			0.001
			(0.004)			(0.004)
Tar ROA (y-1)			−0.000			−0.000
			(0.000)			(0.000)
Tar leverage (y-1)			0.001			0.005
			(0.016)			(0.018)
Industry FE	No	Yes	Yes	No	Yes	Yes
Year FE	No	Yes	Yes	No	Yes	Yes
#obs	438	412	400	459	426	414
F-test	3.560	2.129	2.065	2.944	2.199	1.964
Adj. R-squared	0.014	0.082	0.090	0.015	0.077	0.082

Notes: The dependent variable is $CAR[-1;1]$. See Table 8 for detailed descriptions of the independent variables. Heteroskedasticity-consistent standard errors are in parentheses. ***, ** and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

dummy variable that is set to 1 when the target's RoA is in the top quartile. The resulting coefficient estimates, shown in columns (3) and (4) of Table 5, are insignificant for both greenness measures.

The analysis so far is based on the assumption that green acquisitions are initiated to support the acquirers' greening process and/or their adaptation to climate risks, and that investors understand and value that motivation. However, there is an alternative explanation. The higher CARs of green acquisitions may be driven by attention-based or sentiment-based overvaluation. In this case, we would expect more positive price reactions to green acquisitions announced at times when climate change-related topics receive more attention. As our measure of attention we use a 10-day average of the level of the Ardia et al. (2023) media climate change concerns index. Alternatively, we use the 10-day average of the residuals of an AR1 model instead of the levels. We interact these attention measures with our target greenness measures. The results are shown in Table 6. The coefficient estimates for the interaction terms are all insignificant. Thus, we do not find support for the hypothesis that attention-related overvaluation is driving the higher CARs of green acquisitions.

Sensitivity to climate-related topics has increased after the 2015 Paris agreement. To capture this effect, we interact the target greenness measures with a dummy variable that is set to 1 for announcements made after the Paris agreement and 0 else. When greenness is measured by the green beta (column (1) of Table 7) we obtain insignificantly positive coefficient estimates for both the main effect and the interaction term. However, the sum of the two coefficients is significant, implying that a higher target greenness is associated with larger CARs after 2015. When greenness is measured by the climate news beta (column (2)) we obtain an insignificantly negative coefficient estimate on the interaction term. Thus, the visibility of the "Paris effect" depends on the way in which greenness is measured.

It is conceivable that the first acquisition of a green target announced by an acquirer is associated with stronger price reactions than subsequent green acquisitions by the same acquirer. We therefore define, and interact with our greenness measures, a dummy variable that is 1 for the first green acquisition and 0 else. When greenness is measured by the green beta (column (3)), we obtain an insignificant coefficient estimate for the interaction term, inconsistent with the hypothesis that first deals trigger larger price effects. When greenness is measured by the climate news beta (column (4)) we find an insignificantly positive main effect and an insignificantly positive interaction effect. However, the sum of the two coefficients is positive and significant, meaning that the target greenness is positively associated with acquirer's CARs for the first green acquisition.

Table 4
Interaction effects of greenness.

	(1)	(2)	(3)	(4)
Tar green beta (m-1)	0.006*		0.003	
	(0.003)		(0.004)	
Acq green beta (m-1)	−0.003		−0.002	
	(0.006)		(0.006)	
Tar news beta (d-10)		0.010***		0.006
		(0.003)		(0.009)
Acq news beta (d-10)		−0.022		−0.022
		(0.015)		(0.015)
Tar green beta * PC25(Acq green beta)	0.002			
	(0.006)			
Tar news beta * PC25(Acq green news)		−0.006		
		(0.016)		
Tar green beta * PC75(Δ green beta)			0.008	
			(0.008)	
Tar news beta * PC75(Δ green news)				0.004
				(0.010)
Controls	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Tar green beta (joint)	0.007		0.011**	
Tar news beta (joint)		0.004		0.010***
#obs	400	414	400	414
F-test	2.045	1.910	2.069	1.974
Adj. R-squared	0.088	0.080	0.091	0.080

Notes: The dependent variable is $CAR[-1;1]$. Controls are the same as in Table 3 and are described in Table 8. Heteroskedasticity-consistent standard errors are in parentheses. ***, ** and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Table 5
The moderating role of target characteristics.

