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CEO DUALITY AND FIRM PERFORMANCE: WHAT'S THE FUSS?

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Rising shareholder activism following poor corporate performance and a subsequent drop in shareholder value at many major U.S. corporations had rekindled interest in duality and corporate governance. Despite limited empirical evidence, duality (chairman of the board and CEO are the same individual) has been blamed, in many cases, for the poor performance, and failure of firms to adapt to a changing environment. In examining the relationship between duality and firm performance, this study considers the announcement effects of changes in duality status, accounting measures of operating performance for firms that have changed their duality structure, and long-term measures of performance for firms that have had a consistent history of a duality structure. Our results suggest that: (1) the market is indifferent to changes in a firm's duality status; (2) there is little evidence of operating performance changes around changes in duality status; and (3) there is only weak evidence that duality status affects long-term performance, after controlling for other factors that might impact that performance.

Since the seminal work of Berle and Means (1932), the impact of the separation of ownership from control on performance of U.S. firms has been the subject of debate and numerous studies (e.g., Jensen and Meckling, 1976; Fama, 1980; Jensen, 1983; Weisbach, 1988; Davis, 1991). Many writings have advanced the notion that separation of ownership from control leads to self-utility maximizing behavior by corporate managers and suboptimization of shareholder value (e.g., Fama and Jensen, 1983; Jarrell, Brickley, and Netter, 1988; Fromson, 1990; Hersch and McDougall, 1992). Such suboptimal performance is generally attributed to the inability or unwillingness of the board—the representatives of shareholders—to exercise its governance role effectively (Walsh and Seward, 1990, provide an excellent review). Geneen goes so far as to assert that 'boards are unable to protect the interests of the stockholders whom they represent; ... fully 95% (corporate boards) are not fully doing what they are legally, morally and ethically supposed to do. And they couldn't even if they wanted to' (1984: 28). That Geneen's remarks are as valid today is confirmed by the acquiescence of boards in endorsing various anti-takeover provisions that are not in the best interests of the shareholders and negotiating the sale of their firms without going through an auction process, as in the recent attempt by Viacom to acquire Paramount (Jarrell, 1993).

Fama and Jensen (1983), Mizruchi (1983), Vance (1983),Dalton and Kesner (1985), and Molz (1988) have asserted that the inability of boards to exercise their legitimate governance role arises from board domination by firm managers. Specifically, firm managers have been accused of defeating the system of checks and balances through their ability to: (1) influence board composition and tenure (Mace, 1971; Foster, 1982; Geneen, 1984); (2) set board

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agenda and control information flows (Aram and Cowan, 1983; Pound, 1992; Solomon, 1993); (3) influence development of corporate strategy (Middleton, 1987; Pearce and David, 1987); and (4) promote convergence on an established strategic direction and resist executive change despite performance decline or instability (Alexander, Fennell, and Halpern, 1993).

CEO DUALITY AND CORPORATE GOVERNANCE

Within the broad arena of the impact of separation of ownership and control, CEO duality has come under particular scrutiny (Lorsch and MacIver, 1989; Millstein, 1992; Pound, 1992; Pi and Timme, 1993; Brickley, Coles, and Jarrell, 1994). In cases of CEO duality, the CEO of the firm wears two hats—a CEO hat and a chairperson of the board of directors hat. Nonduality implies that different individuals serve as the CEO and the chairperson.

Interest in duality has emerged primarily because it is assumed to have significant implications for organizational performance and corporate governance. Proponents of duality argue that duality should lead to superior firm performance as it permits clear-cut leadership for purposes of strategy formulation and implementation (Stoeberl and Sherony, 1985; Anderson and Anthony, 1986). CEOs supporting this position contend that nonduality would: (1) dilute their power to provide effective leadership of the company by increasing the probability that actions and expectations of management and the board are at odds with each other (Alexander *et al.*, 1993); (2) create the potential for rivalry between the chairperson and the CEO; (3) create confusion as a result of the existence of two public spokesmen, the chairperson and the CEO; and (4) limit innovation and intrapreneurship if the CEO feels that the board will perennially second guess his or her actions.

Opponents of duality, however, maintain that duality: (1) constrains board independence and reduces the possibility that the board can properly execute its oversight and governance role (Lorsch and MacIver, 1989; Fizel and Louie, 1990; Dobrzynski, 1991; Millstein, 1992); (2) 'signals the absence of separation of decision management and decision control ... the organization suffers in the competition for survival' (Fama and Jensen, 1983: 314); and (3) makes it difficult for insecure directors to be honest when evaluating firm performance which, in turn, leads to long-term organizational drift (Carver, 1990).

