

FIN 423
Hostility in Takeovers:
In the Eyes of the Beholder?

Questions:

Takeovers are often described as “hostile” – what does this mean?

Is resistance bad for shareholders?

Can you tell whether resistance is motivated by bargaining, or could it reflect agency problems?

What Is Hostility?

- **Some stakeholders are threatened by a potential takeover and resist**
- **Public disclosure of a breakdown in negotiations**
 - **puts pressure on target managers by letting shareholders know of terms**
 - **puts pressure on bidders by attracting other bidders**
- **Preemptive action in anticipation of target resistance**

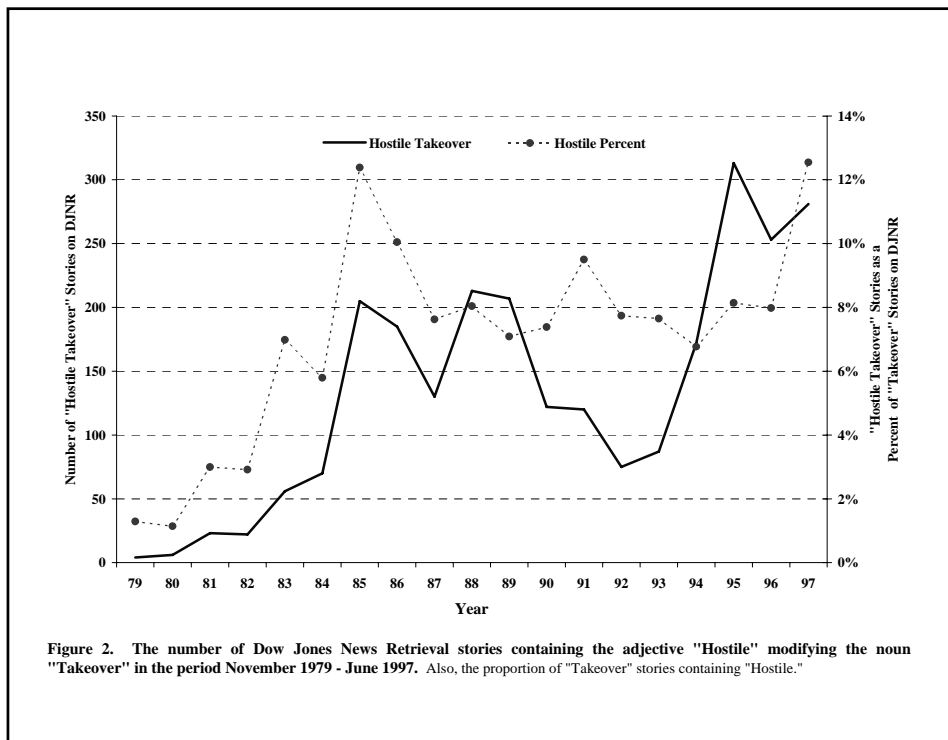
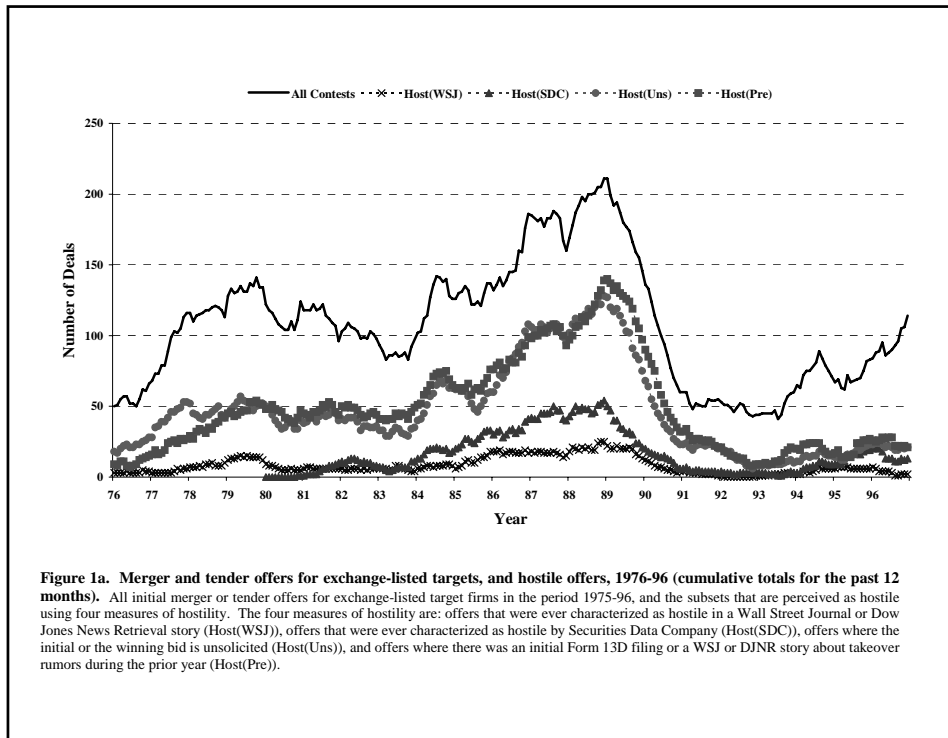
Measuring Hostility

- **Host(WSJ)** - WSJ Index or DJNR
- **Host(SDC)** - SDC
 - unsolicited offer resisted by target management
- **Host(Uns)** - an unnegotiated tender offer or a merger proposal with price
 - a "bear hug"
- **Host(Pre)** - In prior 12 months, an initial 13D is filed, or significant merger rumors about the target firm
 - suggesting an effort to put the firm in play

