Is CEO/Chair Duality Associated with Greater Likelihood of an International Acquisition?

Michael Sampson-Akpuru[1]
Indiana University

Abstract

I investigate the likelihood that a firm with a combined CEO/chair (i.e., a firm in which the CEO is also the chairman of the board) will pursue an international acquisition using 2,271 firms in the S&P 1500 from 1992 to 2007. I find evidence that firms with a dual CEO/chair are more likely to announce an international acquisition, although the strength of the association varies with the specification of my control variables. International acquisitions are also more likely for larger, high-sales-growth firms with lower leverage and lower cash levels. This paper extends prior work on the relationship between leadership structure and acquisitions by investigating international acquisitions.

1 Michael Sampson-Akpuru is a Junior at Kelley School of Business, Indiana University-Bloomington majoring in Finance. Contact information is misampso@indiana.edu. He thanks Derek Oler of Indiana University-Bloomington for helpful revisions on prior versions of this paper, data gathering and analysis, and his full-fledged support and mentorship throughout this research paper. He also thanks McNair Scholars Program for the financial sponsorship of this research.

I. Introduction

In this paper, I investigate the likelihood that a firm with a combined CEO/chairperson will engage in an international acquisition. CEO duality is a contentious issue that has attracted significant public and academic scrutiny. In 1992, *The New York Times* reported that 75% to 80% of U.S. firms combine the CEO and chair roles into one position.[2] However, Grinstein & Valles[3] show a significant jump in the number of S&P 500 companies splitting CEO/chair roles. They report that 31% of S&P 1000 firms in 2004 separated the CEO/chair roles, a marked increase from the 24% reported in 2000. They argue that corporate scandals, such as Enron and WorldCom, and the 2001 recession raised the alarm for more board vigilance and decentralization of power.

Critics of CEO duality argue that duality compromises board effectiveness in monitoring the CEO. They assert that dual CEOs are more likely to pursue selfish interests that are inconsistent with shareholders' values.[4,5] Proponents of CEO duality assert that a combined CEO/chair structure provides directional clarity and judgment that is lacking within an independent leadership structure.[6,7] Separation of CEO and chair may limit CEO entrepreneurism in ventures that can increase firm value because the CEO's decisions are consistently monitored. To date, research on CEO duality attempts to determine if the benefits of CEO duality outweigh the costs. For example, Rechner and Dalton[8] examine 141 firms with both combined and separate leadership structures finding that firms with separate titles outperformed firms with combined titles. In contrast, Baliga et al.[9] analyze a sample of 181 firms and find that firms that switched to a dual leadership structure experienced better long-term performance. As prior results are inconclusive, my paper attempts to answer a smaller question: is a dual CEO more likely to pursue international acquisitions than a non-dual CEO?

Finkelstein[10] identifies CEO duality as a major contributor to CEO power.

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2 *New York Times* 15 November 1992: A4.

3 Yaniv Grinstein and Y. Valles. "Separation of CEO from the Chairman Position: Determinants and Changes after the New Corporate Governance Regulation." Working Paper, Cornell University (2008).

4 Idalene F. Kesner and R. B. Johnson. "An Investigation of the Relationship Between Board Composition and Stockholder Suits." *Strategic Management Journal* 11 (1990): 327-336.

5 Eugene F. Fama and M. C. Jensen. (1983). "Separation of Ownership and Control." *Journal of Law and Economics* 26 (1983): 301-326.

6 Charles A. Anderson and R. N. Anthony. *The New Corporate Directors*. New York: John Wiley & Sons, 1986.

7 Mark Lipton and J. W. Lorsch. "The Lead Director." *Directors & Boards* 17, 3 (1993): 28-29.

8 Paula L. Rechner and D. R. Dalton. "CEO Duality and Organizational Performance: A Longitudinal Analysis." *Strategic Management Journal* 12 (1991): 155-160.

9 B. Ram Baliga, R. C. Moyer and R. S. Rao. "CEO Duality and Firm Performance: What's the Fuss?" *Strategic Management Journal* 17.1 (1996): 41-53.

10 Sydney Finkelstein, "Power in Top Management Teams: Dimensions, Measurement, and Validation." *The Academy of Management Journal* 35 (1992), 505-538.