Attempting to reconcile the two perspectives, Finkelstein and D'Aveni (1994) have proposed a contingency model of CEO duality. They argue that the association between CEO duality and board vigilance changes with circumstances—with a vigilant board considering duality to be less desirable when firm performance is good and the CEO possesses substantial informal power. The rationale for this seemingly paradoxical position is that boards fear that duality, under these circumstances, constrains their ability to fulfill their oversight role.

Duality often is identified as a primary cause for recent declines of major U.S. corporations such as Westinghouse, Sears, General Motors (GM) and IBM (White and Ingrassia, 1992). Consider the cases of GM and IBM. In 1992, GM lost $23.5 billion (the largest loss ever for a *Fortune* 500 firm); its market share dropped to 34.9 percent (from 50% or higher in the 1960s); and its (book) stockholders' equity dropped to $6.2 billion from a peak of nearly $36 billion in 1988. Furthermore, while it ranked 4 and 5 (in market value) in 1972 and 1982 respectively, it did not make the top 20 in 1993 (*Fortune*, 1993). IBM's case parallels GM's in many respects. Like GM, IBM was a world leader in its industry. Like GM it saw its worldwide market share drop from historical highs in excess of 70 percent to 18 percent in 1992. This loss in market share resulted in a loss of approximately $5 billion (on revenues of $65 billion) and a crash in IBM's market value from a peak of $106 billion in 1987 to a low of $27 billion in January of 1993 (*The Economist*, 1993).

While GM critics charge that GM's poor performance arose from its failure to adapt to changing consumer preferences, the emergence of new and powerful competitors, and increasingly stringent safety and environmental requirements, duality critics go a step further. They assert that Roger Smith, in his dual capacities of Chairman and CEO, restricted board oversight and the adoption of strategies appropriate to the changing environment. They point to Roger Smith's muzzling of GM's most vocal board member and critic, Mr. Ross Perot, by buying him out for

$700 million as irrefutable evidence of duality-mediated problems at GM (Millstein, 1992).

In like manner, duality critics are quick to blame Mr. Akers' dual status for the board's difficulty in critically evaluating management performance and exercising independent judgment. According to NACD's Nash 'for too long CEO's (like Akers) have had the attitude that it's *my company, my board*. They will have to set aside their egos and remember that it is not their company, it is not their board ... the board needs to deal immediately with the problems, instead of waiting until it reaches the magnitude it did at GM and IBM' (Verespej, 1993: 66).[1]

In contrast to GM and IBM, Compaq Computer is often cited as an example of a firm that was able to make appropriate strategic responses to a changing competitive environment. Duality critics assert that it was the existence of nonduality that permitted Ben Rosen, venure capitalist and Chairman of Compaq Computers, to act decisively in introducing the low-end ProLinea line after Rod Canion, the founder and CEO of Compaq, had refused to acknowledge and deal with the threat of lower-priced clones. As proof, they cite Rosen's statement that 'Compaq's board was able to act quickly because of the corporate governance structure in place at Compaq where the CEO and Chairman roles are distinct' (Burke, 1993: 33).

THE PERSISTENCE OF DUALITY

Evidence regarding the persistence of duality provides the first indication of a possible relationship between duality and firm performance. Despite the alleged superiority of the nonduality structure, corporate U.S.A. appears to be in no great hurry to abandon duality. For example, in 1991, of the *Fortune* 500 firms that could be identified by the authors explicitly with respect to their managerial structure, 284 had a CEO duality structure. This is not much different from the 273 firms with duality in 1985. Moreover, the number of nonduality managerial structures decreased from 116 in 1985 to 72 in 1991.[2] These findings parallel those of the executive firm Korn Ferry International who in a survey of *Fortune's* 1000 largest industrial and service corporations in the U.S.A. found only 20 percent of the respondents had a separate chairperson in 1992. This was down from 26 percent in 1979 (*Business Week*, 1993). Brickley, Coles and Jarrell (1994) also found no evidence of a decline in the popularity of the duality governance structure.

There are several possible explanations for the persistence of the CEO duality managerial structure: (1) duality reflects the traditional influence of firm management in board composition and reluctance of the board to exercise its governance prerogative; (2) the board may be indifferent to the duality issue and is content to let duality prevail as long as it is convinced that the CEO has the ability to occupy both positions effectively; (3) duality reflects board hubris; (4) duality may be a superior organizational structure; and (5) though a nonduality structure may be superior to a duality structure, *ceteris paribus*, there are other managerial control mechanisms in place to mitigate the abuse of managerial discretion that may arise from a duality structure. Jensen and Meckling (1976), for instance, argued that a combination of managerial incentives and external monitoring would ensure that managers worked toward shareholders' interests. Though this argument was supported by the Chatfield, Moyer, and Sisneros (1989) study, which found evidence of increased external monitoring of firm performance by security analysts in cases where there were greater potential agency problems (as would be true of duality), other studies provided only equivocal support for efficacy of internal and external monitoring and control mechanisms (see Walsh and Seward, 1990, for a comprehensive review).

