

Corporate Governance and Firm Performance: Roles of Insider and Institutional Holdings

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Abstract

Over the last decade more attention has focused upon the corporate governance roles played by insiders and institutional holders of corporations. In particular, how effective is monitoring by institutional holders? Does share ownership by insiders provide incentive for managers to perform in ways that maximize shareholder wealth? Many financial studies examined these relationships over the past thirty years. Recently there has been a change in how the quality of a company's corporate governance is rated. Is the change in ratings systems by the ISS from GRids to Quickscores a good one? Is there a better "quick" indicator of good corporate governance? This paper provides additional evidence on the relationship between ownership structure and firm performance, and in doing so, shows that institutional and insider holdings may be better guides for investors than the "new and improved" ISS indicators.

I. Introduction

In an uncertain world, investors seek ways to identify "good" firms that are well-run and have managers seeking to maximize the wealth of their owners. During the past ten years, significant efforts have been made to determine the role of financial markets in minimizing agency costs. The first step in this process is to create or identify a measure or measures that accurately reflect(s) the quality of a company's corporate governance. Recently, the Institutional Shareholder Services, Inc. (ISS) changed their system of measuring the quality of corporate governance. For several years, the Governance Risk Indicators, or GRId's, as developed by the ISS were used to evaluate the risk of bad corporate governance. Now the ISS has developed a new system called QuickScores. Just as companies and investors become comfortable with the GRId "level of concern" approach, a new QuickScore quantitative approach rating companies in deciles has been adopted.

The ISS Governance QuickScore is based on correlations between governance factors and key financial metrics, and includes 181 variables. The ISS identified a set of important governance factors and depending on how well a company "measures up" with each of these factors, a company is given a "meet," "exceed," or "fall short" of market best practice. For each governance factor, ISS analyzed the correlation with 16 performance and risk factors" (ISS, 2013). The ISS reported "consistent and robust correlation between governance and performance factors" with high correlations for ROA and CFROI. The weights assigned to the variables is not reported by the ISS.

Brownstein et.al. (2013) conclude that rating companies in deciles can be misleading and counterproductive. By definition, half of all companies will be below average. It is possible that companies with minor corporate governance concerns may be labeled as having relatively "bad" governance practices in place. The new QuickScore system of rating companies in deciles may provide undue concern about a company that is not in the top five deciles.

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A score of 1 indicates relatively lower governance risk, and, conversely, a score of 10 indicates relatively higher governance risk. Companies receive an overall QuickScore and are also assessed across four pillars: Board Structure, Compensation/Remuneration, Shareholder Rights, and Audit. There appear to be significant differences between the former GRId system and the new QuickScore system in the specific ratings assigned to some companies. Some examples of these differences are:

- Apple, Inc. - GRId rating of “low risk” was given for the Compensation category, yet a “6” is given in that category by QuickScore,
- General Electric Co. – GRId rating of “low risk” was given for Board Structure, yet a “7” is given by QuickScore,
- Wal-Mart Stores Inc. – GRId rating of “low risk” was given for Board Structure, yet a “9” was given by QuickScore. In fact, an overall, rating of an “8” was given by QuickScore, where GRId rated Wal-Mart as having overall “low corporate governance risk”, and
- IBM – GRId rating of “low risk” was given in the Audit category, yet QuickScore gives the company the worst rating of “10” in that category.

These inconsistencies raise questions on the validity of both rating systems and how much importance investors should place on them. If a rating such as the QuickScore is viewed as the best measure for the markets to use in investment decisions management may have improvement of their “scores” as a primary goal, rather than fundamental decisions that add shareholder value. Should the QuickScore be the universally accepted method of labeling a company’s level of effectiveness in its corporate governance system? Are there publicly available measures that provide a better and clear proxy for a company’s quality of governance?

II. Background

Over the past two decades, numerous studies have examined the relationship between firm characteristics and firm performance, with several variables being identified as potential indicators of good performing firms. The independence of the board of directors, as well as insider ownership and institutional shareholdings has been examined. Several studies have addressed the importance of board independence as a predictor of good firm performance [Bhagat and Bolton, 2008; Lee and Carlson, 2007; Dahya and McConnell, 2002]. Lee and Carlson (2007) find that firms with the most independent boards have better firm performance. Dahya and McConnell (2005) examine firms that recently increased their board’s independence levels and find that those boards are significantly more likely to replace the CEO after a record of poor firm performance. Based upon this, we include the board independence measure in our examination.