Hostility Peaked in 1989

- A slight comeback since mid-1993
- SDC data only starts in 1980
- DJNR also starts in 1980
 - their coverage of rumors & 13D filings is much better than WSJ

Figure 2 shows that the adjective "hostile" for noun "takeover" came into frequent use in early 1980s



Hostility measures are correlated, but not perfectly

Table 1 shows associations

- among hostility measures
- with deal characteristics
- with performance statistics
- with target stock price behavior

Table 2 shows relations among hostility measures

Table 3 shows time series patterns of hostility

Table I

Summary Statistics for Takeover Characteristics and Measures of Hostility, 1975-96

Average values of prior accounting and stock market performance, and the proportions of firms in various takeover categories for successful and unsuccessful takeover bids for exchange-listed target firms, 1975-96. The estimates in columns (4) to (7) are differences in means from the full sample of 2,346 cases, with a t-statistic testing whether the difference is reliably different from zero using White's (1980) heteroskedasticity-consistent standard errors. These tests are designed to show whether the variable in question is related to each of the measures of hostility. Host(WSJ) is based on descriptions in the *Wall Street Journal Index* or *Dow Jones News Retrieval (DJNR)*, Host(SDC) is based on whether the target firm resisted an unsolicited offer as determined by the Securities Data Company (SDC), Host(Uns) is based on whether the initial or winning bid is unsolicited, and Host(Pre) is based on whether the target firm is in play (someone has filed a 13D form with the S.E.C. showing an accumulation of shares within the past 12 months) or the subject of a takeover rumor reported in *DJNR*. Host(Factor) is the first factor or principal component from the set of three hostility variables with complete data (Host(WSJ), Host(Uns), and Host(Pre)). Deal characteristics show the proportions of the full sample in which the target firm has a poison pill in place (Pill), whether there is a multiple bidder auction (Auction), whether the target firm is taken over without more than a one year hiatus between bids (Success), whether there is an all-cash payment to target shareholders (Cash), whether there is an all-equity payment to target shareholders (Equity), whether the deal is a tender offer (Tender Offer), and whether the bidder is an exchange-listed company (Public Bidder). Performance statistics show how the target firm was performing before the takeover bid. ROE is earnings divided by average stockholder's (book) equity and Sales Growth is the growth in sales over the fiscal year before the first bid. Liquidity is the ratio of net liquid assets to total assets, D/E is the long-term debt to book equity, M/B is the ratio of market to book value of stockholder's equity, P/E is the ratio of stock price to the earnings for the last fiscal year, and Size is the logarithm of the market value of common stock, all measured at the end of the fiscal year before the first bid. Target stock price behavior shows the cumulative abnormal stock returns measured relative to a CRSP value-weighted market model regression estimated using a year of prior data for several periods. Runup is the cumulative abnormal return to the target firm's stock for trading days (-63, -1) before the first bid, Markup is the cumulative abnormal return for trading days (0,126), and Premium is the cumulative abnormal return for trading days (-63, 126) (market model estimates from days (-316, -64)).

	(1)	(2)	(3)	(4)		(5)		(6)		(7)	
	Full Sample (N = 2,346)			Host(WSJ) vs. Full		Host(SDC) vs. Full		Host(Uns) vs. Full		Host(Pre) vs. Full	
Cases	Mean	Std Error	Diff	t-statistic	Diff	t-statistic	Diff	t-statistic	Diff	t-statistic	
Panel A: Measures of Hostility											
Host(WSJ)	174	0.074	0.005			0.342	12.32	0.144	12.04	0.058	5.16
Host(SDC)	300	0.216	0.011	0.746	25.19			0.378	17.73	0.140	6.45
Host(Uns)	990	0.422	0.010	0.513	20.23	0.552	23.27			0.143	7.01
Host(Pre)	1,043	0.445	0.010	0.209	5.50	0.207	6.64	0.145	7.02		
Host(Factor)		0.246	0.005	0.706	69.26	0.376	20.34	0.389	50.64	0.267	28.88

	(1)	(2)	(3)	(4)		(5)		(6)		(7)	
	Full Sample (N = 2,346)			Host(WSJ) vs. Full		Host(SDC) vs. Full		Host(Uns) vs. Full		Host(Pre) vs. Full	
	Cases	Mean	Std Error	Diff	t-statistic	Diff	t-statistic	Diff	t-statistic	Diff	t-statistic
Panel B: Deal Characteristics											
Pill	218	0.093	0.006	0.229	6.47	0.267	9.25	0.128	9.84	0.131	10.44
Auction	454	0.194	0.008	0.331	8.54	0.316	10.27	0.254	15.05	0.126	7.59
Success	1,751	0.746	0.009	-0.074	-2.01	-0.116	-3.86	-0.276	-15.14	-0.134	-7.35
Cash	1,363	0.581	0.010	0.179	5.18	0.208	7.07	0.241	12.23	0.035	1.69
Equity	556	0.237	0.009	-0.169	-7.48	-0.186	-8.52	-0.246	-15.47	-0.119	-6.97
Tender Offer	763	0.325	0.010	0.431	12.22	0.313	9.96	0.166	8.45	0.065	3.34
Public Bidder (First)	1,426	0.608	0.010	0.070	1.88	-0.088	-2.73	-0.251	-12.53	-0.116	-5.71
Public Bidder (Winner)	1,174	0.500	0.010	-0.031	-0.80	-0.117	-3.61	-0.291	-14.59	-0.133	-6.45
Panel C: Target Performance Statistics											
ROE	1,631	0.090	0.003	0.005	0.59	0.015	1.69	-0.024	-3.66	-0.009	-1.34
Sales Growth	1,630	0.078	0.005	-0.040	-2.75	-0.020	-1.42	-0.035	-3.49	-0.021	-2.08
Liquidity	1,468	0.247	0.006	-0.026	-1.32	-0.003	-0.21	0.004	0.39	-0.029	-2.60
D/E	1,622	0.999	0.102	-0.507	-4.09	-0.587	-2.87	-0.120	-0.56	0.107	0.52
M/B	1,612	1.670	0.093	-0.465	-3.72	-0.672	-3.95	-0.173	-0.83	-0.221	-1.22
P/E	1,336	13.674	0.326	-1.929	-2.55	-1.667	-1.89	-0.941	-1.43	0.210	0.32
Size	2,306	11.512	0.036	1.468	11.81	0.929	9.22	0.189	2.62	0.573	8.07
Panel D: Target Stock Price Behavior											
Runup	2,296	0.124	0.005	-0.007	-0.52	0.015	1.09	-0.022	-2.17	0.047	4.56
Markup	2,296	0.096	0.007	0.122	5.40	0.051	2.36	0.023	1.63	-0.081	-6.02
Premium	2,296	0.220	0.009	0.115	4.46	0.067	2.53	0.000	0.01	-0.034	-1.89