Powerful CEOs have the capacity to make bold moves that can increase or destroy stockholder's value.[11] Acquisitions are typically proposed and overseen by the CEO[12] and therefore can be viewed as a manifestation of CEO power. International acquisitions, in particular, increased significantly in 2007.[13] The decision to diversify outside of the home country is risky and can significantly impact shareholder value.[14] Critics of international diversification claim that CEOs engage in global diversification in order to increase salary, decrease pay-to-performance sensitivity, and to entrench themselves.[15,16] Proponents argue that CEOs engage in global diversification in order to exploit untapped market opportunities that are unattainable in their home country.[17] This paper expands the academic literature on CEO duality (and on corporate control) by investigating the possible effect of CEO duality on the strategic investment decision of diversifying internationally through mergers and acquisitions.

I use a dataset of 15,491 firm-year observations (for 2,271 unique firms) from 1992 to 2007 to investigate the relationship between CEO duality and international acquisitions. I determine the CEO duality status of S&P 1500 companies using the EXECUCOMP database. International acquisition announcements are taken from the SDC Mergers and Acquisitions database. Information on firm stock prices is taken from CRSP and firm financial statement information is taken from Compustat. My results suggest that a firm's decision to diversify internationally is influenced by CEO duality, but my results are sensitive to the choice of control variables. Specifically, my results are sensitive to the inclusion of logged firm size (proxied by the total book value of assets). I interpret the results as suggesting a marginal relationship between CEO duality and international diversifications.

The rest of the paper proceeds as follows: Section II reviews relevant literature and develops the hypothesis, Section III presents data and analysis, and Section IV lays out the discussion and conclusion.

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11 Derek Oler, B. Olsen, C. J. Skousen. "Governance, CEO Power, and Acquisition." Working Paper, Indiana University, 2007.

12 Kenneth Lehn and M. Zhao. "CEO Turnover After Acquisitions: Are Bad Bidders Fired?" *Journal of Finance* 61 (2006): 1759-1811

13 For example, see "Crossing the Border," in the October 2007 issue of *Mergers and Acquisitions: The Dealmaker's Journal.* However, acquisition activity has decreased significantly in 2008.

14 Sara B. Moeller, F. P. Schlingemann, and R. M. Stulz. "Wealth Destruction on a Massive Scale? A Study of Acquiring-Firm Returns in the Recent Merger Wave." *Journal of Finance* 60 (2005): 757-782.

15 Ronald C. Anderson, T. W. Bates, J. M. Bizjak, M. L. Lemmon. "Corporate Governance and Firm Diversification" *Financial Management* 78 (2000): 5-22.

16 Andrei Shleifer and R. Vishny. "Management Entrenchment: The Case of Manager-Specific Investments." *Journal of Financial Economics* 25 (1989): 123-139.

17 Lehn, Zhao, Ibid.

II. Literature Review and Hypothesis Development

I review prior work that explores the advantages and disadvantages of CEO duality, possible motivations for acquiring foreign firms, and the impact of foreign acquisitions on firm performance. Proponents of CEO duality argue that duality is a logical business model that encourages superior firm performance through clear responsibility in formulating and implementing business strategies.[18] In making decisions, a dual CEO is privy to a greater level of information that leads to better decision making and board leadership[19] because communications between the CEO and chair are not required.[20],[21] Duality also removes the potential problems of rivalry between the CEO and chair and possible problems from having two public firm spokespersons.[22] Having a centralized leadership structure connotes to external constituents that a firm has "strong leadership and a clear sense of direction."[23,24] Firms with formerly separate CEO and chair positions often eventually grant the chairperson role to well-performing CEOs.[25]

Board activists argue that CEO/chair separation is driven by a need to dilute power at the top. Jensen[26] states that duality makes it "difficult for board to respond early to failure in its top management team." Jensen also indicates that when the CEO also holds the chair position, internal control systems fail because board members cannot effectively monitor, evaluate, or fire a poorly performing CEO (also, see Carver[27]). Dalton and Kesner[28] point out that the "wearing of multiple hats" by CEO/chair poses a conflict of interest for both the CEO and the board of directors. Given the weakened monitoring system in place under duality, a CEO is more able push his/her agenda, and is likely

18 Phillip A. Stoeberl and B. C. Sherony, "Board Efficiency and Effectiveness." In E. Mattar and M. Ball (eds.), *Handbook for Corporate Directors,* (New York: McGraw-Hill, 1985), 12.01-12.10.

