Internet Appendix

for

External Networking and Internal Firm Governance*

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In this appendix, we provide additional results to supplement the evidence included in the published version of the paper. Below we briefly describe each of the included tables and figures.

In Tables IA.I and IA.II, we provide additional details of the *Social Network Index (SNI).* The index is defined as the sum of the links between an individual director and his or her firm's CEO through current or prior employment, education, and other activities. To provide more insight into the type of links that fall under the "other activities" heading, we list the 50 most common organizations through which directors share such ties with their firms' CEOs (Table IA.I).

We also provide a comprehensive mapping of all of the *SNI* ties between the directors and CEO of Citi Corp for 2001 and 2002 (Table IA.II). Only employment or activities that result in director-CEO links are reported in the table. There are no education links in the Citi example.

In the next two tables, we provide additional evidence on director selection to accompany the tests in Section II.B of the published paper. First, we perform a principal components analysis of the three measures of CEO power used in our tests: consolidation of the titles President,

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Chairman of the Board, and CEO (*BOSS*); CEO tenure; and the Entrenchment Index. Principal components analysis allows us to isolate the common "power" component of the measures while removing the idiosyncratic noise in each individual proxy. The analysis is performed on the correlation matrix of the variables. The procedure first finds the linear combination of the variables with maximum variance (the first principal component). Then, it iteratively finds the linear combination with maximal variance that is orthogonal to all already-chosen combinations, ending with a basis of eigenvectors for the space spanned by the input variables. In Table IA.III, we tabulate the coefficients for each component as well as their eigenvalues and the proportion of variance explained.

We use the directions of the components to help interpret the variation they capture. A CEO power index should be positively correlated with each individual power measure. The second principal component (which explains 36% of the variance) has positive coefficients on each measure (*BOSS* = 0.84; *CEO Tenure* = 0.37; *Entrenchment Index* = 0.38). The remaining two components each have coefficients of the same sign on two measures, but an opposite sign on the third. Thus, we can interpret these components as capturing idiosyncratic variation with respect to a particular variable and the second principal component as capturing the common "power" component. A common rule of thumb when using principal components analysis to reduce the dimensionality of a data set is to retain components with eigenvalues greater than one. Thus, even though a clear argument can be made for retaining only the second component, we include both the first and second principal components as independent variables in our regressions. This choice does not affect our conclusions.

In Table IA.IV, we present the results of regressing *SNI* on the first two principal components of the three power measures and our set of controls.

The coefficient on CEO power, measured by the second principal component, is significantly positive. In Column 2, we add fixed effects for the Fama-French 49 industry groups and in Column 3 we supplement the industry effects with year fixed effects. The industry effects appear to dampen the coefficient on CEO power, though it remains positive and significant, while the year effects have little impact on our estimate.

In Table IA.V, we examine the allocation of directors across four key board committees: the Executive, Audit, Compensation, and Nominating Committees. We present both pooled and firm-fixed-effect logit regressions. Coefficient estimates are reported as odds ratios, so a coefficient of one indicates no effect on the dependent variable.

We control for various director characteristics, including specific expertise (using indicator variables for lawyers, academics, engineers, and directors with financial education). The most pronounced effect of *SNI* appears to be an increased likelihood of serving on the Executive Committee, which is tasked with evaluating major investment projects like merger or acquisition opportunities.

In Tables IA.VI, IA.VII, and IA.VIII, we provide robustness checks related to the main result of our paper; that is, firms in which independent directors have *SNI* ties to the CEO underperform firms with truly independent directors. Our main identification strategy uses director deaths and retirements as an exogenous shock to board composition. A crucial assumption, then, is that director deaths and retirements affect the incidence of *SNI* ties on the board, but are not directly related to firm performance. Because directors in our data sometimes remain on the board beyond their firms' mandatory retirement ages, we explore the link between performance and retirement more formally. In Table IA.VI, we present pooled and firm-fixed-

effect logit regressions that predict director retirement using various firm and director characteristics. Again, we present coefficient estimates as odds ratios.

We find no evidence of a relationship between performance – measured using either *Q* or *Cash Flow* – and director retirement. Not surprisingly, we find that bigger and older boards are much more likely to experience retirements. However, we control for these factors in our main regression analyses.