Table II

Relations Among Different Measures of Hostility, 1975-96

Host(WSJ) is based on descriptions in the *Wall Street Journal Index* or *Dow Jones News Retrieval* (DJNR). Host(SDC) is based on whether the target firm resisted an unsolicited offer as determined by the Securities Data Company (SDC). Host(Uns) is based on whether the initial or winning bid is unsolicited. Host(Pre) is based on whether the target firm is in play (someone has filed a 13D form with the S.E.C. showing an accumulation of shares within the past 12 months) or the subject of a takeover rumor reported in DJNR. Asymptotic standard errors for the correlation coefficients are between 0.021 and 0.027 under the hypothesis of no correlation. Host(Factor) is the first factor or principal component from the set of three hostility variables with complete data (Host(WSJ), Host(Uns), and Host(Pre)).

The cross-tabulations in Panel B show the frequency and types of disagreements among the four hostility measures.

Panel A: Correlation Coefficients Among Hostility Measures

	Host(SDC)	Host(Uns)	Host(Pre)	Host(Factor)
Host(WSJ)	0.502	0.272	0.152	0.737
Host(SDC)		0.457	0.181	0.578
Host(Uns)			0.208	0.753
Host(Pre)				0.560

Panel B: Cross-Tabulations Among Separate Hostility Measures

	Host(SDC)=1	Host(SDC)=0	Host(Uns)=1	Host(Uns)=0
Host(WSJ)=1	106	12	156	18
Host(WSJ)=0	194	1077	834	1338

	Host(Uns)=1	Host(Uns)=0	Host(Pre)=1	Host(Pre)=0
Host(SDC)=1	263	37	198	102
Host(SDC)=0	354	735	493	596

	Host(WSJ)=1	Host(WSJ)=0	Host(Uns)=1	Host(Uns)=0
Host(Pre)=1	111	932	523	520
Host(Pre)=0	63	1240	467	836

Table III

Frequency of Hostile Transactions by Year for Different Measures of Hostility, 1975-96

The proportions of successful and unsuccessful takeover bids for exchange-listed target firms for each year from 1975-96. The estimates in columns (4) - (7) are differences in means from the full sample of 2,346 cases, with a t-statistic testing whether the difference is reliably different from zero using White's (1980) heteroskedasticity-consistent standard errors. Host(WSD) is based on descriptions in the *Wall Street Journal Index* or *Dow Jones News Retrieval*. Host(SDC) is based on whether the target firm resisted an unsolicited offer as determined by the Securities Data Company (SDC). Host(Uns) is based on whether the initial or winning bid is unsolicited, and Host(Pre) is based on whether the target firm is in play (someone has filed a 13D form with the S.E.C. showing an accumulation of shares within the past 12 months) or the subject of a takeover rumor reported in *DJNR*.

Year	(1) Cases	(2)		(3)		(4) Host(WSD) vs. Full Sample		(5) Host(SDC) vs. Full Sample		(6) Host(Uns) vs. Full Sample		(7) Host(Pre) vs. Full Sample	
		Mean	Std Error	Diff	t-statistic	Diff	t-statistic	Diff	t-statistic	Diff	t-statistic		
1975	49	0.021	0.003	-0.010	-1.17					-0.010	-1.72	-0.022	-3.96
1976	66	0.028	0.003	-0.006	-0.47					0.000	0.04	-0.025	-3.80
1977	116	0.049	0.004	-0.016	-1.11	-0.001	-1.00	0.007	0.77	-0.042	-4.96		
1978	113	0.048	0.004	0.010	0.55	0.009	1.19	-0.010	-1.13	-0.014	-1.62		
1979	134	0.057	0.005	0.013	0.65	-0.001	-0.32	-0.008	-0.83	-0.015	-1.56		
1980	124	0.053	0.005	-0.026	-1.92	-0.014	-2.73	-0.022	-2.38	-0.014	-1.53		
1981	96	0.041	0.004	-0.007	-0.48	0.009	0.75	-0.001	-0.11	0.002	0.28		
1982	98	0.042	0.004	-0.002	-0.11	0.004	0.36	-0.009	-1.14	0.001	0.09		
1983	97	0.041	0.004	-0.020	-1.63	-0.002	-0.15	-0.010	-1.27	0.010	1.21		
1984	126	0.054	0.005	-0.008	-0.50	-0.008	-0.51	0.017	1.78	0.016	1.63		
1985	137	0.058	0.005	0.049	2.06	0.034	1.71	0.004	0.39	0.026	2.62		
1986	186	0.079	0.006	0.020	0.86	0.030	1.38	0.052	4.39	0.028	2.47		
1987	160	0.068	0.005	0.019	0.89	0.039	1.80	0.048	4.36	0.038	3.52		
1988	211	0.090	0.006	0.058	2.13	0.063	2.62	0.068	5.45	0.078	6.35		
1989	146	0.062	0.005	0.013	0.65	-0.020	-1.17	0.023	2.26	0.055	5.31		
1990	60	0.026	0.003	-0.003	-0.24	-0.021	-2.11	-0.004	-0.62	0.009	1.38		
1991	55	0.023	0.003	-0.019	-2.88	-0.027	-3.30	-0.006	-0.90	-0.006	-0.96		
1992	44	0.019	0.003	-0.014	-2.17	-0.016	-1.92	-0.018	-3.54	-0.018	-3.43		
1993	60	0.026	0.003	-0.015	-1.73	-0.035	-4.11	-0.027	-4.44	-0.012	-1.80		
1994	71	0.030	0.004	0.005	0.32	-0.020	-1.65	-0.026	-3.93	-0.027	-3.98		
1995	83	0.035	0.004	-0.001	-0.07	0.015	0.95	-0.021	-2.86	-0.017	-2.29		
1996	114	0.049	0.004	-0.040	-4.28	-0.037	-2.61	-0.047	-5.74	-0.051	-6.13		