19 Jay W. Lorsch and E. MacIver. *Pawns or Potentates: The Reality of America's Corporate Boards* (Boston: Harvard Business School Press, 1989).

20 Jeffrey A. Alexander, M. L. Fennell and M. T. Halpern. "Leadership Instability in Hospitals: The Influence of Board-CEO Relations and Organization Growth and Decline." *Administrative Science Quarterly* 38 (1993): 74-99.

21 Oliver E. Williamson, *The Economic Institutions of Capitalism: Firms, Markets, and Relational Contracting* (New York: MacMillan, 1985).

22 Mark Lipton and J. W. Lorsch. "The Lead Director." *Directors & Boards* 17, 3 (1993): 28-29.

23 Gerald R. Salancik and J. R. Meindl. "Corporate Attributions as Strategic Illusions of Management Control." *Administrative Science Quarterly* 29 (1984): 238-254.

24 Catherine M. Daily and D. R. Dalton. "Separate, But Not Independent: board leadership structure in large corporations." *Corporate Governance* 3 (1997): 126-136.

25 James A. Brickley, J. L. Coles, G. Jarrell. "Leadership Structure: Separating the CEO and chairman of the board." *Journal of Corporate Finance* 3 (1997): 189-220.

26 Michael C. Jensen, "Presidential Address: The Modern Industrial Revolution, Exit and Failure of Internal Control Systems." *Journal of Finance* 48 (1993): 831-880.

27 John Carver, *Boards that Makes a Difference*. San Francisco: Jossey-Bass, 1990.

28 Daniel R. Dalton and I. F. Kesner. "Composition and CEO Duality in Boards of Directors: An International Perspective." *Journal of International Business Studies* 18,3 (1987): 33-42.

to wield more influence over the approval of the initiatives. Board activists point out that shareholders get the short end of the stick because the failure of corporate monitoring systems allows CEOs to engage in trivial and value-destructive projects with reduced risk of punishment.

Empirical results on the effect of CEO duality on firm performance are mixed. On the one hand, Chaganti, Mahajan, and Sharma[29] and Baliga, Moyer, and Rao[30] find no correlation between duality and firm performance. As previously mentioned, Brickley et al.[31] find that superior CEOs are often granted the chair position. In contrast, Rechner and Dalton[32] and Pi and Timme[33] find that dual CEO firms often outperform non-dual firms. Goyal and Park[34] find that dual CEOs have lower turnover sensitivity, suggesting that dual CEOs are less likely to be ousted for destroying shareholder value.

The literature considers multiple motivations for international acquisitions. Jensen[35] and Stulz[36] argue that managers diversify in order to benefit from the power and prestige of running a large, diversified firm. Others assert that diversification is a vehicle for CEO entrenchment, increased compensation, and decreased pay-for-performance sensitivity.[37,38] In contrast, Lehn and Zhao[39] argue that US firms engage in cross-border acquisitions to exploit untapped resources and to avoid the costs associated with building from scratch (sometimes known as "greenfield entry"). By diversifying, the acquiring firm can capitalize on the intellectual and cultural assets inherent within the target firm.

As for the impact of foreign diversification on firm performance, results

29 Rajeswararao S. Chaganti, V. Mahajan and S. Sharma. "Corporate Board Size, Composition and Corporate Failures in Retailing Industry." *Journal of Management Studies* 22 (1985): 400-417.

30 B. Ram Baliga, R. C. Moyer and R. S. Rao. "CEO Duality and Firm Performance: What's the Fuss?" *Strategic Management Journal* 17.1 (1996): 41-53.

31 Brickley, Coles, Jarrell, Ibid.

32 Paula L. Rechner and D. R. Dalton. "CEO Duality and Organizational Performance: A Longitudinal Analysis." *Strategic Management Journal* 12 (1991): 155-160.