Despite its perceived importance, assertions made regarding the desirability or undesirability of duality are invariably grounded in anecdotal data. Empirical studies examining the link between duality and firm performance are few and their findings mixed (e.g., Chaganti, Mahajan, and Sharma, 1985; Rechner and

[1] See Jensen (1993) for a discussion of the role played by the failure of internal control systems in the decline of GM and IBM.

[2] The remaining firms in each year could not be identified clearly by the authors as possessing a duality managerial structure or not because of the use of nonstandard terms to describe Chairman and CEO responsibilities.

Dalton, 1991; Pi and Timme, 1993). One possible reason for the mixed findings is that the studies employ different measures of firm performance. For instance, the Pi and Timme (1993) and Rechner and Dalton (1991) findings that nonduality firms consistently outperform duality firms is not strictly comparable to the findings of Chaganti *et al.* (1985) because these studies exclusively used accounting measures of performance (such as return on investment, return on equity, and profit margins), whereas Chaganti *et al.* employed firm backruptcy/survival as their performance criterion. Furthermore, these studies did not control for industry effects or other offsetting governance factors. Pi and Timme (1993) limit their analysis to a sample of banking firms over the 1987–90 period, whereas Chaganti *et al.* focused on the retailing industry.

In order to overcome these limitations in studying the link between duality and performance, our study controls for industry effects and considers a comprehensive set of performance measures. These include announcement effects of duality status changes, variations in accounting measures of performance around duality status changes, and the impact of duality on a long-term, market-oriented measure of performance—market value added (MVA). The section below delineates specific hypotheses tested and the methodology employed.

THE STUDY

Hypotheses

Announcement effects

If security analysts and investors accept the notion that CEO duality results in more consistent strategy formulation and implementation and ultimately superior firm performance, announcement effects (discussed in detail below) related to changes from nonduality to duality should be positive. On the other hand, if investors believe that duality leads to decreased and/or ineffective governance by the board, then announcement effects should be negative. We set up the following null hypotheses to test this reasoning:

> *Hypothesis 1: Announcement effects of changes in managerial structure from duality to nonduality will be zero.*

Operating performance

The relationship between operating performance around the time a firm changes from duality to nonduality and from nonduality to duality also was examined. Specifically, we looked for changes in return on equity, return on assets, operating cash flow to total assets, and operating cash flow to sales, in the period immediately following the duality structure changes. Consistent with our earlier discussion, the following null hypothesis was tested:

> *Hypothesis 2: Operating performance will not be impacted by changes in a firm's CEO duality structure.*

Market value added

As an additional, longer-term test of the impact of duality on firm performance, we employed the change in the industry-adjusted, standardized, MVA ratio (discussed below) from Stern Stewart & Co (1992). Specifically, we examined changes in standardized market value measures (controlling for industry and size effects) for a group of firms that had a duality managerial structure for each year between 1986 and 1991, another group that had nonduality during the same period, and a third group that had partial duality. The following hypothesis (in its null form) was tested:

> *Hypothesis 3: There will be no difference in the change in the industry adjusted standardized MVA ratio between CEO duality firms and nonduality firms,* ceteris paribus.

Data

The base data set used to test Hypotheses 1 and 2 was the *Fortune* 500 companies as defined at the end of 1990.[3] For each of the *Fortune* 500

[3] The 1990 definition of the S&P 500 was used to provide a relatively large, consistent set of firms over the period from 1980 to 1991. The use of a beginning of the period definition would have led to dramatic sample reductions as firms failed, merged or were taken private. The approach we employed does create a possible survivorship bias. Accordingly, we checked the duality status of firms that disappeared from the data set used to test Hypothesis 3 to see if there was evidence of a relationship between duality status and the reason for disappearance, such as merger, failure, taken

firms, we determined their CEO duality status for each year from 1980 to 1991 by examining company annual reports, proxy statements, 10K reports, *Value Line* reports, *Standard & Poor's Reports* and *Moody's Industrial Manuals*. A firm was classified as having a duality structure in a year if the CEO and Chairperson of the Board were the same individual. Nonduality firms were those where the positions of CEO and Chairperson of the Board were held by separate individuals. In several cases, because of the use of nonstandard managerial titles, the duality status could not be clearly established. In these cases the firm was dropped from the initial sample for the years of indeterminate status. This left a total potential sample of about 375 firms in any given year.