Selection bias issues

Table 4 shows effects of requiring full Compustat data for performance

- larger, more successful targets

Table 10 shows effects of a NYSE/Amex bidder

- more likely to use equity and to be successful
- larger targets
- hostility evidence is mixed
 - less likely to be unsolicited, or have pre-bid events

What Predicts Hostility (Table 5)?

- **Larger target size => more hostile**
 - **likelihood of resistance?**
 - **demand for takeover insurance?**
- **lower M/B (q) => more hostile**
 - **MSV results**
 - **could also be that public bargaining is more valuable**
- **secular variation**
 - **reflects takeover market technology**
 - **also reflects data availability**

Table V
Hostility Prediction Models, 1975-96

Probit models predicting whether successful and unsuccessful takeover bids for exchange-listed target firms from 1975-96 are hostile, using four measures of hostility. The dependent variables are dummy variables that equal one when a hostile bid is made for a target firm, and zero otherwise. Host(WSJ) is based on descriptions in the *Wall Street Journal Index* or *Dow Jones News Retrieval*, Host(SDC) is based on whether the target firm resisted an unsolicited offer as determined by the Securities Data Company (SDC), Host(Uns) is based on whether the initial or winning bid is unsolicited, and Host(Pre) is based on whether the target firm is in play (someone has filed a 13D form with the S.E.C. showing an accumulation of shares within the past 12 months) or the subject of a takeover rumor reported in *DJNR*. Several variables measuring the performance of the target firm before the first bid are used in the model. ROE is earnings divided by average stockholder's (book) equity and Sales Growth is the growth in sales over the fiscal year before the first bid. Liquidity is the ratio of net liquid assets to total assets, D/E is the long-term debt to book equity, M/B is the ratio of market to book value of stockholder's equity, P/E is the ratio of stock price to the earnings for the last fiscal year, and Size is the logarithm of the market value of common stock, all measured at the end of the fiscal year before the first bid. Dummy variables are equal to one when the first bid occurs from 1980-84, or 1985-89, or 1990-96, and zero otherwise, allow for secular variation. The last two columns contain the coefficients and t-statistics for a regression of the hostility factor (principal component), Host(Factor)_i, created from the three hostility variables with complete data (Host(WSJ), Host(Uns), and Host(Pre)) on the explanatory variables from the probit model. The marginal effect column transforms the probit coefficient into the marginal effect of the variable on the estimated probability, evaluated at the sample means of the explanatory variables.

Variable	Host(WSJ)			Host(SDC)			Host(Uns)			Host(Pre)			Host(Factor)		
	Coef	t-statistic	Marginal Effect	Coef	t-statistic	Marginal Effect	Coef	t-statistic	Marginal Effect	Coef	t-statistic	Marginal Effect	Coef	t-statistic	
Constant	-4.692	-7.66	-0.638	-3.145	-4.57	-0.882	-0.153	-0.43	-0.056	-1.660	-4.57	-0.603	-0.092	-1.36	
ROE	-2.413	-2.79	-0.328	-0.104	-0.12	-0.029	-1.192	-2.11	-0.439	-0.483	-0.90	-0.175	-0.321	-3.65	
Sales Growth	-0.715	-1.83	-0.097	-0.187	-0.54	-0.052	-0.433	-1.89	-0.159	-0.268	-1.19	-0.097	-0.121	-3.29	
Liquidity	0.386	1.02	0.052	0.236	0.66	0.066	-0.027	-0.12	-0.010	-0.262	-1.13	-0.095	0.003	0.07	
D/E	-0.243	-1.55	-0.033	-0.082	-0.72	-0.023	0.018	0.32	0.007	0.117	2.24	0.042	0.007	0.93	
M/B	-0.068	-0.82	-0.009	-0.226	-2.83	-0.063	-0.151	-3.01	-0.055	-0.055	-1.48	-0.020	-0.018	-2.59	
P/E	-0.020	-2.21	-0.003	-0.006	-0.89	-0.002	-0.003	-0.66	-0.001	-0.003	-0.65	-0.001	-0.002	-2.64	
Size	0.359	7.49	0.049	0.256	5.68	0.072	0.032	1.11	0.012	0.124	4.29	0.045	0.038	6.73	
1980-84	-0.511	-2.85	-0.069	-0.508	-1.39	-0.142	-0.114	-1.05	-0.042	0.363	3.30	0.132	-0.018	-0.94	
1985-89	-0.188	-1.11	-0.026	-0.016	-0.04	-0.004	0.402	3.59	0.148	0.687	6.07	0.250	0.088	4.14	
1990-96	-0.675	-2.88	-0.092	-0.457	-1.24	-0.128	-0.356	-2.43	-0.131	-0.134	-0.93	-0.049	-0.096	-3.37	
R ²		0.108			0.119			0.078		0.099				0.133	
Log-likelihood		-275.6			-304.0			-704.5		-697.0					
Sample Size, N		1,096			593			1,096		1,096				1,096	