	(1)	(2)	(3)	(4)
Tar green beta (m-1)	0.002		0.007**	
	(0.003)		(0.003)	
Acq green beta (m-1)	−0.003		−0.003	
	(0.006)		(0.005)	
Tar news beta (d-10)		0.009***		0.009***
		(0.003)		(0.003)
Acq news beta (d-10)		−0.023		−0.022
		(0.015)		(0.015)
Tar green beta * PC75(Deal value/Acq MV)	0.021**			
	(0.009)			
Tar news beta * PC75(Deal value/Acq MV)		0.011		
		(0.032)		
Tar green beta * PC75(Tar ROA)			−0.002	
			(0.008)	
Tar news beta * PC75(Tar ROA)				0.020
				(0.026)
Controls	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Tar green beta (joint)	0.023***		0.005	
Tar news beta (joint)		0.019		0.029
#obs	400	414	400	414
F-test	2.390	1.955	2.008	1.915
Adj. R-squared	0.111	0.081	0.088	0.081

Notes: The dependent variable is $CAR[-1;1]$. Controls are the same as in Table 3 and are described in Table 8. Heteroskedasticity-consistent standard errors are in parentheses. ***, ** and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Table 6
The moderating role of climate attention.

	(1)	(2)	(3)	(4)
Tar green beta (m-1)	0.006*		0.005	
	(0.003)		(0.004)	
Acq green beta (m-1)	−0.003		−0.003	
	(0.006)		(0.005)	
Tar news beta (d-10)		0.012***		0.011***
		(0.004)		(0.003)
Acq news beta (d-10)		−0.024		−0.023
		(0.016)		(0.016)
Tar green beta * PC75(Attention)	0.002			
	(0.005)			
Tar news beta * PC75(Attention)		−0.012		
		(0.008)		
Tar green beta * PC75(Residual attention)			0.003	
			(0.006)	
Tar news beta * PC75(Residual attention)				−0.009
				(0.008)
Controls	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Tar green beta (joint)	0.008*		0.008*	
Tar news beta (joint)		0.000		0.002
#obs	400	414	400	414
F-test	2.050	1.985	2.028	1.968
Adj. R-squared	0.088	0.083	0.088	0.082

Notes: The dependent variable is $CAR[-1;1]$. Controls are the same as in Table 3 and are described in Table 8. Heteroskedasticity-consistent standard errors are in parentheses. ***, ** and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Table 7
Paris and first deals.

	(1)	(2)	(3)	(4)
Tar green beta (m-1)	0.005		0.007**	
	(0.004)		(0.003)	
Acq green beta (m-1)	−0.004		−0.003	
	(0.006)		(0.005)	
Tar news beta (d-10)		0.014		0.007
		(0.015)		(0.007)
Acq news beta (d-10)		−0.022		−0.022
		(0.015)		(0.015)
Tar green beta * AfterParis	0.003			
	(0.006)			
Tar news beta * AfterParis		−0.005		
		(0.015)		
Tar green beta * FirstDeal			−0.002	
			(0.008)	
Tar news beta * FirstDeal				0.004
				(0.008)
Controls	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Tar green beta (joint)	0.008**		0.005	
Tar news beta (joint)		0.009***		0.010***
#obs	400	414	400	414
F-test	2.041	1.900	2.025	1.928
Adj. R-squared	0.088	0.080	0.088	0.080

Notes: The dependent variable is $CAR[-1;1]$. Controls are the same as in Table 3 and are described in Table 8. Heteroskedasticity-consistent standard errors are in parentheses. ***, ** and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

4. Conclusion

We analyze whether the greenness of the target affects the market reaction to the announcement of an acquisition. Using a sample of acquisitions of listed U.S. targets and event study methodology, we find that higher target greenness is indeed associated with higher cumulative abnormal returns. Further analyses provide (weak) evidence that this effect is more pronounced after the 2015 Paris agreement, and that it is more pronounced for the first than for subsequent green acquisitions by an acquirer.

Appendix

See Tables 8–10.

Data availability

The authors do not have permission to share data.

Table 8
Variable definitions and sources.