In Table IA.VII, we explore the robustness of our main result to changes in the definition of the *SNI* variable. In particular, we replicate the regressions reported in Table IV of the main text measuring changes in firm value around the deaths or retirements of (connected) independent directors, but excluding Other Activities Connections (OA) from the definition of the *Social Network Index (SNI)*. The rationale for this test is to demonstrate that our results are not limited to OA links. In our main analysis, we require active membership as officers or directors to measure an OA link to increase the likelihood that the director and CEO actually interact through the nonprofessional organization in question. However, organizations are sometimes large and relatively anonymous. The results in Table IA.VII confirm that this potential source of error in our measurement of connections is not responsible for our results. The primary driver of the relations reported in Table IA.VII are links through past employment experience.

In Table IA.VIII, we subject our results to a different identification strategy. Instead of benchmarking the value change around the death or retirement of a connected independent director to the value change around the death or retirement of an unconnected independent director, we compare it to the value change for a matched firm (board) that did *not* experience the death or retirement of a connected independent director. To choose a matching control firm for each "treated" firm (i.e., each firm in which a connected independent director dies or retires),

we use the nearest-neighbor matching technology developed by Abadie and Imbens (2007). In all cases, we exact-match each treated firm to control firms in the same industry and during the same fiscal year. We use the 17 Fama-French industry groups to ensure that this exact match is possible while retaining a large enough pool of potential controls to match on additional characteristics. In Columns 1 and 2 of Table IA.VIII, we include the number of independent directors with network ties to the CEO and Tobin's *Q* measured at the end of the last two fiscal year-ends prior to the event as additional match variables. Thus, the intuition behind our strategy is to compare the future performance of firms with the same number of connected directors on their boards in the same industry at the same time and with the same trajectories of recent performance, but only one of which experienced the death or retirement of a connected independent director. Of course, it is not possible to exactly match on all the additional controls; however, we use the regression approach of Abadie and Imbens (2007) to correct for bias due to remaining differences between treated and control observations. The bias adjustment procedure uses the estimates from an OLS regression of the outcome variable (Tobin's *Q*) on the match variables on the set of nontreated observations to adjust for the (expected) impact of differences in characteristics after the match on the outcome. The adjustment becomes more important as the number of match variables or the number of matches per treated observation increases. In the former case, additional match variables create greater tradeoffs between the quality of the match on different dimensions. Nevertheless, for the estimates in the first two columns of Table IA.VIII, the summary statistics across our treated and matched samples are very similar and our results are virtually identical before and after the bias correction.

We report the results using the single closest match for each treated observation (Column 1) and using the two closest matches (Column 2). We find statistically significant estimates of

0.077 and 0.054, respectively, for the impact of severing a CEO-director tie on firm value. In Columns 3 and 4 we repeat the procedure, but adding our standard set of controls as additional match variables: firm size, board size, director independence, market leverage, and the GIM governance index. There is little impact on our estimates, suggesting that past performance of firms in the same industry at the same time is a reasonable summary statistic for differences in these characteristics. Most importantly, we note that not only the direction but also the magnitude of our estimates is nearly identical to the differences-in-differences estimates in the main text, even though the benchmark samples are completely different. Thus, our result that connections between independent directors and the CEO lead to lower firm value does not appear to be an artifact of choosing any one particular estimation methodology.

Finally, in Figure IA.1, we explore the long-run value implications of (extra) merger bids undertaken by firms with a high degree of connections between their independent directors and CEOs. The figure displays the long run cumulative abnormal returns surrounding merger bids, separately for firms in which the percentage of independent directors with external network ties to the CEO is above and below the sample median.

We see little evidence that the short-run value destruction among the former set of acquirers is overturned in the long run.

REFERENCES

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Bebchuk, Lucian Arye, Alma Cohen, and Allen Ferrell, 2004, What matters in corporate governance? Harvard Law School John M. Olin Discussion Paper No. 491.

Gompers, Paul, Joy Ishii, and Andrew Metrick, 2003, Corporate governance and equity prices, *Quarterly Journal of Economics* 118, 107-155.