Does Hostility Affect Success (Table 6)?

•Only the unnegotiated offer group [Host(Uns)] matters, $t = -8.34$

Is Hostility Related to Pre-bid Runup (Table 7)?

•unnegotiated offers [Host(Uns)] have lower runups, [-9.5%; $t = -4.40$]
 •SDC [Host(SDC)] and Rumor [Host(Pre)] deals have higher runups, [6.5%; $t = 2.89$ and 8.1%; $t = 4.53$]

Table VI

How Does Hostility Affect the Probability of Success?

A probit model predicts whether takeover bids for exchange-listed target firms from 1975-96 will be successful. The dependent variable is a dummy variable that equals one when a bid leads to an acquisition of a target firm (even if a different bidder is the acquirer), and zero otherwise. Several variables measuring the performance of the target firm before the first bid are used in the model. ROE is earnings divided by average stockholder's (book) equity and Sales Growth is the growth in sales over the fiscal year before the first bid. Liquidity is the ratio of net liquid assets to total assets, D/E is the long-term debt to book equity, M/B is the ratio of market to book value of stockholder's equity, P/E is the ratio of stock price to the earnings for the last fiscal year, and Size is the logarithm of the market value of common stock, all measured at the end of the fiscal year before the first bid. Host(WSJ) is based on descriptions in the Wall Street Journal Index or Dow Jones News Retrieval, Host(SDC) is based on whether the target firm resisted an unsolicited offer as determined by the Securities Data Company (SDC), Host(Uns) is based on whether the initial or winning bid is unsolicited, and Host(Pre) is based on whether the target firm is in play (someone has filed a 13D form with the S.E.C. showing an accumulation of shares within the past 12 months) or the subject of a takeover rumor reported in DJNR. Host(Factor) is the factor (principal component) created from the three hostility variables with complete data (Host(WSJ), Host(Uns), and Host(Pre)). Dummy variables are equal to one when the first bid occurs from 1980-84, or 1985-89, or 1990-96, and zero otherwise, allow for secular variation. The marginal effect column transforms the probit coefficient into the marginal effect of the variable on the estimated probability, evaluated at the sample means of the explanatory variables.

Variable	Coefficient	t-statistic	Marginal Effect	Coefficient	t-statistic	Marginal Effect	Coefficient	t-statistic	Marginal Effect
Constant	1.676	2.28	0.449	0.818	2.03	0.232	0.249	0.65	0.073
ROE	-0.519	-0.64	-0.139	-0.622	-0.99	-0.176	-0.641	-1.03	-0.189
Sales Growth	-0.566	-1.69	-0.152	-0.425	-1.70	-0.120	-0.420	-1.71	-0.124
Liquidity	0.649	1.81	0.174	0.316	1.22	0.089	0.364	1.44	0.107
D/E	-0.151	-1.77	-0.041	-0.186	-3.23	-0.053	-0.201	-3.53	-0.059
M/B	0.099	1.68	0.026	0.118	2.40	0.033	0.136	2.71	0.040
P/E	-0.001	-0.25	0.000	-0.005	-1.25	-0.002	-0.006	-1.51	-0.002
Size	0.020	0.43	0.005	0.041	1.25	0.012	0.074	2.34	0.022
Host(WSJ)	-0.393	-1.85	-0.105	0.019	0.12	0.005			
Host(SDC)	0.362	2.12	0.097						
Host(Uns)	-1.260	-8.34	-0.338	-0.896	-9.62	-0.254			
Host(Pre)	-0.239	-1.85	-0.064	-0.464	-5.08	-0.132			
Host(Factor)							-1.536	-8.98	-0.452
1980-84	-0.555	-1.31	-0.149	0.252	2.01	0.071	0.182	1.49	0.053
1985-89	-0.522	-1.27	-0.140	0.066	0.52	0.019	-0.066	-0.55	-0.020
1990-96	-0.907	-2.13	-0.243	-0.171	-1.07	-0.048	-0.194	-1.24	-0.057
R ²		0.196			0.156			0.107	
Log-likelihood		-282.3			-551.0			-574.0	
Sample Size, N		593			1,096			1,096	

Table VII

Is the Pre-Bid Stock Price Runup Related to Hostility?