We direct the focus to the important roles of insider and institutional holdings as effective corporate governance indicators. Berle and Means (1932) began the discussion of the existence of a “separation of ownership from control”, and warned of possible significant negative effects on companies and society as a whole if power is concentrated with managers and insiders. Jensen and Meckling (1976) discuss the potential reduction in agency costs if managers are also shareholders of the company. With their interest aligned with shareholders, managers may be motivated to make decisions that maximize shareholder wealth. Recent literature provides

evidence on the importance of insider and institutional holdings on firm value and firm performance. On the other hand, high insider ownership may create an entrenched management that feels too comfortable in their position (Morck et. al, 1988, Shleifer and Vishny, 1997). However, Morck et. al find a non-monotonic positive relationship between insider ownership and firm performance, as measured by Tobin's q. Leech and Leahy (1991) examine ownership structure and firm performance of nearly 500 U.K. firms, and do not find strong results supporting the shareholder-maximizing theory nor the management entrenchment theory.

Evidence on the relationship between institutional ownership and firm performance is mixed. Bhattacharya and Graham (2009) find that institutional investors with investment or business ties with the firm have a negative effect on firm performance. In an examination of takeover bid premiums, Duggal and Millar (1999) find a positive relationship between the level of institutional ownership and bidder gains. However, in two-stage regressions when bidder gains are regressed on institutional ownership, the estimates do not support the ordinary least-squares regression (OLS) results. Shareholders with significant ownership stakes may provide monitoring of management, enhancing firm performance (Schleifer and Vishny, 1986). Holderness (2009) finds that over 96% of U.S. Firms have at least one blockholder. A blockholder is defined as a shareholder with a minimum 5% stake. Blockholders, whether insiders or institutional, may also encourage good managerial decisions by selling their shares when bad decisions are made (Admati and Pfleiderer, 2009, Edmans and Manso, 2011, Nguyen et. al, 2013). Edmans and Manso (2011) find that with the presence of multiple blockholders, the effectiveness of an "exit", reducing or eliminating their stakes, is increased. The level of insider and/or institutional holdings may provide investors with a good indicator of corporate governance quality. The level of insider holdings may serve as an incentive for management to make decisions in the best interest of shareholders. This leads to good firm performance in that agency costs are minimized. On the other hand, the level of institutional holdings serves a monitoring function, where shareholders use the exit mechanism and "vote with their feet" in cases where bad managerial decisions were made.

We hypothesize that publicly available measures such as insider ownership and institutional can provide as good or better proxies for a company's quality of corporate governance, better than the 188-variable QuickScore rating system currently published by the ISS. Are the insider or institutional holdings "quick" indicators for investors to identify "good" vs. "bad" firm? Are they as good or better than QuickScores?

III. Data and Methodology

Sixteen (16) performance measures (as used in the ISS's QuickScore ratings) have been collected for S & P 500 firms as of June 2013, as well as insider holdings, institutional holdings, board independence levels, and QuickScores. Two measures, dividend one-year growth and stock price volatility, were omitted due to their inclusion in the ISS list of factors. The fourteen (14) performance measures are: One-year Shareholder Return, Tobin's Q, Cash Flow Return on Investment (CFROI), EBITDA Margin, Free Cash Flow to Sales (FCF/Sales), Net Profit Margin, Return on Assets (ROA), Return on Equity (ROE), Return on Invested Capital (ROIC), Sales Growth (one-year), Altman's Z Score, Market to Book, Price to Cash flow (Price/CF), and P/E ratio. These performance measures are collected from the *Compustat* database. Insider holdings,

Institutional holdings, and ISS QuickScores are collected from *Yahoo.Finance.com*. All mean performance measures are industry-adjusted and winsorized. By using the method of winsorizing, the effects of extreme values, or outliers, in the data are minimized. Our data is winsorized at $\pm 3 \sigma$.

The performance measures are tested using one-way ANOVA (F-tests) and regressions with both insider holdings and institutional holdings as explanatory variables. We hypothesize that insider holdings serves as a management incentive, and that institutional holdings serve to monitor management. Given evidence in the literature, these two variables, together or alone, may serve as better quick indicators than the QuickScore developed by the ISS. We estimate least-squares regressions, using each industry-adjusted performance measure as the dependent variable, and insider holdings, institutional holdings, QuickScore, and Total Average Assets as explanatory variables. Total Average Assets, divided by \$10 million, serves as a control variable, commonly done in governance literature, and is not industry-adjusted.