Table IA.I
Top 50 Organizations Responsible for OA Connections

Advertising Council (AdCouncil) (USA)
Allegheny Conference on Community Development (ACCD)
American Gas Association (AGA)
American Petroleum Institute (API)
Annie E Casey Foundation
Boy Scouts of America (BSA)
Boys and Girls Clubs of America (BGCA)
Carnegie Hall Corp
Carnegie Mellon University
Chicago Council on Foreign Relations (CCFR)
Chicago Symphony Orchestra (CSO)
Cleveland Clinic Foundation (CCF)
Cleveland Tomorrow
Commercial Club of Chicago (CCC)
Conference Board Inc
Creighton University
Dana Farber Cancer Institute (DFCI)
Economic Club of Chicago (ECC)
Emory University
Extra Mile Education Foundation
Georgia Chamber of Commerce (GCC)
Georgia Research Alliance (GRA)
Greater Boston Chamber of Commerce (GBCC)
Greater Cleveland Growth Association (GCGA)
Greater Cleveland Partnership
Greater Houston Partnership (GHP)
Grocery Manufacturers of America (GMA)
International Council of Shopping Centers (ICSC)
John F Kennedy Center for the Performing Arts
Johns Hopkins University
Kennedy Center Corporate Fund
Manufacturers Alliance/MAPI
Marquette University
Metro Atlanta Chamber of Commerce
Metropolitan Milwaukee Association of Commerce (MMAC)
Midwest Research Institute (MRI)
Museum of Science and Industry (MSI) (USA)
National Association of Manufacturers (NAM)
National Association of Real Estate Investment Trusts (NAREIT)
National Employers Retirement Trust (NERT)
National Ocean Industries Association (NOIA)
Northwestern University
Oregon Business Council (OBC)
Petroleum Equipment Suppliers Association (PESA)
Pharmaceutical Research and Manufacturers of America (PhRMA)
United Way of America (UWA)
United Way of Central Alabama Inc
University of Chicago
University of Nevada
Virginia Foundation for Independent Colleges

Table IA.II
SNI Connections at Citi Corp in 2001 and 2002

The table contains only employment and activity information that is shared between the CEO and at least one company director. Changes in Connections between Sanford Weill (Citi Chairman and CEO) and company directors are indicated in blue (2001) and red (2002). Connections are measured as of the end of fiscal years 2001 and 2002 for Citi. Reported years for employment experience are calendar years.

Name	Role	Current Emp.	Prior Employment	Other Activities
Sanford Weill	Chairman/CEO	United Technologies (Director 1999-2003), AT&T (Director 1998-2002), Dupont (Director 1998-2001)	AT&T (Director 1998-2002), Travelers Group (Chairman/CEO 1994-1998), Dupont (Director 1998-2001)	Carnegie Hall Corp (Chairman), National Academy Foundation (Board Member), Cornell University (Trustee Emeritus), Memorial Sloan Kettering Cancer Center (Board Member)
Robert Rubin	Executive Officer			
C Michael Armstrong	Indep. Director	AT&T (Chairman/CEO 1997-2002)	AT&T (Chairman/CEO 1997-2002) , Travelers Group (Director 1993-1998)	Carnegie Hall Corp (Trustee)
Alain Belda	Indep. Director	Dupont (Director 2000-2007)	Dupont (Director 2000-2007), Travelers (Director 1997-1998)	
Kenneth Bialkin	Director		Travelers (Director 1986-1998)	Carnegie Hall Corp (Secretary)
George David	Indep. Director	United Technologies (CEO 1988-Present)		Carnegie Hall Corp (Trustee), National Academy Foundation (Board Member)
Kenneth Derr	Indep. Director	AT&T (Director 1995-2005)	AT&T (Director 1995-2005)	Cornell University (Trustee Emeritus)
John Deutch	Indep. Director			
Alfredo Helu	Director			
Roberto Ramirez	Director			
Ann Jordan	Indep. Director		Travelers (Director 1989-1998)	Memorial Sloan-Kettering Cancer Center (Board Member)
Robert Lipp	Director		Travelers (Director 1995-1998)	Carnegie Hall Corp (Trustee)
Reuben Mark	Indep. Director			
Michael Masin	Director		Travelers (Director 1997-1998)	Carnegie Hall Corp (Trustee)
Dudley Mecum II	Indep. Director		Travelers (Director 1986-1998)	
Richard Parsons	Indep. Director			
Andrall Pearson	Indep. Director		Travelers (Director 1986-1998)	
Franklin Thomas	Indep. Director			
Arthur Zankel	Indep. Director		Travelers (Director 1994-1998)	Carnegie Hall (Vice-Chairman)