Variable	Description
	Dependent variable
$CAR[\tau_1, \tau_2]_{i,g}$	Abnormal returns of firm i cumulated over τ_1 to τ_2, where 0 is the announcement day. We estimate parameters for calculating 3-factor-adjusted normal returns from the 252-trading-day period ending ten trading days before the announcement date, requiring at least 30 valid observations. Source: Authors' own calculation based on continuously compounded returns calculated from dividend- and split-adjusted stock prices in USD from CRSP. Release dates are from SDC Platinum. Data on the market, size and book-market factors are sourced from Kenneth French's homepage.
	Greenness
Green $Beta_{i,t}$	The slope estimate of a regression of a stock's excess return on the Pastor et al. (2022) green factor (available at https://faculty.chicagobooth.edu/lubos-pastor/data). The regression uses 36 months of data ending with the month prior to the announcement date and includes the market, size and book-market factors as additional independent variables.
News $Beta_{i,t}$	We first regress the Ardia et al. (2023) climate change concerns index on its first lag using the full sample and retain the residuals. We then obtain the slope estimate of a regression of a stock's excess return on these residuals. For each announcement the regression uses 504 daily observations ending 10 days prior to the announcement date and includes the market, size and book-market factors as additional independent variables.
X...	X placed before a variable indicates whether the information refers to the target (X = Tar) or the acquirer (X = Acq).
	Deal characteristics
Days completion	Number of calendar days between the transaction announcement date and the deal completion (effective) date. Source: SDC Platinum.
Paid in cash	Share of the total transaction value paid in cash by the acquiring firm. Source: SDC Platinum.
Tender offer	Indicator variable equal to 1 if the transaction is classified as a tender offer, and 0 otherwise. Source: SDC Platinum.
Divest deal	Indicator variable equal to 1 if the transaction is classified as an asset sale or divestiture (i.e., the acquirer purchases assets or a subsidiary rather than the entire target firm), and 0 otherwise. Source: SDC Platinum.
Same industry	Indicator variable equal to 1 if the acquirer and target operate in the same industry, defined using the same 2-digit SIC code, 0 otherwise. Source: SDC Platinum.
Deal value/Acq MV	Transaction value divided by the acquiring firm's market value measured at the end of the fiscal year before the announcement. Source: SDC Platinum, Compustat.
	Firm level controls
Tobins Q	The Tobin's Q of a firm is defined as the market value of assets divided by the book value of assets. Source: Compustat.
MV	Natural logarithm of the firm's market value of assets. Source: Compustat.
ROA	Return on assets of the firm calculated as operating income before depreciation divided by total assets. Source: Compustat.
Leverage	Leverage of the firm measured as total debt divided by total assets. Source: Compustat.
	Interaction effects
$PC25(Z)$	Dummy variable equals 1 if the value of Z is below the 25 percentile, zero otherwise.
$PC75(Z)$	Dummy variable equals 1 if the value of Z is above the 75 percentile, zero otherwise.
ΔZ	The difference between the target's value of Z minus the acquirer's value of Z.
Attention	10-day average of the level of the media climate change concerns index. Source: Ardia et al. (2023).
Residual attention	10-day average of the residual attention. Residual attention is determined with an AR(1) model. Source: Ardia et al. (2023).
AfterParis	The dummy variable equals 1 after the Paris Agreement, and 0 otherwise.
FirstDeal	The dummy variable equals 1 if the acquirer acquires its first green target, and 0 otherwise.

All firm characteristics are measured in the fiscal year ending before the deal announcement year.
Financial variables are winsorized at the 1st and 99th percentiles.

Table 9
7-day cumulative abnormal returns.

	(1)	(2)	(3)	(4)	(5)	(6)
Tar green beta (m-1)	0.008**	0.009**	0.008**			
	(0.004)	(0.003)	(0.004)			
Acq green beta (m-1)	−0.004	−0.006	−0.007			
	(0.008)	(0.009)	(0.008)			
Tar news beta (d-10)				0.007	0.010**	0.010**
				(0.005)	(0.004)	(0.004)
Acq news beta (d-10)				−0.029*	−0.020	−0.021
				(0.017)	(0.017)	(0.018)
Controls	No	Yes	Yes	No	Yes	Yes
Industry FE	No	No	No	No	No	No
Year FE	No	No	No	No	No	No
#obs	438	412	400	459	426	414
F-test	2.472	1.658	1.760	1.929	1.530	1.438
Adj. R-squared	0.012	0.067	0.078	0.013	0.061	0.072

Notes: This table presents results from a robustness test where the dependent variable is $CAR[-3;3]$. Controls are the same as in Table 3 and are described in Table 8. Heteroskedasticity-consistent standard errors are in parentheses. ***, ** and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Table 10
Adjusted greenness measures.

	(1)	(2)	(3)	(4)	(5)	(6)
Tar green beta (m-1) adj	0.008**	0.009***	0.008**			
	(0.003)	(0.003)	(0.004)			
Acq green beta (m-1) adj	0.004	0.004	0.003			
	(0.006)	(0.005)	(0.005)			
Tar news beta (d-10) adj				0.005*	0.010***	0.009***
				(0.003)	(0.003)	(0.003)
Acq news beta (d-10) adj				−0.034*	−0.030	−0.031
				(0.018)	(0.020)	(0.021)
Controls	No	Yes	Yes	No	Yes	Yes
Industry FE	No	Yes	Yes	No	Yes	Yes
Year FE	No	Yes	Yes	No	Yes	Yes
#obs	438	412	400	459	426	414
F-test	3.804	2.324	2.235	3.621	2.402	2.191
Adj. R-squared	0.016	0.086	0.092	0.017	0.080	0.086

Notes: This table presents results from a robustness test where the dependent variable is $CAR[-1;1]$ and greenness measures are adjusted by replacing values with zero whose p-values are larger than 0.2. Controls are the same as in Table 3 and are described in Table 8. Heteroskedasticity-consistent standard errors are in parentheses. ***, ** and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

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