To test if any of our potential governance proxies are related to an aggregation of performance measures as opposed to any particular one, we perform additional regressions, regressing the four proxies, board independence, insider holdings, institutional holdings, and the ISS QuickScore on the fourteen measures of firm performance (Table IV). One set of regressions is comprised of all 14 performance measures as independent variables, while the other set exploits the almost tautological relationship among performance measures suggested by financial reporting conventions. In particular, we recognize that Tobin's Q and the market to book ratio are similar; cash flow return on investment, return on equity, and return on assets are similar; EBITDA margin, free cash flow per sales, and net profit margin are similar; and finally, price to cash flow and price earnings are similar. A Pearson Correlations table between all the variables is created with 162 relationships. All of these relationships are used to reduce the number of regressors in the second set of regressions shown in Table IV.

IV. Results

The results indicate that there are significant relationships between many firm performance measures. Table I shows the results of the One-Way ANOVA of the industry-adjusted performance measures.

TABLE I
One-Way ANOVA Industry-Adjusted Performance Measures vs. Indicators of Corporate Governance (Board Independence, Insider Holdings, Institutional Holdings)
As of June 2013

Performance Measure	Industry Adjusted				Industry & Winsorized			
	Board Ind.	Insider Holdings	Institution	Quick Score	Board Ind.	Insider Holdings	Institution	Quick Score
1 Yr Return	0.904	2.236*	0.807	1.362	0.953	2.193*	0.932	1.241
Tobin's Q	2.177*	1.207	0.907	0.622	1.869*	1.127	0.981	0.606
CFROI	0.375	0.232	3.03*	0.871	0.51	0.546	2.268*	0.76
EBITDAM	1.285	0.965	1.234	0.846	1.285	0.965	1.234	0.846
FCF/Sales	0.359	0.348	0.871	0.993	0.345	0.368	0.932	1.002
NPM	1.024	1.468**	1.111	0.19	1.001	1.58**	1.369*	0.582
ROAA	1.251	1.591**	1.600*	0.538	1.324	1.246	1.354*	0.539
ROAEQ	1.279	0.017	0.441	1.084	1.279	0.017	0.441	1.084
ROI	0.592	1.306	2.177*	0.378	0.592	1.306	2.177*	0.378
SalesGrwth	1.019	2.215*	1.407	0.993	1.238	1.151	1.492*	1.064
Alt Z-Score	5.63*	1.11	1.183	2.09*	2.045*	1.247	1.106	1.392
Mk/BK	0.945	0.14	2.163*	1.103	1.057	0.097	2.225*	1.039
Price/CF	0.643	0.036	23.02*	0.845	0.642	0.036	25.606*	0.84
P/E	0.454	3.770*	0.813	0.825	0.454	3.77*	0.813	0.825

* < .01 level of significance

** < 0.05

*** < 0.10

1 Yr Return - One year shareholder return (adjusted by 4-digit GICS groups)

CFROI - Cash Flow Return on Investment

EBITDAM - EBITDA Margin

ROAA - Return on Average Assets

ROAEQ - Return on Average Equity

The Industry-Adjusted means, adjusted for outliers, show that Quickscore is not related to any performance measure, whereas Insider Holdings and Institutional Holdings are significantly related to nine (9) different performance measures, combined. Both variables are significant at the 5% level with NPM (Net Profit Margin).

While the ANOVA results show Quickscore is related only to Altman's Z Score with an F-statistic of 2.405, once outliers are controlled by winsorization, Quickscore does not appear to be related to any of the performance measures. Insider holdings and institutional holdings,

however, are significantly related to five (5) and six (6) performance measures, respectively. Specifically, the insider holdings measure is related to the one-year return, Tobin's Q, Return on Average Assets, Sales Growth, and the P/E ratio. The institutional holdings measure is related to Free Cash Flow/Sales, Return on Average Assets, Return on Investment, Sales Growth, Market/Book, and Price/Cash Flow. Combined, these two indicators of corporate governance are related to nine (9) of the fourteen (14) performance measures, whereas the QuickScore is related to only one.