Table IA.III
CEO Power Measure: Principal Component Analysis

BOSS is a dummy equal to one if the CEO is also Chairman of the Board and President. *CEO Tenure* is measured in years. *Entrenchment Index* measures antishareholder charter provisions an is defined and constructed by Bebchuk, Cohen, and Ferrell (2004). The eigenvectors are reported in orthonormal form.

	First Component	Second Component	Third Component
BOSS	0.0082	0.8447	-0.5352
CEO Tenure	0.7101	0.3719	0.5978
Entrenchment Index	-0.704	0.3849	0.5968
Eigenvalue	1.127	1.0849	0.7885
Proportion of Variance Explained	0.3755	0.3616	0.2628

Table IA.IV
CEO Power and Director Selection

The sample is restricted to newly appointed non-executive directors (one observation per new director). The dependent variable is *Social Network Index (SNI)* at the time of appointment, where *SNI* is defined as the sum of *Current Employment Connection* , *Prior Employment Connection* , *Education Connection* , and *Other Activity Connection* . *Current Employment Connection* indicates that both the director and CEO currently serve externally in at least one common firm. *Prior Employment Connection* indicates that the director and CEO both served in at least one common company in the past, excluding prior roles in the company in question. *Education Connection* indicates that the director and CEO attended the same school at the same time. *Other Activity Connection* indicates that the director and CEO share active membership in at least one non-professional organization. *BOSS* is a dummy equal to one if the CEO is also Chairman of the Board and President. *CEO Tenure* is measured in years. *Entrenchment Index* measures antishareholder charter provisions and is defined and constructed by Bebchuk, Cohen, and Ferrell (2004). *First (Second) Principal Component* is the first (second) factor from a principal components analysis of *BOSS* , *CEO Tenure* , and *Entrenchment Index* . *Age* is the director's age, measured in years. *Independence* is an indicator variable equal to one if the director is independent. *ROA* is net income plus interest expense, scaled by the lag of total assets. *Q* is the natural logarithm of the ratio of the market value of assets to the book value of assets. *Firm Size* is the natural logarithm of total assets. *ROA* , *Q* , and *Firm Size* are measured at the beginning of the fiscal year. Industries are the Fama-French 49 industry groups. All standard errors are clustered at the firm level.

	OLS	OLS	OLS
	(1)	(2)	(3)
First Principal Component	-0.0064	-0.0012	-0.0013
	(1.07)	(0.20)	(0.22)
Second Principal Component	0.0164	0.01	0.0099
	(3.02)***	(1.83)*	(1.82)*
Age	0.0028	0.0025	0.0027
	(3.69)***	(3.34)***	(3.50)***
Independence	0.0212	0.0252	0.0352
	(1.33)	(1.50)	(2.00)**
ROA	-0.0429	-0.039	-0.0412
	(0.69)	(0.60)	(0.63)
Q	-0.0083	0.0035	0.0012
	(0.59)	(0.25)	(0.08)
Firm Size	0.0165	0.0107	0.0102
	(4.64)***	(2.77)***	(2.57)***
Industry Fixed Effects	no	yes	yes
Year Fixed Effects	no	no	yes
Observations	4,339	4,293	4,293
R^2	0.02	0.04	0.04

Robust *t* -statistics in parentheses. Constant included. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table IA.V
Director Network Ties to the CEO and Committee Membership

The sample is restricted to non-executive directors. The dependent variable in Columns (1) and (2) is an indicator for membership on the executive committee; in Columns (3) and (4) for membership on the audit committee; in Columns (5) and (6) for membership on the compensation committee; and in Columns (7) and (8) for membership on the nominating committee. *Social Network Index (SNI)* is defined as the sum of *Current Employment Connection* , *Prior Employment Connection* , *Education Connection* , and *Other Activity Connection* . *Current Employment Connection* indicates that both the director and CEO currently serve externally in at least one common firm. *Prior Employment Connection* indicates that the director and CEO both served in at least one common company in the past, excluding prior roles in the company in question. *Education Connection* indicates that the director and CEO attended the same school at the same time. *Other Activity Connection* indicates that the director and CEO share active membership in at least one nonprofessional organization. *Age* and *Tenure* are measured in years. *Financial Education* is an indicator equal to one if the director is an MBA, CPA, CFA, or has a degree in economics, management, accounting, or business. All standard errors are clustered at the firm level. Coefficient estimates are presented as odds ratios.