A regression model is used to explain the pre-bid stock price runup (the cumulative abnormal return to the target firm's stock for trading days (-63, -1) relative to the date of the first bid) for successful and unsuccessful takeover bids for exchange-listed target firms, 1975-96. Several variables measuring the performance of the target firm before the first bid are used in the model. ROE is earnings divided by average stockholder's (book) equity and Sales Growth is the growth in sales over the fiscal year before the first bid. Liquidity is the ratio of net liquid assets to total assets, D/E is the long-term debt to book equity, M/B is the ratio of market to book value of stockholder's equity, P/E is the ratio of stock price to the earnings for the last fiscal year, and Size is the logarithm of the market value of common stock, all measured at the end of the fiscal year before the first bid. Host(WSJ) is based on descriptions in the Wall Street Journal Index or Dow Jones News Retrieval, Host(SDC) is based on whether the target firm resisted an unsolicited offer as determined by the Securities Data Company (SDC), Host(Uns) is based on whether the initial or winning bid is unsolicited, and Host(Pre) is based on whether the target firm is in play (someone has filed a 13D form with the S.E.C. showing an accumulation of shares within the past 12 months) or the subject of a takeover rumor reported in DJNR. Host(Factor) is the factor (principal component) created from the three hostility variables with complete data (Host(WSJ), Host(Uns), and Host(Pre)). Dummy variables are equal to one when the first bid occurs from 1980-84, or 1985-89, or 1990-96, and zero otherwise, allow for secular variation. T-statistics use White's (1980) heteroskedasticity-consistent covariance matrix. S(u) is the standard error of the regression.

Variable	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic
Constant	0.356	3.27	0.392	6.05	0.361	5.62
ROE	0.011	0.10	-0.100	-1.07	-0.093	-0.97
Sales Growth	-0.018	-0.39	-0.031	-0.83	-0.031	-0.79
Liquidity	-0.098	-2.06	-0.094	-2.55	-0.098	-2.65
D/E	0.023	2.31	0.003	0.30	0.005	0.54
M/B	-0.015	-2.88	-0.007	-1.04	-0.006	-0.96
P/E	-0.001	-1.62	-0.001	-1.89	-0.001	-1.91
Size	-0.011	-1.57	-0.009	-1.78	-0.006	-1.21
Host(WSJ)	-0.048	-1.82	-0.007	-0.40		
Host(SDC)	0.065	2.89				
Host(Uns)	-0.095	-4.40	-0.052	-3.75		
Host(Pre)	0.081	4.53	0.055	4.13		
Host(Factor)					-0.034	-1.53
1980-84	-0.032	-0.53	-0.079	-4.45	-0.070	-3.89
1985-89	-0.077	-1.31	-0.113	-6.00	-0.104	-5.54
1990-96	-0.120	-1.93	-0.160	-6.66	-0.158	-6.46
R ²		0.133		0.119		0.094
S(u)		0.201		0.208		0.211
Sample Size, N		579		1,095		1,095

Does Hostility Affect Premiums (Table 8)?

- **Conditional on runup (so you are really looking at the post-bid markup), deals with rumors have lower premiums (markups)**
 • **-8.9%; t = -3.51**
- **Unconditionally, unsolicited deals have lower premiums**
 • **but this reflects the lower success rate, since premiums are measured for both successful and unsuccessful deals**

Table VIII

Is the Takeover Premium Related to Hostility?

A regression model is used to explain the takeover premium (the cumulative abnormal return to the target firm's stock for trading days (-63, 126) relative to the date of the first bid) for successful and unsuccessful takeover bids for exchange-listed target firms, 1975-96. Several variables measuring the performance of the target firm before the first bid are used in the model. ROE is earnings divided by average stockholder's (book) equity and Sales Growth is the growth in sales over the fiscal year before the first bid. Liquidity is the ratio of net liquid assets to total assets, D/E is the long-term debt to book equity, M/B is the ratio of market to book value of stockholder's equity, P/E is the ratio of stock price to the earnings for the last fiscal year, and Size is the logarithm of the market value of common stock, all measured at the end of the fiscal year before the first bid. Host(WSJ) is based on descriptions in the Wall Street Journal Index or Dow Jones News Retrieval, Host(SDC) is based on whether the target firm resisted an unsolicited offer as determined by the Securities Data Company (SDC), Host(Uns) is based on whether the initial or winning bid is unsolicited, and Host(Pre) is based on whether the target firm is in play (someone has filed a 13D form with the S.E.C. showing an accumulation of shares within the past 12 months) or the subject of a takeover rumor reported in DNR. Host(Factor) is the factor (principal component) created from the three hostility variables with complete data (Host(WSJ), Host(Uns), and Host(Pre)). Dummy variables are equal to one when the first bid occurs from 1980-84, or 1985-89, or 1990-96, and zero otherwise, allow for secular variation. In addition, in columns (3)-(4), (7)-(8), and (11)-(12), several variables that are only known during the takeover contest are included in the model. Pill equals one if the target firm has a poison pill in place, Auction equals one if there are multiple bidders, Cash equals one if there is an all-cash payment to target shareholders, and Tender Offer equals one if the deal is a tender offer. T-statistics use White's (1980) heteroskedasticity-consistent covariance matrix. S(u) is the standard error of the regression.