The initial classification of firms by CEO duality status was used to identify firms that had undergone a change in managerial structure between 1980 and 1991. If a firm's status changed from duality to nonduality or from nonduality to duality, we examined the *Wall Street Journal Index*, the *Wall Street Journal*, and *Value Line* to identify the date the managerial change occurred. Specific announcement dates were found for 61 firms that moved from a nonduality managerial structure to duality. Specific announcement dates were also identified for 37 firms that moved from a duality managerial structure to nonduality. These samples were used to test the announcement effect of a change in duality status.[4]

In testing the impact of changes in duality status on firm operating performance, we used data for all firms that underwent a change in duality status, even if the specific date of the change could not be determined. After eliminating firms because of multiple changes in status over the period 2 years before to 2 years after the duality status change and because of missing or incomplete data in the *Compustat PC Plus* data base, a sample of 30 firms that changed their status from duality to nonduality and 58 firms that changed from nonduality to duality remained. For the longer-term tests of the impact of duality status on firm performance, as measured by the change in the standardized, industry-adjusted MVA, we used the set of firms contained in the 1986 issue of *Business Week's* 'Executive Compensation Scoreboard.'[5]

A firm was classified as having a pure, nonduality managerial structure if, for the period from 1986 to 1991,[6] the firm had a separate CEO and Chairman of the Board for each year. A total of 12 firms met this criterion. A firm was classified as having partial nonduality if it had a separate CEO and Chairman of the Board for one or more (but not all) years between 1986 and 1991. A total of 58 firms met this criterion. A firm was classified as having a pure duality status if the positions of Chairman of the Board and CEO were held by the same individual for all years.[7] A total of 111 firms met the pure duality definition.

Analyses and findings

Announcement effects of duality status changes

To examine the announcement effects of changes in duality status, we examined the event period price reactions around the announcement date of changes in a firm's CEO duality status. The announcement period excess returns were measured using the Single Index Market Model (SIMM). The SIMM model controls for changes in returns of the overall market, thus isolating the effect of the event (the duality status change) to the firm in question (Brown and Warner, 1980). The parameters of the SIMM were estimated from the pre-event estimation period, $-300 < t < -61$, where t is the index for the trading day relative to the announcement date

private, etc. There appeared to be no discernible pattern of duality or nonduality among firms that failed or had been merged out of existence.

[4] The low number of duality status changes over this time period relative to the potential total number of such changes also is consistent with the view that the duality status of a firm's governance structure is unimportant with respect to firm performance.

[5] The long-term tests of performance are limited to the *Business Week* sample described above because of the close correlation between that sample and the *Stern Stewart Performance* 1000 sample. The *Fortune* 500 companies contains a large number of banking and utility firms that are not covered by Stern Stewart.

[6] The 1986–91 time period was used for these tests because of the availability of changes in standardized MVA figures, both for individual companies and for industries at those points in time.

[7] In some cases the Chairman of the Board and CEO changed during the period, but throughout the period both offices were held by one individual.

and $t = 0$ is the announcement date (defined as the *Wall Street Journal* publication date). Specifically, the following regression equation was estimated:

$$R_{it} = \alpha_i + \beta_i R_{mt} + e \qquad (1)$$

where R_{it} = day t return for the stock of firm i, a firm announcing a change in duality status;
R_{mt} = return on the CRSP equally weighted market index for day t;
α_i, β_i = security-specific parameters for firm i; and
e = random error term distributed as $N(0,\sigma)$.

The estimated parameters from regression equation (1) were used to calculate excess returns (ER_{it}) for each firm i, for each day t, in the period from $t = -60$ to $t = +60$

$$ER_{it} = R_{it} - \alpha_i - \beta_i R_{mt} \qquad (2)$$

The excess returns for individual stocks were averaged to yield portfolio excess returns, for each of two subsamples—the group of firms that changed from a duality structure to nonduality and the group that changed from nonduality to duality.

$$AER_t = 1/n_t \sum_{i=1}^{n_t} ER_{it} \qquad (3)$$

where AER_t = excess return for day t, averaged over all firms in each group; and
n_t = number of firms having nonmissing excess returns in each group for day t.