	Executive Committee		**Audit Committee**		**Compensation**		**Nominating Committee**	
	Logit	Conditional Logit	Logit	Conditional Logit	Logit	Conditional Logit	Logit	Conditional Logit
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
SNI	1.3524	1.4246	0.7976	0.8183	0.962	1.0584	1.0101	1.09
	(6.84)***	(6.64)***	(6.80)***	(5.16)***	(1.27)	(1.49)	(0.31)	(2.21)**
Independent	0.9002	0.8177	3.6045	4.5566	2.907	3.4839	2.7782	3.2475
	(2.05)**	(3.09)***	(32.04)***	(32.10)***	(27.40)***	(26.50)***	(23.69)***	(22.12)***
Age	1.0063	1.0045	1.008	1.0098	1.0081	1.0104	1.0126	1.0165
	(2.57)**	(1.57)	(5.06)***	(5.35)***	(5.30)***	(5.69)***	(7.53)***	(8.67)***
Tenure	1.0531	1.0817	0.9902	0.9919	1.0063	1.0135	1.0145	1.0236
	(14.71)***	(17.03)***	(4.81)***	(3.11)***	(2.82)***	(4.91)***	(6.33)***	(8.28)***
Financial Education	1.2477	1.2432	1.5128	1.6315	0.9554	0.9343	0.9384	0.902
	(5.36)***	(4.41)***	(13.70)***	(13.94)***	(1.51)	(1.99)**	(2.04)**	(2.90)***
Engineer	1.0625	0.9514	0.8338	0.7821	1.1358	1.1448	1.1274	1.1176
	(0.97)	(0.71)	(4.04)***	(4.64)***	(3.02)***	(2.72)***	(2.56)**	(2.04)**
Lawyer	1.1758	1.2354	0.9324	0.934	0.8645	0.8493	1.3411	1.4511
	(2.75)***	(3.14)***	(1.55)	(1.31)	(3.21)***	(3.22)***	(6.60)***	(7.36)***
Academic	0.7809	0.7544	0.7812	0.7807	0.8041	0.8017	1.1377	1.2023
	(3.69)***	(3.78)***	(4.90)***	(4.37)***	(4.30)***	(3.98)***	(2.65)***	(3.29)***
Female	0.6213	0.5274	1.0274	1.1341	0.8495	0.9022	1.0817	1.1943
	(7.54)***	(9.33)***	(0.59)	(2.53)**	(3.73)***	(2.16)**	(1.76)*	(3.63)***
Year Fixed Effects	no	yes	no	yes	no	yes	no	yes
Firm Fixed Effects	no	yes	no	yes	no	yes	no	yes
Observations	46,947	45,545	83,055	82,458	82,567	81,763	71,478	70,097

Robust *z* -statistics in parentheses. Constant included. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table IA.VI
Retirement Regressions

The binary dependent variable indicates at least one director retirement during the fiscal year. All independent variables are measured at the beginning of the fiscal year. *Board Size (Independence)* counts the number of directors (independent directors). *Cash Flow* is net income plus interest expense, scaled by the lag of total assets. *Q* is the natural logarithm of the ratio of the market value of assets to the book value of assets. *Firm Size* is the natural logarithm of total assets. *Market Leverage* is long-term debt plus debt in current liabilities, divided by the numerator plus market equity. All standard errors are clustered at the firm level. Coefficients are presented as odds ratios.