Variable	(1) Coefficient	(2) t-statistic	(3) Coefficient	(4) t-statistic	(5) Coefficient	(6) t-statistic	(7) Coefficient	(8) t-statistic	(9) Coefficient	(10) t-statistic	(11) Coefficient	(12) t-statistic
Constant	0.734	3.82	0.564	2.82	0.490	4.67	0.423	3.85	0.450	4.40	0.378	3.45
ROE	0.110	0.52	0.153	0.75	-0.032	-0.19	0.020	0.13	-0.036	-0.22	0.018	0.11
Sales Growth	-0.044	-0.44	-0.022	-0.22	-0.083	-1.10	-0.073	-1.00	-0.084	-1.12	-0.073	-1.01
Liquidity	-0.153	-1.69	-0.219	-2.52	-0.096	-1.46	-0.146	-2.29	-0.086	-1.31	-0.140	-2.19
D/E	-0.016	-0.46	-0.013	-0.40	-0.024	-1.16	-0.019	-1.01	-0.027	-1.32	-0.021	-1.12
M/B	-0.001	-0.07	-0.005	-0.35	-0.001	-0.07	-0.004	-0.34	0.000	0.03	-0.003	-0.25
P/E	-0.003	-2.00	-0.002	-1.75	-0.003	-2.29	-0.002	-1.86	-0.003	-2.38	-0.002	-1.94
Size	-0.033	-2.82	-0.028	-2.30	-0.012	-1.41	-0.013	-1.51	-0.010	-1.20	-0.011	-1.22
Host(WSJ)	-0.046	-0.87	-0.070	-1.42	0.090	2.41	0.011	0.30				
Host(SDC)	0.151	3.22	0.061	1.28								
Host(Uns)	-0.098	-2.48	-0.106	-2.72	-0.026	-1.03	-0.079	-3.03				
Host(Pre)	0.008	0.24	-0.013	-0.43	-0.052	-2.16	-0.056	-2.39				
Host(Factor)									-0.005	-0.13	-0.147	-3.21
1980-84	0.008	0.07	0.026	0.24	0.004	0.14	-0.007	-0.23	-0.007	-0.22	-0.014	-0.46
1985-89	-0.025	-0.24	-0.043	-0.40	-0.022	-0.68	-0.058	-1.79	-0.039	-1.23	-0.069	-2.13
1990-96	-0.018	-0.16	0.028	0.25	-0.037	-0.84	-0.019	-0.44	-0.039	-0.89	-0.019	-0.44
Pill			0.035	0.77			0.055	1.28			0.048	1.12
Auction			0.125	3.07			0.086	2.61			0.082	2.51
Cash			0.098	2.64			0.088	3.33			0.086	3.24
Tender Offer			0.151	4.62			0.141	5.84			0.148	6.09
R ²		0.048		0.133		0.029		0.097		0.021		0.091
S(u)		0.367		0.351		0.368		0.355		0.369		0.356
Sample Size, N		593		593		1,095		1,095		1,095		1,095

Does Hostility Affect the Likelihood of an Auction (Table 9)?

- All measures of hostility [except Host(WSJ)] have a higher probability of leading to an auction
 - Host(WSJ) also, when SDC is omitted
 - could be targets seeking a "white knight"
 - or, targets seeking a better deal (for shareholders)

Table IX

Is Hostility Related to the Probability of an Auction?

A probit model predicts whether takeover bids for exchange-listed target firms from 1975-96 will be lead to competition from other bidders (an auction). The dependent variable is a dummy variable that equals one when a bid is followed by a formal bid for the target firm by a different bidder within a year, and zero otherwise. Several variables measuring the performance of the target firm before the first bid are used in the model. ROE is earnings divided by average stockholder's (book) equity and Sales Growth is the growth in sales over the fiscal year before the first bid. Liquidity is the ratio of net liquid assets to total assets, D/E is the long-term debt to book equity, M/B is the ratio of market to book value of stockholder's equity, P/E is the ratio of stock price to the earnings for the last fiscal year, and Size is the logarithm of the market value of common stock, all measured at the end of the fiscal year before the first bid. Host(WSJ) is based on descriptions in the *Wall Street Journal Index or Dow Jones News Retrieval*, Host(SDC) is based on whether the target firm resisted an unsolicited offer as determined by the Securities Data Company (SDC), Host(Uns) is based on whether the initial or winning bid is unsolicited, and Host(Pre) is based on whether the target firm is in play (someone has filed a 13D form with the S.E.C. showing an accumulation of shares within the past 12 months) or the subject of a takeover rumor reported in *DJNR*. Host(Factor) is the factor (principal component) created from the three hostility variables with complete data (Host(WSJ), Host(Uns), and Host(Pre)). Dummy variables are equal to one when the first bid occurs from 1980-84, or 1985-89, or 1990-96, and zero otherwise, allow for secular variation. The marginal effect column transforms the probit coefficient into the marginal effect of the variable on the estimated probability, evaluated at the sample means of the explanatory variables.

Variable	(1) Coefficient	(2) t-statistic	(3) Marginal Effect	(4) Coefficient	(5) t-statistic	(6) Marginal Effect	(7) Coefficient	(8) t-statistic	(9) Marginal Effect
Constant	-0.938	-1.27	-0.236	-1.770	-3.92	-0.423	-1.401	-3.24	-0.337
ROE	-0.106	-0.13	-0.027	-0.613	-0.96	-0.146	-0.657	-1.04	-0.158
Sales Growth	-0.267	-0.72	-0.067	0.017	0.06	0.004	0.024	0.08	0.006
Liquidity	0.190	0.51	0.048	0.272	0.97	0.065	0.256	0.92	0.062
D/E	0.004	0.04	0.001	0.024	0.40	0.006	0.029	0.49	0.007
M/B	0.049	0.94	0.012	0.042	0.97	0.010	0.035	0.81	0.008
P/E	0.002	0.31	0.000	-0.004	-0.85	-0.001	-0.004	-0.81	-0.001
Size	-0.054	-1.09	-0.013	0.027	0.76	0.006	0.004	0.12	0.001
Host(WSJ)	0.109	0.53	0.028	0.567	3.83	0.136			
Host(SDC)	0.618	3.86	0.155						
Host(Uns)	0.505	3.41	0.127	0.763	7.60	0.182			
Host(Pre)	0.392	2.95	0.099	0.278	2.83	0.066			
Host(Factor)							1.700	9.44	0.409
Runup	0.248	0.82	0.062	0.011	0.05	0.003	-0.056	-0.26	-0.014
1980-84	0.045	0.12	0.011	0.021	0.16	0.005	0.022	0.17	0.005
1985-89	-0.059	-0.16	-0.015	-0.074	-0.54	-0.018	-0.045	-0.34	-0.011
1990-96	-0.130	-0.33	-0.033	-0.128	-0.70	-0.030	-0.144	-0.79	-0.035
R ²		0.119			0.107			0.098	
Log-likelihood		-268.8			-472.3			-477.6	
Sample Size, N		593			1,095			1,095	

How Does Hostility Affect the Bidder's Stock Price (Table 11)?

