

Measuring Management:

Using corporate governance data to improve portfolios

September 2008

Introduction

In a perfect world, a company's managers would make decisions that maximize the value of the shareholders' investment. In reality, management and shareholder goals often conflict. Management, from the CEO down, may be more focused on their own power and interests, to the detriment of the corporation's long-term health. Such misalignment of interests can have disastrous effects for shareholder wealth, as seen in the corporate history of firms like Enron and WorldCom.

The Basics...

Corporations vary in their governance styles. Some are more shareholder-friendly, while others are more management friendly

Past research has shown a link between shareholder-friendly governance policies, strong firm performance and favorable stock returns

The Smith Group has developed a model which analyzes key corporate governance variables and assigns a governance score to every stock in our universe

Our governance score correlates strongly with future stock returns.

We use this score in concert with our other analytical tools to construct and maintain our equity portfolios.

Corporate governance data provide a way to determine which firms have policies that favor shareholders, rather than management. Such a determination can increase a money manager's ability to create better portfolios with increased potential returns. Investment professionals on the leading edge of this issue are designing computer models that use corporate governance data to evaluate stocks.

The Smith Group has developed a model that builds upon prior work in this field. The model allows us to create a corporate governance ranking of every stock in our universe, and utilize that ranking when creating and managing equity portfolios.

This paper will summarize past research investigating the link between corporate governance variables and stock performance, and outline the construction, validation and application work we have done with the Smith Group Corporate Governance Model.

Background

Will corporations with shareholder-oriented governance structures really outperform other companies? What exactly are "shareholder-oriented governance structures"? Researchers who study governance have asked these the kinds of questions. The increasing availability of corporate governance data allows researchers to develop compelling answers.

In the 2003 article "Corporate Governance and Equity Prices," Paul Gompers, Joy Ishii and Andrew Metrick¹ use twenty-four governance factors to indicate how shareholder-friendly a firm is. Strong defenses against takeovers, limits on shareholder voting rights and protection for directors and officers (from legal liability or termination) are harmful to shareholders.

Fifteen hundred large firms were scored. The returns of the top and bottom 10% were analyzed for the period September 1990 to December 1999. It was found that a long-short strategy which bought the top 10% and sold the bottom 10% generated returns of 8.5% per year.

In a subsequent 2004 paper, "Corporate Governance and Firm Performance," Lawrence D. Brown and Marcus L. Caylor² employed fifty-one separate factors to measure governance. They found that more shareholder-oriented firms had higher operating performance, higher valuations and higher dividend payouts than lower scoring firms.

More Recently in 2006, Dennis Wright Michaud and Kate A. Magaram of the Brown University Corporate Governance Program wrote "Recent Technical Papers on Corporate Governance³," where they divided the available literature into four clusters.

Research in the first cluster found that the probability of fraud varies with the size and independence of the board of directors. Anup Agrawal and Sahiba Chadha⁴ found in 2005 that companies with more independent boards of directors tend to experience fewer sudden large drops in stock price.

The second set of research investigated the relationship between management compensation and stock performance. Articles by Sudip Datta et al.⁵ in 2005 and Daniel A. Cohen et al.⁶ in 2007 argued, “that when management has ‘skin in the game’ (more of its compensation is equity based), management / shareholder interests are better aligned.”³

The third set of research found that well-governed companies recognize corporate write-offs earlier before losses compound, and are, therefore, less likely to suffer large sudden drops in stock price as a result. Kristina Minnick⁷ found in 2004 that well-governed firms perform especially better under harsh conditions such as recessions.

The fourth set of research, focused on entrenchment, found that poorly-governed companies may prevent mergers that would have otherwise benefited shareholders. Lucian Arye Bebchuk et al.⁸ created an “entrenchment index,” in 2004, which they show is significantly related to stock price performance.

Migration Toward Better, Uniform Governance

The scandals of 2002 increased attention on corporate governance. Subsequently, the Sarbanes-Oxley Act of 2002 made many previously measured governance variables irrelevant by mandating that firms conform to a codified standard.

The Smith Group has developed a Corporate Governance Model (explained in greater detail later) that scores firms based on their governance policies. Figure 1 shows the frequencies of scores among firms during the second quarter of 2003 and the first quarter of 2008. The 2008 mean score (2008 scores are represented by the red line) is visibly better than the 2003 mean score (2003 scores are represented by the blue line). Over the past five

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years, firms have migrated toward a central paradigm of significantly improved governance.

The Smith Group has adapted its Corporate Governance model to respond to these environmental changes. The model organizes variables into logical categories and consistently screens out under-performing stocks. More importantly, the model appears to be a valuable tool for mitigating risk. In back tests, it performs especially well in the volatile financial and energy sectors and in quarters when macroeconomic conditions are poor. It also screens out a large proportion of stocks that suffered sudden large drops in stock price.