Table II presents the results of the multivariate regressions with board independence, insider holdings, institutional holdings, and QuickScores as explanatory variables for firm performance. First, regarding the results with no control for outliers, the QuickScore measure plays a significant role in determining the one-year returns and Tobin's Q with the industry-adjusted performance measures, whereas insider holdings and institutional holdings significantly help in determining the one-year return and the Cash Flow Return on Investment (CFROI). On the right side of Table II, are the results using a control for outliers (i.e., winsorized data). Once again, the QuickScore is only significant in determining the one-year return. However, insider holdings and institutional holdings are each significant in determining three different industry-adjusted measures: One-Year Return, CFROI, and the 1-year Sales Growth. It appears that insider holdings and institutional holdings are better predictors of firm performance, outperforming the QuickScore measure. Table III includes results of a separate regression, with QuickScore by itself (with total assets as a control variable). For the QuickScore measure there is no significant relationship to any of the firm performance measures. However Table III shows that both insider holdings and institutional holdings (without QuickScore) are significant in predicting five (5) performance measures, one-year return, Tobin's Q, CFROI, EBITDAM, and 1-year Sales Growth.

The results of the additional regression analyses to examine if any of the governance proxies are related to an aggregation of performance measures are found in Table IV. The F-ratios in Table IV indicate that neither the ISS QuickScore nor insider holdings are related to the least squares aggregation of performance measures. However, in the case of board independence and institutional holdings, the F-test does allow rejection of the null hypothesis of no relationship. Moreover, the relationship between institutional holdings and the individual performance measures is of the expected sign in all cases but one.

V. Conclusions

It appears that two publicly available governance measures do as well or better than the proprietary QuickScore measure in predicting firm performance. The QuickScore, based on 181 variables, may not be the best guide for investors in their investment choices. The lack of evidence of a relationship between QuickScore and financial measures could possibly result due to its expression in deciles (Brownstein et. Al., 2013). There is evidence in the literature on the possible positive effects of insider holdings and institutional holdings. In particular, the insider holdings may serve as an incentive for management to make value-maximizing decisions, and institutional holdings serve as a monitor, "exiting" when bad management decisions are made. This study confirms not only the important roles of insider and institutional holdings, but also that the QuickScore may not be the best guide for investors.

TABLE II
Multivariate Regressions
With Insider Holdings, Institutional Holdings, and QuickScores as Explanatory Variables

Performance Measure	Industry-Adjusted Firm Performance Measures (Total Assets is not industry-adjusted)				Industry-Adjusted Firm Performance Measures Winsorized to Control for Data Outliers				
	One Year Return	Q	CF ROI	EBIT DAM	One Year Return	Q	CFROI	EBIT DAM	1 Yr Sales Growth
R2	3.4	3.7	5.5	2.1	3.9	3.8	6.6	2.1	2.2
AR2	2.4	2.8	4.5	1.1	3	2.8	5.6	1.1	1.3
F	3.484*	3.8	5.86	2.147*	4.12	3.87	7.126	2.147*	2.317
	*	478	6*	**	3*	4*	*	**	***
Constant	-0.075	0.477	-2.33	-	0.438	-0.049	-0.349	0.5	-0.316
t-Ratio	1.152	1.457	8.268*	-	2.034**	0.21	2.769*	2.019*	1.693***
Insider Holdings	0.382	0.984	1.156	-14.563	1.31	0.664	0.675	-1.103	0.772
t-Ratio	2.953*	1.526	2.062**	2.24	3.069*	1.442	2.690*	2.24	2.083**
Institutional	0.125	0.248	0.859	-7.283	644	0.177	0.492	-0.551	0.441
t-ratio	2.383**	0.697	2.791*	2.042	2.744*	0.694	3.578*	2.042	2.164**
QuickScore	-0.092	-0.12	0.007	-0.042	-0.31	-0.008	0.005	-0.003	-0.016
t-ratio	1.827*	5.13*	0.342	0.184	2.055**	0.644	0.587	0.184	1.23
Total Assets	0.045	-4.353	-2.854	0.987	0.323	-3.154	-0.956	0.074	-0.344