33 L. Pi and S. G. Timme. "Corporate Control and Bank Efficiency." *Journal of Banking and Finance* 17 (1993): 515-530.

34 V. K. Goyal and C. W. Park."Board Leadership structure and CEO turnover." *Journal of Corporate Finance* 8 (2002): 49-66.

35 Michael C. Jensen, "Agency Costs of Free Cash Flows, Corporate Finance and Takeovers." *American Economics Review* 76 (1986): 323-329.

36 Rene Stulz, "Managerial Control of Voting Rights, Financing Policies and the Market for Corporate Control." *Journal of Financial Economic* 20 (1990): 25-54.

37 Ronald C. Anderson, T. W. Bates, J. M. Bizjak, M. L. Lemmon. "Corporate Governance and Firm Diversification" *Financial Management* 78 (2000): 5-22.

38 Andrei Shleifer and R. Vishny. "Management Entrenchment: The Case of Manager-Specific Investments." *Journal of Financial Economics* 25 (1989): 123-139.

39 Kenneth Lehn and M. Zhao. "CEO Turnover After Acquisitions: Are Bad Bidders Fired?" *Journal of Finance* 61 (2006): 1759-1811.

are mixed. Denis, Denis, and Yost[40] find that increased global diversification is associated with lower firm value. Bodnar, Tang and Weintrop,[41] however, find a significantly positive relationship between firm value and international acquisition. They argue that the "beneficial impact of geographic diversification arises partially from a significantly stronger association between profitability and value, capital expenditure and value for international firms." Finally, Fatemi[42] (1984) finds no difference in shareholder return from multinational firms compared to purely non-diversified firms.

Although results on whether CEO duality results in higher shareholder value are mixed, prior work unanimously concludes that dual CEOs have greater power within the firm. If the decision to acquire a foreign firm is a manifestation of CEO power, then I expect to find that CEO duality is positively associated with international firm acquisition. This expectation is important because, as past research shows, international acquisition has a significant impact on shareholder value. Therefore, my research examines the association between firm leadership structure and foreign acquisitions.

Stated formally:

> *H1:* *CEO duality is positively correlated with a firm announcement of one or more international acquisitions.*

Control Variables

To ensure that my results are not driven by other factors that prior research suggests are associated with acquisitions, I include the following control variables in my analysis (mostly following Harford[43]). All variables are calculated as of the start of the fiscal year prior to the year that the international acquisition is announced. For convenience, all variables are also defined in the Appendix.

Cash includes cash and cash equivalents, scaled by total assets, averaged over the past four years. As cash is another measure of financial flexibility, I expect that international diversifications are more likely to occur when firms hold high cash balance. As an alternative measure, I use estimated excess

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40 David J. Denis, D. Denis and K. Yost. "Global Diversification, Industrial Diversification, and Firm Value." *Journal of Finance* 57 (2002):1951-1979.

41 Gordon M. Bodnar, C. Tang, and J. Weinthrop. "Both Sides of Corporate Diversification: The Value Impacts of Geographic and Industrial Diversification." Working Paper (1998).

42 Ali M. Fatemi, "Shareholder Benefits from Corporate International Diversification." *Journal of Finance* 39 (1984): 1325-1344.

43 Jarrad Harford, "Corporate Cash Reserves and Acquisitions." *Journal of Finance* 54 (1999): 1969-1997.

cash (calculated following Oler and Picconi[44]), which is actual cash level less an estimated "normal" or expected cash level given the firm's industry and financial characteristics.

Leverage is the ratio of book value of debt to market value of equity, averaged over the past four years. Highly leveraged firms have less ability to pursue international diversifications because they face restrictions on additional borrowing to finance acquisitions. I expect a negative relationship between the number of international acquisition ventures and firm leverage.

Market-to-book (MTB) is the ratio of market value of equity to book value of equity, averaged over the past four years. As MTB is increasing in the firm's market equity value, MTB also captures overvaluation, and I expect that international diversifications are more likely to occur when the MTB ratio is high.

Momentum is the prior year's buy-and-hold, beta-adjusted return, which is indicative of a firm's performance in the prior year. Jensen[45] argues that firms with overvalued equity may pursue acquisitions to maintain investors' unrealistic expectations, as high momentum firms are also more likely to be overvalued. I anticipate that international diversification will be positively associated with momentum.