Creating a corporate governance ranking

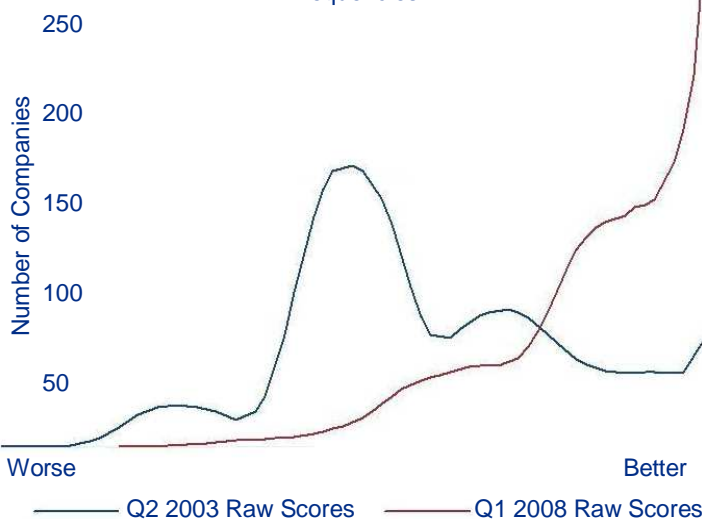
The Smith Group’s proprietary governance model began with over 200 governance variables gathered from company filings. Statistical and “common sense” testing was applied to narrow these down to the factors which we found most significant in predicting future stock performance. These are incorporated into the actual model.

We then grade companies based on six logical categories: *Power Asymmetry, Takeover Defenses, Compensation, Board Independence, Board Properties, and Conflicts of Interest*. Each category score is a factor in a company’s overall governance grade. The model assigns a score between 1 and 100 to each company. The end result is a model that ranks stocks based on the firms’ corporate governance policies.

Smith Group governance factors fall into the following categories:

- **Board Independence** - the portion of the board of directors (and committees) that is comprised of independent outsiders.
- **Board Properties** - characteristics of the board of directors that indicate shareholder friendliness.
- **Takeover Defenses** - policies that entrench the current management regime in positions of authority, preventing buyouts and mergers that may otherwise benefit shareholders.
- **Compensation** - the ways in which management and the board of directors are paid.
- **Power Asymmetry** - the balance of power between management, the board of directors, and shareholders.
- **Conflicts of Interest** - policies that create mixed incentives for directors or executives.

Figure 1: Governance Raw Score Frequencies



“The return spreads are especially pronounced in down markets... sixty percent larger than the average spread of the full twenty quarters.”

Performance Testing

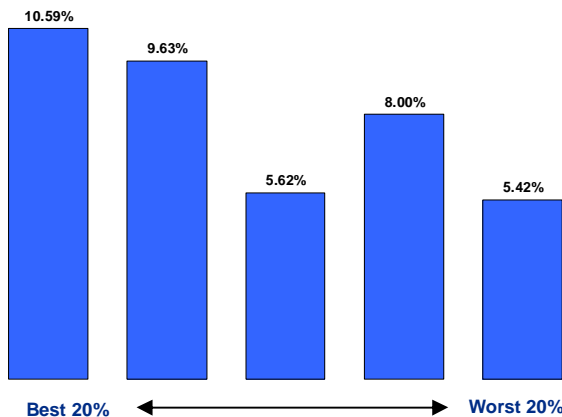
We used the Smith Group Corporate Governance Model to score each company in the largest 3000 stocks from past five years.

Figure 2 shows annualized pro forma performance of the Smith Group Corporate Governance Model vs. the 3000 stock universe by quintile. The firms with the best governance scores (the top 20% made up of approximately 750 companies) had annualized returns 10.59%, while companies in the worst 20% experienced annualized returns of only 5.42%.

Risk Mitigation

For the period studied, the Smith Group Corporate Governance Model appears to significantly mitigate risk. The return spreads are especially pronounced in down markets, and in the financial and energy sectors. A five-year back test of Corporate Governance against the 3000 stock universe reports the average spread of the seven down quarters (defined by negative pro forma returns in the 3000 stock universe) as being over sixty percent larger than the average spread of the full twenty quarters. The return spreads in the financial sector is nearly twice as large as the average spread across all sectors. Screening out the worst governed companies over the past five years would have protected against losses in down markets and helped avoid some more risky stocks in financials.

Figure 2: Pro Forma Performance vs. Benchmark: Annualized Pro Forma Excess Returns*



Source: Clarifi ModelStation, Universe:

Largest 3000 stocks, Quarterly quintile return spreads from 12/31/05 to 03/31/08.

*See pro forma performance disclosure on page 4.

Another important finding in our research is related to identification of “torpedoes”, or companies that experience a stock price decline of over 30% in a three month period. Companies with poor governance scores have a much higher incidence of torpedoes. In fact, the worst governed firms (worst 20%) have 48% more incidences of “torpedo” stocks than the best (top 20%).