- **Host(Pre) might have a negative effect (-4.7% ; t = -2.12)**
 - other measures show no effect
- **Other factors:**
 - larger bidders are good for bidder stock
 - larger premium to target is good for the bidder
- **Measures of bidder stock performance adjust for prior good performance**
 - Fig 4

Table XI

How Does Hostility Affect the Bidder's Stock Price?

A regression model is used to explain the cumulative abnormal return to the bidder firm's stock for trading days (-63, 126) relative to the date of the first bid for successful and unsuccessful takeover bids for exchange-listed target firms, 1975-96. Host(WSJ) is based on descriptions in the *Wall Street Journal Index* or *Dow Jones News Retrieval*. Host(SDC) is based on whether the target firm resisted an unsolicited offer as determined by the Securities Data Company (SDC). Host(Uns) is based on whether the initial or winning bid is unsolicited, and Host(Pre) is based on whether the target firm is in play (someone has filed a 13D form with the S.E.C. showing an accumulation of shares within the past 12 months) or the subject of a takeover rumor reported in *DJNR*. Host(Factor) is the factor (principal component) created from the three hostility variables with complete data (Host(WSJ), Host(Uns), and Host(Pre)). Target size and Bidder size are the logarithms of the market values of common stocks, all measured at the end of the fiscal year before the first bid. Target runup is the cumulative abnormal return to the target firm's stock for trading days (-63, -1) before the first bid and Target markup is the cumulative abnormal return to the target firm's stock for trading days (0, 126) based on CRSP value-weighted market model estimates for trading days (-316, -64). Dummy variables are equal to one when the first bid occurs from 1980-84, or 1985-89, or 1990-96, and zero otherwise, allow for secular variation. In addition, in columns (5) and (7), several variables that may be only known during the takeover contest are included in the model. Pill equals one if the target firm has a poison pill in place, Auction equals one if there are multiple bidders, Cash equals one if there is an all-cash payment to target shareholders, Tender offer equals one if the deal is a tender offer, and Successful equals one if the target firm is taken over by some bidder as a result of a bid that occurs within twelve months of the first bid. T-statistics use White's (1980) heteroskedasticity-consistent covariance matrix. S(u) is the standard error of the regression.

Variable	(1) Coefficient	(2) t-statistic	(3) Coefficient	(4) t-statistic	(5) Coefficient	(6) t-statistic	(7) Coefficient	(8) t-statistic	(9) Coefficient	(10) t-statistic	(11) Coefficient	(12) t-statistic
Constant	-0.804	-2.69	-0.756	-2.48	-0.296	-1.84	-0.257	-1.65	-0.289	-1.86	-0.247	-1.65
Host(WSJ)	0.048	1.08	0.058	1.29	-0.023	-0.74	-0.020	-0.62				
Host(SDC)	-0.025	-0.67	-0.042	-1.16								
Host(Uns)	-0.002	-0.06	0.008	0.26	-0.015	-0.74	-0.007	-0.33				
Host(Pre)	-0.047	-2.12	-0.051	-2.29	-0.039	-2.30	-0.038	-2.23				
Host(Factor)									-0.073	-2.17	-0.063	-1.69
Target size	-0.002	-0.25	-0.005	-0.71	0.001	0.25	0.000	-0.02	0.001	0.21	0.000	-0.06
Bidder size	0.042	2.40	0.041	2.34	0.018	1.90	0.016	1.76	0.017	1.92	0.015	1.76
Target runup	0.114	1.68	0.104	1.52	0.106	2.35	0.093	2.04	0.096	2.09	0.082	1.76
Target markup	0.104	2.64	0.092	1.96	0.113	4.02	0.102	3.28	0.121	4.39	0.109	3.62
1980-84	0.109	2.30	0.111	3.15	-0.028	-1.27	-0.031	-1.37	-0.033	-1.48	-0.035	-1.59
1985-89	0.083	1.83	-0.065	-1.99	-0.030	-1.38	-0.047	-2.10	-0.036	-1.66	-0.054	-2.36
1990-96	0.056	1.12	-0.010	-0.43	-0.077	-2.70	-0.078	-2.71	-0.079	-2.75	-0.080	-2.76
Pill			0.033	1.25			0.079	2.44			0.076	2.39
Auction			0.026	0.69			-0.084	-3.28			-0.082	-3.18
Cash			0.114	2.46			0.003	0.16			0.006	0.29
Tender offer			0.067	1.49			0.041	2.02			0.043	2.11
Successful			0.057	1.15			0.020	0.79			0.019	0.73
R ²	0.051		0.073		0.042		0.060		0.040		0.057	
S(u)	0.279		0.277		0.277		0.275		0.277		0.275	
Sample Size, N	726		726		1,253		1,253		1,253		1,253	

Conclusions

- **Some of the evidence is consistent with agency cost/ entrenchment story**
- **Most of the evidence is also consistent with bargaining strategy story**
 - **hostility, as perceived by the public/academics, is likely to be observationally equivalent to "hard bargaining"**
 - **since it looks like target shareholders are not hurt in terms of the premiums they expect, this explanation seems like it captures the average experience**

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