Non-cash working capital is current assets, less current liabilities and cash and cash equivalents, normalized by total assets and averaged over the past four years. This variable indicates the degree of financial flexibility of the firm, and therefore I expect non-cash working capital to be positively associated with international diversifications.

Price-to-earnings is the stock price divided by earning per share averaged over the past four years, and is an alternate measure of overvaluation. I expect the likelihood of international acquisition to be positively correlated with P/E.

Sales growth is the average sales growth over the past four years and proxies for firm growth. I expect sales growth to be positively associated with international diversifications.

Size is book value of total assets (in millions of dollars). As I discuss in the results section, I also use the natural log of book value of total assets but find that using this measure of size masks my results on the dual CEO dummy. Prior works have shown that larger firms typically pursue acquisitions, so I expect to find that size is positively related to international diversifications.

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44 Derek Oler and M. Picconi. "Implications of Suboptimal Cash Holdings for Current and Future Market Returns." Working Paper, Indiana University, 2008

45 Michael C. Jensen, "Agency Costs of Overvalued Equity." *Financial Management* 34 (2005): 5-19.

III. Data and Analysis

I draw data on dual CEO/chair positions from EXECUCOMP, which tracks data for the top five firm executives within the S&P 1500 firms from 1992 to 2007. I collect acquisitions data from SDC (Securities Data Corporation). Financial statement information is drawn from COMPUSTAT and stock price performance data is drawn from CRSP. After removing observations with missing data, I am left with 15,491 firm years covering 2,271 firms. There are 2,238 firm-years where at least one international acquisition is announced. I provide univariate statistics in Table 1 (means and medians) and Table 2 (Pearson correlations). Adding data on excess cash estimates from Oler and Picconi[46] further restricts my observations from 15,491 to 13,694.

Table 1: Descriptive Statistics

Table 1 provides descriptive statistics for the variables used. All continuous variables are winsorized at the 1% level, and are defined in the Appendix.

Variable	N	Mean	Standard Deviation	25th Percentile	Median	75th Percentile
Foreign acquisition dummy	15,491	0.144	0.352	0.000	0.000	0.000
Dual CEO Dummy	15,491	0.659	0.474	0.000	1.000	1.000
Momentum	15,491	0.090	0.543	-0.192	0.039	0.298
Leverage	15,491	0.324	0.425	0.039	0.173	0.438
Market to book	15,491	3.542	3.276	1.735	2.548	4.008
Cash	15,491	0.124	0.151	0.020	0.058	0.170
Estimated Excess Cash	13,694	-0.023	0.396	-0.212	-0.041	0.113
Non-cash working capital	15,491	0.093	0.149	-0.015	0.075	0.189
Price to Earnings	15,491	34.421	46.943	15.793	21.105	31.764
Sales growth	15,491	0.177	0.234	0.045	0.111	0.227
Book value of total assets	15,491	3.815	7.351	0.392	1.057	3.234
Market Capital	15,491	5.363	12.929	0.532	1.358	4.056

46 Derek Oler and M. Picconi. "Implications of Suboptimal Cash Holdings for Current and Future Market Returns." Working Paper, Indiana University, 2008.

Table 2: Pearson Correlations

Table 2 provides univariate correlations for all variables. The variables are defined in the Appendix.