The significance of the average daily excess return was evaluated by means of the following test statistic:

$$T = AER_t/s$$

where s is the standard deviation of excess returns over the estimation period for each portfolio of announcing firms. The cumulative excess returns for various intervals of time around the event date were calculated as follows:

$$CAER_{t_1,t_2} = \sum_{t=t_1}^{t_2} AER_t; \qquad t_2 > t_1 \qquad (4)$$

and T_{t_1,t_2} is the test statistic for the significance of CAER, defined as:

$$T_{t_1,t_2} = CAER_{t_1,t_2}/s(t_2 - t_1 + 1)^{0.5} \qquad (5)$$

where $CAER_{t_1,t_2}$ = cumulative average excess returns over the interval t_1 to t_2.

Panel A of Table 1 presents cumulative excess returns for various intervals around the *Wall Street Journal* announcement date and the corresponding test statistics for the sample of 37 firms that changed from a duality managerial structure to a nonduality structure. The 2-day (−1,0) announcement effect is insignificant. The 5-day announcement period effect (−4,0) also is insignificant. Because of the possibility that changes in management

Table 1. Announcement effects of changes in managerial structure

Panel A: Cumulative average excess returns for intervals around the announcement date of a change from CEO duality to nonduality (n = 37)

Interval	CAER[c]	T[d]
[−1,0]	−0.0068	−1.59
[−4,0]	−0.0022	−0.33
[−10,0]	0.0145	1.43
[−60,0]	0.0373	1.56

Panel B: Cumulative average excess returns for intervals around the announcement date[a] of a change from nonduality to CEO duality (n = 61)

Interval[b]	CAER[c]	T[d]
[−1,0]	−0.0013	−0.36
[−4,0]	0.0009	0.16
[−10,0]	−0.0074	−0.89
[−60,0]	−0.0292	−1.48

[a]Day is the day relative to the announcement date (day = 0) defined as the publication date of the *Wall Street Journal*.
[b]Interval refers to the interval over which the cumulative average excess return is calculated.
[c]CAER is the cumulative average excess return for the portfolio of managerial structure change announcements over the interval specified.
[d]T is the test statistic for the signifiance of the CAER. All results are insignificant.

may be subject to information leakage prior to the formal announcement, we also examined longer preannouncement periods, specifically days −10 to 0 and days −60 to 0. The announcement effect from day −10 to day 0 is insignificant. The announcement effect from day −60 to day 0 is also insignificant.[8] Overall, these results provide very little evidence in support of the perceived superiority of a nonduality management structure from the perspective of market participants.

Panel B of Table 1 provides announcement period results for the sample of 61 firms that moved from a nonduality structure to duality. The 2-day (−1,0) and 5-day (−4,0) announcement effects are insignificant. The announcement effects from day −10 to day 0 also are insignificant as are the announcement effects from day −60 to day 0. Thus, on balance, there is no evidence of significant announcement effects associated with changes in managerial structure from nonduality to duality.

CEO duality changes and operating performance

Table 2 provides the results of a Wilcoxon signed-rank test[9] of accounting performance measures around the time of a change in managerial structure from duality to nonduality and from nonduality to duality. The performance measures are return on common equity (ROE), return on total assets (ROA), operating cash flow/total assets (OCF/AT), and operating cash flow/sales (OCF/S). Table 2 reports the results of this analysis from year 0 (the year of a change in duality status) to year +2 (2 years after the change in status). Although not shown in Table 2, a similar analysis was performed for the periods 1 year before the duality status change to 2 years after, and 2 years before the duality status change to 2 years after. Our results are robust with respect to alternative definitions of measurement period.

Panel A reports the results from the sample of firms that changed from duality status to nonduality. All results presented show the percentage change in each ratio—measured as the ratio value 2 years after the duality status change minus the ratio value measured during the year of the status change, divided by the ratio value in the year of the status change and presented as a percent. From Panel A, it is apparent that there is no evidence of a significant change in the return on equity, return on assets, operating cash flow to sales, or operating cash flow to assets ratios for the sample of firms that moved from duality to nonduality status. If a change from duality to nonduality has an impact on a firm's operating performance, it is not observable over the time horizon we have used for these performance measures.

Panel B reports results for the sample of 58 firms that changed their managerial structure from nonduality to duality. Here too there is no evidence that a change in managerial governance structure from nonduality to duality impacts operating performance.