	Logit	Logit	Conditional Logit
	(1)	(2)	(3)
Q	0.9384	0.9257	0.6892
	(0.58)	(0.69)	(1.18)
Cash Flow	1.3054	1.3122	0.4454
	(0.68)	(0.69)	(0.92)
Firm Size	0.9981	0.9975	0.3373
	(0.06)	(0.08)	(4.04)***
Board Size	1.1095	1.1039	1.3722
	(4.78)***	(4.23)***	(5.03)***
Market Leverage	1.6375	1.6181	0.7045
	(2.03)**	(1.99)**	(0.43)
Board Independence	0.9962	1.0017	0.8525
	(0.18)	(0.07)	(2.23)**
Minimum Board Age	1.0192	1.0188	1.0001
	(2.36)**	(2.32)**	(0.00)
Median Board Age	1.0304	1.0304	1.0449
	(2.74)***	(2.74)***	(1.64)
Maximum Board Age	1.1135	1.1139	1.8749
	(13.03)***	(12.92)***	(11.37)***
Minimum Board Tenure	0.9203	0.9198	1.0971
	(2.87)***	(2.88)***	(2.03)**
Median Board Tenure	0.9776	0.978	0.9973
	(1.93)*	(1.90)*	(0.08)
Maximum Board Tenure	1.0087	1.0087	0.9957
	(2.18)**	(2.18)**	(0.21)
Year Fixed Effects	no	yes	yes
Firm Fixed Effects	no	no	yes
Observations	6,656	6,656	3,498

Robust *z* -statistics in parentheses. Constant included. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table IA.VII
Director Network Ties to the CEO and Market Value: No OA Connections

Events are the death or retirement of a connected or unconnected independent director. Firms are included in the regressions only if a director dies or retires during a sample year and only over the event window in the column title. For firms with multiple events, each event is included individually with all firm-years in the event window. Connections to the CEO are measured using the sum of *Current Employment* , *Prior Employment* , and *Education Connections* . *Current Employment Connection* indicates that both the director and CEO currently serve externally in at least one common firm. *Prior Employment Connection* indicates that the director and CEO both served in at least one common company in the past, excluding prior roles in the company in question. *Education Connection* indicates that the director and CEO attended the same school at the same time. The dependent variable is *Tobin's Q* , measured as the natural log of the ratio of the market value of assets to the book value of assets. All independent variables are measured at the beginning of the fiscal year. *Board Size (Independence)* counts the number of directors (independent directors). *Firm Size* is the natural log of total assets. *Market Leverage* is long-term debt plus debt in current liabilities, divided by the numerator plus market equity. *GIM* is the Gompers, Ishii, Metrick (2003) governance index. *After* is a dummy variable equal to one for all full fiscal years after a director death or retirement. All standard errors are clustered at the firm level.

Panel A. Baselines

	Connected	Full Sample	Connected	Full Sample	Connected	Full Sample
	(1)	(2)	(3)	(4)	(5)	(6)
	[-1, 2]		[-2, 2]		[-3, 3]	
After	0.0878	0.0220	0.1199	0.0353	0.1328	0.0412
	(2.03)**	(1.89)*	(2.59)***	(2.96)***	(2.74)***	(3.08)***
After * (Connected)		0.0658		0.0846		0.0916
		(1.47)		(1.80)*		(1.87)*
Firm Fixed Effects	yes	yes	yes	yes	yes	yes
Observations	318	2,812	414	3,711	504	4,609
Adjusted R^2	0.89	0.89	0.86	0.87	0.83	0.84

Panel B. Multivariate Regression Analysis

				[-2, 2]		
	[-1, 2]	[-2, 2]	[-3, 3]	GIM < Median	GIM ≥ Median	Full Sample
	(1)	(2)	(3)	(4)	(5)	(6)
After	0.0177	0.0254	0.0367	0.0061	0.0405	-0.0008
	(1.26)	(2.25)**	(3.14)***	(0.37)	(2.63)***	(0.05)
After * (Connected)	0.0782	0.0882	0.0858	0.0398	0.1262	0.0357
	(2.05)**	(1.92)*	(1.76)*	(1.06)	(2.38)**	(0.99)
After * (GIM ≥ Median)						0.0504
						(2.29)**
After * (Con.) * (GIM ≥ Med.)						0.0955
						(1.46)
Board Size	-0.0105	-0.0123	-0.0066	-0.0145	-0.0072	-0.0111
	(1.03)	(1.75)*	(1.11)	(2.13)**	(0.70)	(1.75)*
Independence	0.0093	0.0169	0.0159	0.02	0.0134	0.017
	(1.21)	(3.06)***	(3.13)***	(2.88)***	(1.67)*	(3.14)***
Firm Size	-0.0974	-0.0731	-0.1015	-0.0974	-0.0542	-0.0782
	(1.53)	(1.93)*	(3.17)***	(1.80)*	(1.41)	(2.25)**
Market Leverage	-0.283	-0.34	-0.4133	-0.1995	-0.5604	-0.3791
	(2.23)**	(4.02)***	(5.47)***	(1.92)*	(4.95)***	(4.71)***
GIM	-0.0163	-0.0006	0.0089			
	(1.32)	(0.06)	(0.77)			
Firm Fixed Effects	yes	yes	yes	yes	yes	yes
Observations	2,425	3,160	3,863	1,583	1,650	3,233
Adjusted R^2	0.91	0.90	0.88	0.90	0.88	0.89