Variable		1	2	3	4	5	6
Foreign Acquisition Dummy	**1**	1.000	0.028 <0.001	-0.004 0.597	-0.089 <0.001	0.060 <0.001	-0.023 0.005
Dual CEO Dummy	**2**	0.028 0.000	1.000	-0.016 0.041	0.045 <0.001	-0.009 0.253	-0.127 <0.001
Momentum	**3**	-0.004 0.597	-0.016 0.041	1.000	0.023 0.004	0.069 <0.001	0.088 <0.001
Leverage	**4**	-0.089 <0.001	0.045 <0.001	0.023 0.004	1.000	-0.237 <0.001	-0.368 <0.001
Market to book	**5**	0.060 <0.001	-0.009 0.253	0.069 <0.001	-0.237 <0.001	1.000	0.288 <0.001
Cash	**6**	-0.023 0.005	-0.127 <0.001	0.088 <0.001	-0.368 <0.001	0.288 <0.001	1.000
Estimated Excess Cash	**7**	-0.102 <0.001	-0.039 <0.001	0.044 <0.001	-0.023 0.007	0.006 0.504	0.412 <0.001
Non-cash working capital	**8**	0.022 0.007	-0.044 <0.001	-0.033 <0.001	-0.144 <0.001	-0.186 <0.001	-0.126 <0.001
Price to earnings	**9**	0.013 0.097	-0.035 <0.001	0.040 <0.001	-0.074 <0.001	0.162 <0.001	0.191 <0.001
Sales growth	**10**	0.015 0.058	-0.039 <0.001	0.095 <0.001	-0.126 <0.001	0.215 <0.001	0.285 <0.001
Book Value of Total Assets	**12**	0.119 <0.001	0.130 <0.001	-0.034 <0.001	0.144 <0.001	0.017 0.031	-0.177 <0.001
Market Cap	**13**	0.179 <0.001	0.080 <0.001	0.026 0.002	-0.098 <0.001	0.236 <0.001	-0.014 0.088

Variable		7	8	9	10	12	13
Foreign Acquisition Dummy	**1**	-0.102 <0.001	0.022 0.007	0.013 0.097	0.015 0.058	0.119 <0.001	0.179 <0.001
Dual CEO Dummy	**2**	-0.039 <0.001	-0.044 <0.001	-0.035 <0.001	-0.039 <0.001	0.130 <0.001	0.080 <0.001
Momentum	**3**	0.044 <0.001	-0.033 <0.001	0.040 <0.001	0.095 <0.001	-0.034 <0.001	0.026 0.002
Leverage	**4**	-0.023 0.007	-0.144 <0.001	-0.074 <0.001	-0.126 <0.001	0.144 <0.001	-0.098 <0.001
Market to book	**5**	0.006 0.504	-0.186 <0.001	0.162 <0.001	0.215 <0.001	0.017 0.031	0.236 <0.001
Cash	**6**	0.412 <0.001	-0.126 <0.001	0.191 <0.001	0.285 <0.001	-0.177 <0.001	-0.014 0.088
Estimated Excess Cash	**7**	1.000	0.100 <0.001	0.029 0.001	0.083 <0.001	-0.072 <0.001	-0.071 <0.001
Non-cash working capital	**8**	0.100 <0.001	1.000	-0.035 <0.001	-0.016 0.052	-0.272 <0.001	-0.201 <0.001
Price to earnings	**9**	0.029 0.001	-0.035 <0.001	1.000	0.176 <0.001	-0.017 0.037	0.023 0.004
Sales growth	**10**	0.083 <0.001	-0.016 0.052	0.176 <0.001	1.000	-0.070 <0.001	-0.013 0.107
Book Value of Total Assets	**12**	-0.072 <0.001	-0.272 <0.001	-0.017 0.037	-0.070 <0.001	1.000	0.747 <0.001
Market Cap	**13**	-0.071 <0.001	-0.201 <0.001	0.023 0.004	-0.013 0.107	0.747 <0.001	1.000

Table 1 shows that 14% of the firm-years had at least one foreign acquisition announced. 66% of the firm-years have dual CEOs, consistent with the findings of Grinstein and Valles.[47] The average firm has a book value of total assets of $3.8 million and an average market capitalization of $5.4 million. Table 2 shows the Pearson correlations for the variables used in the analysis. P-values for each correlation coefficient are shown below the coefficient. To highlight some key correlations, the dual CEO dummy is positively correlated with the foreign acquisition dummy ($p<0.001$), consistent with my hypothesis. Leverage is negatively correlated with foreign acquisitions (-0.089, $p < 0.001$), which is consistent with my expectation that the more debt a firm has, the less likely the firm is to pursue international acquisition. Cash (-0.023, $p = 0.005$) and excess cash estimates (-0.102, $p < 0.001$) are negatively associated with foreign acquisition. The negative correlation between cash and international acquisitions suggests that Harford's[48] results may not extend to international acquisitions. Overvalued firms are more likely to pursue a foreign acquisition, as suggested by the correlations between the foreign acquisition dummy and market-to-book, price-to-earnings, and sales growth. Larger firms are also more likely to pursue an international acquisition.