In summary, our tests of the effect of a change in a firm's managerial governance structure indicate that there is no evidence that changes from duality to nonduality or from nonduality to duality have any measurable impact on the operating performance of the affected firms in the period up to 2 years after the change occurred. This result is contrary to the results reported by Rechner and Dalton (1991) using U.S. firm data. Their analysis, however, simply compares levels of accounting returns between duality and nonduality firms without controlling for other effects, whereas our approach looks at changes in performance around the time of changes in a firm's duality status. Our results also are not consistent with those reported by Pi and Timme (1993), who restrict their analysis to U.S. banking firms. However, our findings are consistent with those reported in England where the legally mandated separation of the chairperson and CEO has not been found to have any significant impact on firm performance (*Chief Executive*, 1989).

[8] In the case of changes from duality to nonduality, there is a significant (5% level) positive announcement effect from day −10 to day −5, and a significant (10% level) positive announcement effect measured over the period from day −60 to day −5. These longer announcement period results must be reviewed very cautiously, however, because of the potential for contamination from other events, such as dividend announcements, capital structure changes, and other significant, firm-specific events during such an extended horizon.

[9] We also provide paired-*t* test results for purposes of comparison. However, the nonnormality of the data suggests that greater confidence should be placed in the nonparametric test results. Accordingly, our discussion focuses only on those results.

Table 2. Effect of CEO duality changes on operating performance

Panel A: Change of managerial structure from duality to nonduality (n = 30) (two-tailed significance levels in parentheses)

Variable	Mean % change (After−before)/before[a]	Median % change (after−before)/before	Wilcoxon signed rank test statistic	Paired t test statistic
ROE[b]	−29.06	−2.70	−6.50 (0.89)	−0.57 (0.57)
ROA[c]	−37.57	−1.43	−14.00 (0.76)	−1.12 (0.27)
OCF/AT[d]	−8.21	−3.08	−40.50 (0.41)	−1.03 (0.31)
OCF/S[e]	−6.31	1.72	−4.50 (0.93)	−0.88 (0.39)

Panel B: Change of managerial structure from nonduality to duality (n = 58) (two-tailed significance levels in parentheses)

Variable	Mean % change (after−before)/before	Median % change (after−before)/before	Wilcoxon signed rank test statistic	Paired t test statistic
ROE	16.63	2.19	−23.50 (0.85)	1.23 (0.23)
ROA	10.74	−4.65	−114.00 (0.38)	0.85 (0.40)
OCF/AT	−3.07	−7.45	−163.50 (0.20)	−0.72 (0.48)
OCF/S	−3.14	0.58	−76.50 (0.56)	−0.82 (0.42)

[a]'After' is measured from year-end data two full years after the duality status change. 'Before' is measured from year-end data in the year of the duality status change.
[b]ROE = Return on year-end common equity.
[c]ROA = Return on total assets.
[d]OCF/AT = Operating cash flow divided by total assets.
[e]OCF/S = Operating cash flow divided by sales.

CEO duality and long-term firm performance

The analysis presented in Table 2 measures changes in operating performance in the time period immediately following a change in governance structure. In this section, we analyze the longer-term performance of 12 firms that maintained a pure nonduality governance structure, 58 firms that had partial nonduality, and 111 firms with pure duality over the period from 1986 to 1991. We used the change in the industry-adjusted, standardized MVA as computed by Stern Stewart & Co., to measure firm performance (Stewart, 1994; Stern Stewart & Co., 1992). The MVA concept can be thought of as an approximation of Tobin's Q ratio. Tobin's Q is the ratio of market value of a firm's shares to the replacement costs of the assets represented by those shares. Higher Q ratios are indicative of better performance (Copeland and Weston, 1988). One advantage of the MVA metric is the availability of industry composite measures, thus permitting the calculation of industry-adjusted values. Another advantage of MVA is that it represents, more closely, a measure of a firm's ability to identify and exploit positive net present value investment projects.

MVA is defined as the market value of debt, preferred equity and common equity capitalization less the book value of a firm's entire capitalization, adjusted for past write-offs of capital, or:

$$\text{MVA} = \text{market value} - \text{capital}$$

For example, IBM had a book value of outstanding capital at the end of 1992 of approximately $75.3 billion. The market value of this capital was approximately $51.6 billion. Hence IBM's MVA was a negative $23.7 billion. MVA can be viewed as the capital market's assessment of the accumulated net present value (NPV) of all of the firm's past and projected investment projects. It should be related closely to the market returns earned by a firm's shareholders. In the case of IBM, the 10-year average annual returns (ending in 1992) to shareholders from dividends and price appreciation have been a negative 2.1 percent. The 5-year average annual returns (ending in 1992) have been a negative 10.6 percent.

One important implication of the MVA concept is that growth in earnings does not necessarily add to the value of an enterprise (MVA), unless it is achieved by making (and managing) investments such that they earn a return in excess of the cost of capital. Accordingly, the MVA concept reflects both the return and the risk characteristics of investments undertaken by a firm.