t-ratio	0.165	3.2*	2.418**	2.31288	0.359	3.245*	1.812***	0.071	0.441
Performance Measure	One Year Return	Q	CFR OI	EBITD AM	1 Yr Sales Growth	One Year Return	Q	CFR OI	EBITD AM
R2	2.6	3.7	5.4	2.1	1.7	0.5	3.1	3.1	0.2
AR2	1.8	3	4.7	1.3	1	0	2.6	2.7	0
F	3.238**	5.08*	7.819*	2.87**	2.358***	1.031	6.298*	6.617*	0.51
Constant	-115	0.424	-2.299	29.68	-1.029	0.071	0.684	-6.13	23.68
t-Ratio	1.863**	1.374***	8.639*	9.623*	0.255	2.355**	4.62*	12.543*	15.874*
Insider Holdings	0.35	0.942	1.183	-14.714	14.517				
t-Ratio	2.723*	1.477***	2.135**	2.291**	2.085**				
Institutional Holdings	0.163	0.234	0.865	-7.634	7.66				
t-ratio	2.290**	0.661	2.828*	1.077**	1.649**				
QuickScore						-0.006	-	0.014	-0.128
t-ratio						1.378***	0.2561	0.721	0.557
Total Assets	0.119	-4.276	-2.909	1.187	-8.236	-0.163	-	-	9.731
t-ratio	0.44	3.178*	2.494*	0.089	-0.465	0.62	4.623.537*	3.8653.402*	0.741

Note: Total Assets is not industry-adjusted.

Table III
Governance Indicators Regressed on Performance Measures
Industry Adjusted & Winsorized

	Board Ind.	Insider Holdin gs	Insti- tution	Quick Score	Boar d Ind.	Insider Holdin gs	Insti- tution	Quic k Score
AR ²	0.044	0.00	0.06	0.013	0.044	0.027	0.052	0.001
F	4.674*	0.766	2.514*	1.025	4.671 *	3.209*	5.350*	1.061
Constant (t-ratio)	0.768* (59.226)	0.040* (6.274)	0.805* (79.413)	5.386* (32.81 2)	0.465 * (67.76)	0.042* (8.092)	0.790* (81.26)	5.369 * (36.88)
1 Yr Return (t-ratio)	-0.032* (2.180)	0.006 (0.927)	0.300* (2.657)	-0.223 (1.200)	-.031* * (2.330)	0.014** (2.259)	.026** (2.244)	-0.233 (1.364)
Tobin's Q (t-ratio)	-0.021 (1.062)	0.007 (0.806)	0.015 (0.924)	0.009 (0.037)	-.032* * (2.542)	0.004 (0.744)	0.011 (0.541)	0.090 (0.522)
CFROI (t-ratio)	0.011 (0.377)	0.019 (1.457)	0.063* (2.805)	0.559 (1.529)	0.003 (1.33)	.020*** (1.894)	0.073* (3.792)	0.339 (1.183)
EBITDA M (t-ratio)	-0.004 (0.167)	-0.003 (0.347)	-.039** (2.329)	0.011 (0.042)	0.004 (0.318)	-.011** (2.090)	.006** * (1.657)	-0.300 (0.203)
NPM (t-ratio)	0.046 (1.347)	-0.004 (0.750)	0.049** * (1.846)	0.212 (0.494)				
ROAA (t-ratio)	-0.132* (2.731)	0.066 (0.729)	0.037 (0.978)	0.112 (0.184)				
ROI (t-ratio)	0.083* (2.089)	-0.019 (0.881)	0.106* (3.415)	-0.727 (1.453)				
SalesGrwth (t-ratio)	-0.013 (0.700)	0.000 (0.026)	-0.001 (0.037)	0.046 (0.739)	.032* * (2.052)	0.005 (0.748)	0.012 (0.913)	-0.143 (0.718)
Mk/BK (t-ratio)	-0.060 (0.875)	-0.005 (0.160)	0.101** * (1.885)	0.284 (0.329)				
Price/CF (t-ratio)	0.076** * (1.851)	-0.006 (0.294)	-0.011 (0.330)	-0.765 (1.480)				

Two-tailed tests: * < .01 level of significance ** < 0.05 *** < 0.10

In Table III linear regression is used to check the effects of multi-collinearity among performance measures. All performance measures are included in the regression but Free Cash Flows per Sales, Return on Equity, Altman's Z score, and the Price Earnings Ratio are not reported as they were never significant. While Quick score is not related to the performance measures taken together Institutional holdings is related. Moreover, with only one exception the significant relationships between Institutional Holdings and the performance measures are of the expected sign.

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