Smith Group's investment philosophy is built around identifying companies with the potential for undiscovered earnings growth.

Good corporate governance plays an important role in those outcomes, and builds credibility that the market rewards with higher prices

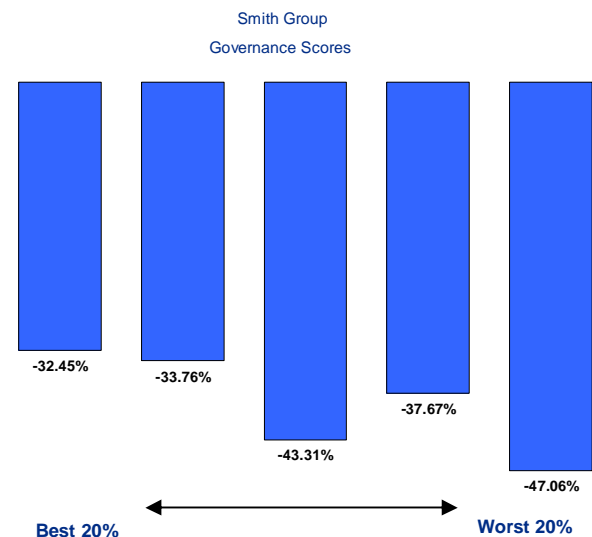
How do we use these rankings in managing portfolios?

Our testing indicates that the governance score contains valuable information about future stock performance. We extract that value by including the score in our portfolio selection process. We use the governance score to screen out firms with poor governance from our universe of buy candidates. The governance score also plays a role in our sell discipline. If a stock's score falls into an unattractive range while we own it, it becomes a likely sell candidate.

The governance score also provides our Portfolio Managers with an excellent starting point from which to conduct more in-depth, qualitative governance analysis of a firm.

“...the worst governed firms have 48% more incidences of ‘torpedo’ stocks than the best.”

Figure 3: Down Market Pro Forma Performance vs. Benchmark: Annualized Pro Forma Excess Returns*



Source: Clarifi ModelStation, Universe:

Largest 3000 stocks, Quarterly quintile return spreads from 12/31/05 to 03/31/08.

*See pro forma performance disclosure on page 4.

Conclusion

The Smith Group Corporate Governance Model provides additional support for the relationship between corporate governance, firm performance and favorable stock returns. This relationship is based on the asymmetric incentives between owners and managers. Continuing to refine our understanding of corporate governance should allow Smith Group to more intelligently construct equity portfolios, lowering risk and increasing returns for our clients.

There are many opportunities for further research. Much of the governance data has only recently become available. Other data has become obsolete due to recent regulations.

Since corporations' disclosure requirements are continually changing, governance models will need to be enhanced and updated regularly to adapt to the latest information available.

The work done thus far indicates that firms have responded to market pressure to improve governance policies. This exhibits the value of continued studies in the area of corporate governance.

¹Gompers, Paul A., Joy L. Ishii and Andrew Metrick. "Corporate Governance and Equity Prices." *Quarterly Journal of Economics* 118(1). February 2003: 107-155.

²Brown, Lawrence D. and Marcus L. Caylor. "Corporate Governance and Firm Performance." *Institutional Shareholder Services website*. <http://www.issproxy.com> December 2004.

³Michaud, Dennis Wright and Magaram, Kate A., "Recent Technical Papers on Corporate Governance" (April 6, 2006). Available at SSRN: <http://ssrn.com/abstract=895520>.

⁴Agrawal, Anup and Sahiba Chadha "Corporate Governance and Accounting Scandals" *Journal of Law and Economics*, October 2005.

⁵Datta, Sudip, Mai Iskandar-Datta and Kartik Raman. "Managerial Stock Ownership and the Maturity Structure of Corporate Debt." *Journal of Finance*, 60(5). 2005: 2333-2350.

⁶Cohen, Daniel A., Aiysha Dey, and Thomas Z. Lys, "The Sarbanes Oxley Act of 2002: Implications for compensation structure and risk-taking incentives of CEOs," (July 8, 2005) Available at SSRN: <http://ssrn.com/abstract=568483>.

⁷Minnick, K. 2004. "Write-offs and corporate governance." (March 2004) Working Paper, University of Maryland.

⁸Bebchuk, Lucian Arye, Cohen, Alma and Ferrell, Allen, "What Matters in Corporate Governance?" (September 2004). Harvard Law School John M. Olin Center Discussion Paper No. 491.

The opinions expressed herein are those of Smith Asset Management Group, L.P. and are subject to change without notice.

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Disclosures

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All index performance returns include the impact of cash, cash equivalents, dividends and interest. The Russell 3000 is an unmanaged index of the shares of large, mid and small capitalization U.S. corporations.