Raw MVA measures reflect the increments to value from all past and expected future investments of the firm. We were interested in the value increments created during periods with, and periods without a duality management structure. Accordingly we used the change in MVA between 1986 and 1991. In addition, in order to remove the size bias inherent in raw MVA measures, we standardized the change in MVA by dividing by the beginning (1986) value of total capital. Finally, to adjust for industry effects, we subtracted the change in the industry average standardized MVA from the individual firm values.[10] This industry adjustment represents an important methodological enhancement over earlier works by Rechner and Dalton (1991) and Chaganti *et al.* (1985).

Table 3 provides the results of regressions of (1) the percentage change in industry adjusted, standardized MVA, and (2) the percentage change in standardized MVA (unadjusted for industry effects), both measured over the period 1986–91, on a set of control variables, including dummy variables to represent each firm's CEO duality status. Dummy 'partial' is set equal to 1 for firms with partial nonduality during the period, 0 otherwise; Dummy 'total' is set equal to 1 for firms with total nonduality during the period, 0 otherwise; the omitted class is the total duality set of firms.

An additional dummy variable 'inside' was included to reflect whether the Chairman of the Board was previously a member of the company's management team. A Chairman of the Board who was not previously on the firm's management team is likely to exercise more independent control over the actions of the firm's managers, possibly leading to improved firm performance.

A firm size variable, measured as the natural log of average annual sales between 1986 and 1991,[11] was also included in the regressions to control for firm size effects. Larger firms, that are more likely to be near their maturity stage, may have fewer positive net present value investment opportunities than smaller firms, a fact that may be reflected in the MVA performance measure. The disciplining impact of capital structure was controlled using the average annual total debt to total assets ratio, computed over the period 1986–91. Dividend policy also has been shown to be an effective controlling mechanism for agency problems (Easterbrook, 1984; Rozeff, 1982). Accordingly, we included the average annual dividend payout ratio in the regressions. Agency control arguments suggest a positive relationship for both the dividend and capital structure variables.

The extent of inside share ownership also may positively impact the success of a firm in creating value. We included the proportion of inside ownership as reported in *Value Line* at the end of 1991. Higher-risk firms, as measured by beta values, may be expected to generate greater returns for their shareholders, on average. We controlled for firm risk with the *Value Line* beta at the end of 1991.

As can be seen in Table 3, there is no

[10] Stern Stewart provides an industry average change in standardized MVA, weighted by firm size. We recomputed this average to exclude the firm under consideration before correcting the firm results for industry effects. The Stern Stewart data classifies firms among 58 industry groups according to Standard & Poor's industry classifications. Firms in regulated industries, such as utilities and banks, are currently not included in the Stern Stewart data base.

[11] This variable was included in the regressions both in its raw form and as a natural log. The use of the log form had no impact on the qualitative results of the analysis.

Table 3. CEO duality and long-term firm performance

Independent variables	Dependent variable: Industry-adjusted, standardized MVA (% change 1986–91)	Dependent variable: Standardized MVA (% change 1986–91)
Intercept	89.95	185.29
	(0.81)	(1.57)
Partial nonduality	31.44	53.50
	(2.10)*	(3.37)***
Total nonduality	−6.29	12.55
	(−0.24)	(0.44)
Inside Chairman	35.66	44.89
	(1.09)	(1.29)
ln Average sales	1.33	−6.45
	(0.29)	(−0.50)
Average TD/TA	−369.54	−352.72
	(−3.29)**	(−2.96)**
Average DPO	−0.14	−0.0018
	(−0.36)	(−0.00)
Beta	41.46	35.98
	(1.26)	(1.03)
Insider ownership	−0.77	−1.31
	(−0.93)	(−1.47)
R^2	0.099	0.118
$F_{8,172}$	2.36	2.88

t values in parentheses.
*Significant at <0.05; **significant at <0.01; ***significant at <0.001

difference in performance between firms with total nonduality during the period and firms with total duality (the excluded class). In contrast, those firms with partial nonduality over the period had significantly higher changes in standardized MVA than firms with total duality during the period. Partial nonduality firms typically have had a change in management between 1986 and 1991. In addition, partial nonduality often occurs when a CEO is elevated to the joint position of Chairman and CEO as a result of a favorable record of performance. Hence, this variable may not be measuring the impact of duality on firm performance, but rather it may be isolating those firms where the CEO has been effective, in the eyes of the board, and as a reward has been elevated to the additional position of Chairman of the Board—a phenomenon referred to as 'passing the baton' by Vancil (1987). This could account for the preponderance of firms with duality and is consistent with the findings of a recent study by Brickley *et al.* (1994).