47 Yaniv Grinstein and Y. Valles. "Separation of CEO from the Chairman Position: Determinants and Changes after the New Corporate Governance Regulation." Working Paper, Cornell University (2008).

48 Jarrad Harford, "Corporate Cash Reserves and Acquisitions." *Journal of Finance* 54 (1999): 1969-1997.

Table 3: Logistic Regressions

Table 3 provides results from logistic regressions of the foreign acquisition dummy on the dual CEO dummy and other control variables. All continuous variables are winsorized at the 1% level and defined in the Appendix. Estimated coefficients that are significant at the 5% level or better are in bold; estimated coefficients that are significant at the 10% to 5% levels are in italics.

Parameter	Exp. Sign	Panel A		Panel B		Panel C		Panel D	
		Est.	Prob.	Est.	Prob.	Est.	Prob.	Est.	Prob.
Dual CEO Dummy	+	**0.174**	**<0.001**	*0.089*	*0.090*	**0.112**	**0.036**	-0.010	0.853
Momentum	+			0.063	0.162	0.046	0.312	**0.101**	**0.035**
Leverage	-			**-0.802**	**<0.001**	**-0.470**	**<0.001**	**-0.731**	**<0.001**
Market to book	+			**0.016**	**0.039**	0.011	0.169	0.008	0.343
Cash	+			**-1.883**	**<0.001**				
Estimated Excess Cash	+					**-0.618**	**<0.001**	**-0.572**	**<0.001**
Non-cash working capital	+			-0.204	0.328	0.446	0.038	**1.480**	**<0.001**
Price to Earnings	+			0.000	0.848	-0.001	0.267	0.000	0.463
Sales Growth	+			**0.411**	**<0.001**	**0.245**	**0.023**	**0.468**	**<0.001**
Book Value of Total Assets	+			**0.498**	**<0.001**	**0.544**	**<0.001**		
Natural Log of Book Value of Total Assets	+							**0.455**	**<0.001**
Intercept		-1.896	<0.001	-1.094	0.067	-1.361	0.009	-4.650	<0.001
One or More Foreign Acquisitions Announced		2,238		2,238		2,137		2,137	
No Foreign Acquisitions Announced		13,253		13,253		11,557		11,557	
PseudoR-Square		0.1%		9.0%		7.9%		10.0%	

Table 3 shows the logistic regression of the foreign acquisition dummy on the dual CEO dummy and control variables. In Panel A, I use the dual CEO dummy alone and find a strong, positive relationship (0.174, $p<0.001$). I add additional control variables in Panel B, along with year and industry dummies that are not shown.[49] The significance of the dual CEO dummy decreases to marginal ($p=0.09$), suggesting that after controlling for other factors, having a dual CEO has a marginal impact on the firm's propensity to pursue an international acquisition.

The amount of cash needed for day-to-day firm operations likely varies by firm, and therefore excess cash may be a more appropriate measure to use

49 Industry dummies are based on major division, generally defined by the first digit of the firm's SIC code.

as a control for my investigation of international acquisitions. In Panel C, I remove the cash control and insert estimated excess cash in its place, which reduces my useable observations from 15,491 to 13,694. In this analysis, the dual CEO dummy loads significantly (0.112, p=0.04). Overall, these results appear to support my hypothesis on the relationship between CEO duality and international acquisitions.

Finally, as an additional robustness check, I use the natural log of firm size. Results are shown in Panel D. Unfortunately, using this transformation of the size variable causes the significance of my dual CEO dummy to drop away (p=0.85). One explanation for this is that international diversifications are typically pursued by only the largest firms, and as these firms are more greatly affected by the log transformation of firm size, I can no longer distinguish between the relationship between firm size and foreign acquisitions and the relationship between the dual CEO dummy and foreign acquisitions.[50]

IV. Discussion and Conclusion

This paper investigates the link between the likelihood that a firm will pursue international acquisition given CEO duality. After controlling for other factors associated with acquisitions, I find mixed evidence that international diversification is associated with CEO duality. Specifically, univariate correlations provide strong evidence that a dual CEO is closely associated with a firm's announcement of an international acquisition, but multivariate results suggest that the relationship is dependent on the specification of the control variables. This may be attributable to noise generated by taking the natural log of firm size (as opposed to using the non-logged value, in millions of dollars).