Robust *t* -statistics in parentheses. Constant included. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table IA.VIII
Director Network Ties to the CEO and Market Value: Matching Estimators

Treatment is the death or retirement of a connected independent director. Connections to the CEO are measured using the *Social Network Index (SNI)*. *SNI* is defined for independent directors as the sum of *Current Employment Connection*, *Prior Employment Connection*, *Education Connection*, and *Other Activity Connection*. *Current Employment Connection* indicates that both the director and CEO currently serve externally in at least one common firm. *Prior Employment Connection* indicates that the director and CEO both served in at least one common company in the past, excluding prior roles in the company in question. *Education Connection* indicates that the director and CEO attended the same school at the same time. *Other Activity Connection* indicates that the director and CEO share active membership in at least one nonprofessional organization. The dependent variable is the change in *Tobin's Q*, measured as the natural log of the ratio of the market value of assets to the book value of assets, from the beginning of the year of treatment to the end of the second full fiscal year after [-1, 2]. *Independent SNI* is the number of independent directors with *SNI* connections to the CEO. All un-subscripted independent variables are measured at the beginning of the fiscal year. *Board Size (Independence)* counts the number of directors (independent directors). *Firm Size* is the natural log of total assets. *Market Leverage* is long-term debt plus debt in current liabilities, divided by the numerator plus market equity. *GIM* is the Gompers, Ishii, Metrick (2003) governance index.

	N = 1	N = 2	N = 1	N = 2
	(1)	(2)	(3)	(4)
ATT	0.0772	0.0543	0.0593	0.0655
	(2.27)**	(1.66)*	(1.84)*	(2.01)**
Independent SNI	X	X	X	X
$\ln(Q_{t-1})$	X	X	X	X
$\ln(Q_{t-2})$	X	X	X	X
Firm Size			X	X
Board Size			X	X
Independence			X	X
Market Leverage			X	X
GIM			X	X
Industry	Exact	Exact	Exact	Exact
Year	Exact	Exact	Exact	Exact