The only other variable that was significant in explaining changes in MVA was the average total debt to total assets ratio. The relationship is negative, contrary to expectations from agency theory. This result is consistent with the debt ratio serving as a proxy for the firm's financial condition, rather than being the result of a conscious decision to increase leverage as a way of disciplining managers.

The sign on the beta coefficient is positive, as expected, but the significance level is only marginal. It is interesting that dividend policy appears to be unrelated to changes in MVA—a result consistent with Miller and Modigliani (1961), but contrary to agency theory arguments (Rozeff, 1982).

Similarly, it is surprising that the level of insider ownership is not positively related to changes in MVA. The lack of signifiance of inside share ownership in affecting shareholder value appears to be at odds with the significance postulated by Jensen (1989). This is not surprising if we recognize the fact that Jensen was referring to corporations that were created as a result of

takeovers, corporate breakups, LBOs, divisional spin-offs, and MBOs; in such instances the proportion of inside shareholding is likely to have been considerably greater than in our sample. Unfortunately, we did not have data on outsider board member equity in our sample to test its impact on long-term performance. Findings from a recent study by Hoskisson, Johnson, and Moesel (1994) suggest that even though outsider board member equity had a significant direct effect on market performance and aspects of divestment strategy, its influence on diversification strategies was relatively insignificant. This suggests that outside board members, while willing to acknowledge that diversification decisions are in the domain of top management, retain the right to intervene if, in their view, diversification has adversely affected firm performance.

CONCLUDING REMARKS

Our findings stand in sharp contrast to the recommendations of those who call for the abolition of duality as a primary way to improve firm governance and performance. The finding of no significant difference in the operating performance suggests that a duality status change (especially going from duality to nonduality) is more a variant of the 'scapegoating phenomenon' (Gamson and Scotch, 1964) and a symbolic way of 'signaling' that the board is effectively exercising its governance role (Pfeffer, 1981), than an effective way of motivating fundamental changes in firm performance. Though there is fairly instantaneous redistribution of legitimate authority at the top levels of the organization in a duality status change, changes in strategies and programs that can have a significant impact on organizational performance may take more time than our observed 2-year measurement window. Delays in strategy shifts could arise from: (1) difficulties in determining the complex causalities that affect firm performance (Oviatt, 1988; Wong and Weiner, 1981); (2) organizational inertia (Miller and Friesen, 1984); (3) organizational politics and consequent difficulties in securing organizational commitment (Quinn, 1980); and (4) prior 'sticky' commitments (Ghemawat, 1991). Even in those instances where quick improvements in operating performance improvements are sought through massive reductions in workforce, severance costs associated with these moves generally create a lag between actions and positive performance outcomes. The only instance where significant performance gains appear to be achieved in a very short period of time are in cases of leveraged buyouts (e.g., Kaplan, 1989; Opler, 1992). This could be due to the fact that managements in leveraged buyout situations are forced to make very drastic cost-cutting moves in order to pare down debt levels.

Second, we find virtually no evidence of significant announcement effects associated with changes in a firm's duality status. From the perspective of the financial marketplace, duality status changes are nonevents. Possible reasons for this are: (1) there could have been prior leakage of the change announcement such that when the change was finally made, no new information needed to be absorbed in the valuation; (2) the investment community is incapable of judging the possible impact of duality status change; and (3) other internal and external control mechanisms are in place (Walsh and Seward, 1990) that render changes in duality status relatively unimportant.

Finally, the lack of significant differences in the longer-term firm performance (as reflected in MVA) between duality and nonduality structure firms is at variance with arguments advanced in favor of nonduality. Duality, although it may increase the potential for managerial abuse, does not appear to lead to tangible manifestations of that abuse. This finding is extremely important since it suggests that a focus on single elements in the corporate governance–firm performance nexus are unlikely to lead to measurable improvements in corporate performance. The determinants of firm performance are highly complex and interrelated and do not appear to be capable of isolation in the context of a single variable such as duality. Activist shareholders and boards of directors, who are ultimately responsible for the governance of corporations, would do well to bear this in mind. In our judgment, boards of directors can function better as the 'ultimate center of control' (Mizruchi, 1983: 433) if they recognize that nonduality is not *the* panacea to firm performance problems and that there is no substitute to designing and implementing effective internal control mechanisms. Signaling active interest and exercising oversight over key strategic

decisions (Ingrassia, 1994) is more likely to lead to effective governance and fewer 'bad' surprises than tinkering with duality.

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