One explanation for my mixed findings is that only the largest of firms have the resources to pursue international acquisitions. Thus, firm size is likely the "first-order" (or strongest) effect on whether a firm will diversify internationally,[51] and CEO duality is a "second-order" (or next-strongest) effect. Furthermore, successful firms are more likely to (1) grow larger, and (2) grant the CEO a dual position.[52] This suggests that both CEO duality and foreign acquisitions are caused by firm success and growth. As a result, most acquisitions are made by large firms with dual CEOs.

50 Returning to Table 2, I note that the correlation between the dual CEO dummy and firm size (non-logged) is 0.13. In non-tabulated results, I find that the correlation between the dual CEO dummy and logged firm size is 0.18. Although the difference is not extreme, it may be that after controlling for other factors, this increase in correlation is sufficient to obscure results for my dual CEO dummy in my analysis.

51 Rupendra Paliwal, "Pre-acquisition Characterisitcs of the Acquirers." *Review of Business Research* 2008: 169-178.

52 James A. Brickley, J. L. Coles, G. Jarrell. "Leadership Structure: Separating the CEO and chairman of the board." *Journal of Corporate Finance* 3 (1997): 189-220.

My findings suggest that firms with a dual CEO should consider instituting stronger executive monitoring mechanisms to compensate for this increase in power. Ideally, these mechanisms should serve to check the CEO/chairperson with respect to major strategic decisions like international acquisitions but not stifle the CEO's entrepreneurism. Specific mechanisms could include (1) increasing the proportion of outside board members to reduce the likelihood that board members will "go along" with CEO suggestions because of fear of reprisal, (2) creating an independent ad-hoc committee to evaluate a proposed international acquisition, and, as Grinstein and Hribar[53] find that the M&A bonus paid to the CEO is higher if the CEO is also the board chair, (3) ensuring that the compensation committee is chaired by someone other than the dual CEO. These recommendations strive to prevent the more damaging outcomes of having a dual CEO while still maintaining the benefits of having a dual CEO.

Future research can expand these findings by using more sophisticated statistical analysis to control for possible simultaneity between firm size, CEO duality, and foreign acquisitions. Future research could also explore other manifestations of CEO power (for example, CEO stock ownership levels and years of CEO tenure) in foreign acquisitions. Research considering the future (post-acquisition) performance of acquirers pursuing a foreign acquisition might also be useful.

My research has some limitations in the fact that I do not explore the reasons why dual CEOs pursue international firms. Additionally, I only examine the effect of CEO/chair duality on firm diversification. However, a CEO can hold other titles such as the President, Vice President or co-board chairperson. I did not consider the effects of combining these positions in my research. Other limitations of this research include a limited sample size over a limited time frame. Given that the 1990's were characterized by increased international M&A activity as more U. S. firms sought to establish a global presence, my conclusions may differ over other periods.

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53 Yaniv Grinstein and P. Hribar. CEO Compensation and Incentives: Evidence from M&A Bonuses. *Journal of Financial Economics* 73 (2003): 119-143.

Appendix

Description and Calculation of Variables

Variable Name	Description
Cash Level	Cash and cash equivalents scaled by total assets and cash equivalents. This variable is winsorized at the 1% level.
Estimated Excess Cash	Cash and cash equivalents less optimal estimates, which follows Oler and Picconi (2008).
Leverage	Total debt scaled by market capital, winsorized at the 1% level. Missing values are set to zero to avoid unnecessary loss of observations.
Market Capital	Shares outstanding multiplied by share price at the end of the fiscal year.
Market-to-Book	Market Capital scaled by book value of equity
Momentum	Buy-and-hold beta-adjusted returns for prior 250 trading days leading up to the start of the firm's fiscal year
Non-cash Working Capital	Non-cash working capital, excluding cash, scaled by total assets, winsorized at the 1% level.
Price to Earning	Stock price at fiscal year end. Based on basic earnings per share excluding extraordinary items.
Sales Growth	Current net sales less prior year net sales, scaled by prior year net sales. This variable is winsorized at the 1% level.
Size	Book value of total assets, in millions

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