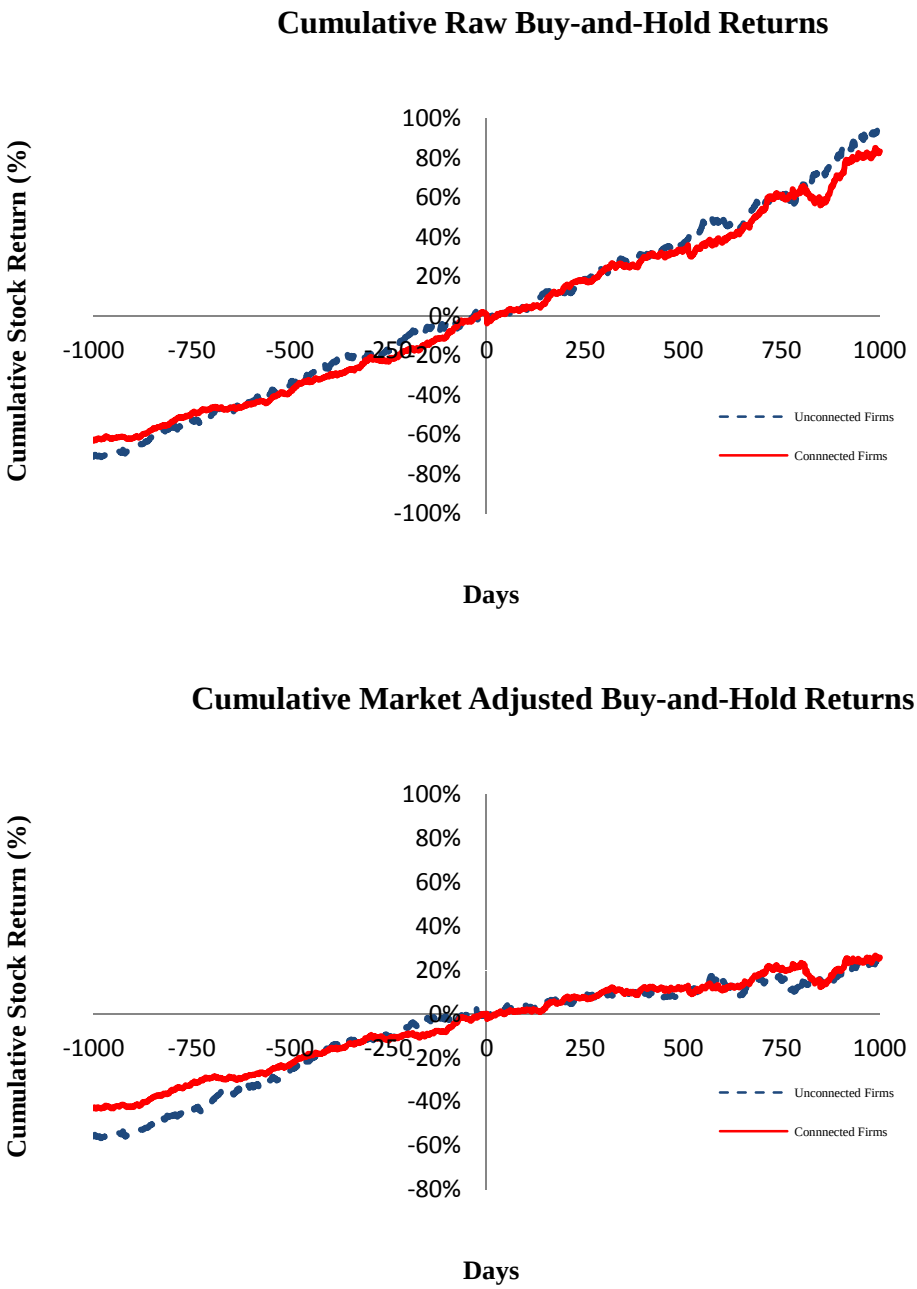

Figure IA.1. Long-run stock performance around mergers. The figures show stock performance around mergers in event time. Day 0 is the day in which the firm announced a merger bid. The sample consists of all merger bids with transaction value at least 10% of the acquirer's beginning-of-fiscal-year market capitalization. Leveraged buyouts, recapitalizations, self-tenders, acquisitions of subsidiaries, spin-offs, exchange offers, repurchases, minority stake purchases, privatizations, and acquisitions of remaining interests are excluded. All returns are buy-and-hold, that is, compounded daily over the relevant interval. For days 0 to 1000, the figures display buy and hold returns from days 0 to x. For days -1000 to 0, the figures display buy-and-hold returns from days -x to 0, downward shifted so that the cumulative return as of day 0 is zero. In the top figure, daily raw returns are compounded for each merger event and then averaged across events within the connected and unconnected firm subsamples. In the bottom figure, market returns (*CRSP* value-weighted index) are first subtracted off the daily raw returns before compounding. In "Connected" firms, the percentage of independent directors with *Social Network Index (SNI)* ties to the CEO is greater than the sample median. *SNI* is the sum of *Current Employment Connection*, *Prior Employment Connection*, *Education Connection*, and *Other Activity Connection*. *Current Employment Connection* indicates that both the director and CEO currently serve externally in at least one common firm. *Prior Employment Connection* indicates that the director and CEO both served in at least one common company in the past, excluding prior roles in the company in question. *Education Connection* indicates that the director and CEO attended the same school at the same time. *Other Activity Connection* indicates that the director and CEO share active membership in at least one nonprofessional organization.