

## MUTUAL FUND GOVERNANCE AND FUND PERFORMANCE

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### Abstract

The increased wealth invested in mutual funds and recent scandals at many fund firms have led to increased scrutiny of mutual fund governance. We examine measures of the strength of mutual fund governance and the relation of these measures to fund performance. We utilize the Morningstar Stewardship Grade and its determining factors to measure the quality of a fund's governance and the information ratio to measure risk adjusted performance. We find that strong corporate governance is associated with better risk-adjusted performance, after controlling for investment objective, expenses, and fund size. The key governance components related to performance are board quality, managerial incentives, and fees. Our results support the notion that, in the mutual fund industry, good governance is consistent with good performance.

**Keyword:** Corporate governance; Mutual funds; Stewardship; Performance

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### 1. Introduction

Gompers, Ishii, and Metrick (2003) develop the notion of a corporate governance index and construct such an index using 24 governance rules. Using this governance index, they find a positive relation between corporate governance and firm value. Beginning in August of 2004, Morningstar began assigning a Stewardship Grade to mutual funds that it covers. This grade, ranging from excellent to very poor, is based on a stewardship score compiled from average ratings in five governance-related areas: Regulatory Issues, Board Quality, Manager Incentives, Fees, and Corporate Culture. The Stewardship Grade is a measure of the strength of the corporate governance system of a fund, providing an assessment of how well the fund companies align their interests with those of fund shareholders. We present data on the Morningstar Stewardship Grade and utilize this data to examine the relation between mutual fund governance and fund performance.

Mutual funds have become a major global investment vehicle, with assets under management exceeding \$10 trillion. These funds are typically structured as corporations or trusts, governed by boards of directors. Similar to a publicly-traded corporation, the board of directors of a mutual fund is the primary governing body, with a fiduciary duty to the fund shareholders. Numerous corporate scandals have called into question the effectiveness of corporate governance systems at U.S. corporations. Similarly, the mutual fund industry has recently been plagued by a rash of scandals that have resulted in lawsuits and fines and have led to calls for governance reform and increased attention to corporate governance practices. This has led to a

variety of governance changes, both voluntary and mandated.

While the area of mutual fund governance is not as well developed as the related area of corporate governance, there is other work in this area in the form of a few published papers and working papers. This paper contributes to this literature and utilizes Morningstar to provide a comprehensive measure of fund governance from a well-recognized source of mutual fund analysis. While other studies often utilize metrics measuring board characteristics to proxy for governance quality and then relate these metrics to fund fees or returns, we employ the Morningstar metric as a broader measure of governance quality, incorporating fees and other criteria directly into the governance rating.

Our results show that the quality of mutual fund governance is positively related to fund performance. Using the information ratio to measure risk-adjusted performance, we find a statistically significant relation to the Morningstar Stewardship Grade. This relation is driven by Board Quality, Manager Incentives, and Fees and remains significant after controlling for investment objective, expenses, and fund size. In the mutual fund industry, good governance is consistent with good performance.

The remainder of the paper is organized as follows: In Section 2, we review the literature on mutual fund governance. Section 3 describes the data. Section 4 presents the empirical results. Section 5 summarizes and concludes the paper.

## 2. Mutual Fund Governance

The importance of corporate governance in the mutual fund industry is highlighted by the significant assets managed by the industry, which has been plagued by recent scandals. At the end of 2006, mutual fund companies held assets valued in excess of \$10.4 trillion, exceeding bank deposits (Wellman and Zhou, 2007). Beginning in 2003, the mutual fund industry was the subject of numerous scandals involving late trading, market timing, and other abuses (Ferris and Yan, 2007). Zitzewitz (2003) reports late trading in international equity funds beginning in 1998 and market timing in 2001. Houge and Wellman (2005) report that the value of fines and restitution paid by the mutual fund industry is more than \$3.1 billion.

Wellman and Zhou (2007) provide an overview of the organization and governance of a mutual fund. Mutual funds in the U.S. are typically organized as corporations or trusts, with boards of directors to manage the funds and protect the interests of fund shareholders. Numerous regulations and issues surround the relationship between a fund's board of directors, the fund firm, and the fund's shareholders. The Investment Company Institute act of 1940 requires at least 40 percent of a fund's board to be comprised of independent directors, and a majority of the board if the underwriter and adviser are affiliated. In June of 2004, the SEC required that at least 75 percent of a fund's directors be independent. The board of directors of a fund is responsible for performing many important functions. The board approves annually the contract between the fund and its investment advisor. It periodically reviews the actions of the investment advisor and approves in advance any major changes made by the advisor. The board also approves annually the contract between the fund and its transfer agent. Independent directors often serve on several fund boards within a fund family. This may lead to directors being too busy to effectively monitor the interests of fund shareholders.

Several studies examine the relation between corporate governance and performance. Gompers, Ishii, and Metrick (2003), Creamers and Nair (2005), and Larcker, Richardson, and Tuna (2006) examine the relation between corporate governance and firm performance. Shleifer and Vishny (1997) and Bhagat and Black (2002) provide comprehensive surveys of the corporate governance literature. A related literature is developing regarding mutual fund governance.

As in the corporate governance literature, much of the early literature on mutual fund governance examines board of director characteristics and how these characteristics relate to fund management and performance. The existing evidence is mixed. Tufano and Sevik (1997) find that directors who sit on a higher proportion of a fund company's boards are associated with lower fund fees, suggesting better governance when directors sit on multiple boards. Del Guercio, Dann, and Partch (2003) find similar

results. Ding and Wermers (2005) examine the joint relation between fund managers and fund directors. They find that funds with large boards and higher proportions of independent directors are more likely to replace poor management and experience better performance. Khorana, Tufano, and Wedge (2006) find that funds with a higher proportion of independent directors are more likely to engage in mergers across fund families. Ferris and Yan (2007) find that neither the probability of a fund scandal nor fund performance is related to the proportion of independent directors on a fund's board. They also find that board size, number of funds overseen by each independent director, and unexplained independent director compensation are positively related to fund fees.

Similar to the corporate governance index of Gompers, Ishii, and Metrick (2003), the Morningstar Stewardship Grade is a broad measure of governance quality, incorporating board of director characteristics and other criteria directly into the governance rating. This composite index provides an opportunity to examine the relation between a comprehensive governance index and fund performance. It also provides an opportunity to examine how different components of the governance index relate to fund performance.

Wellman and Zhou (2007) provide a preliminary assessment of the Morningstar Stewardship Grade data and fund performance. They examine a sample of 653 funds from the first release of the Morningstar Stewardship Grades in August 2004. Using alpha to measure fund performance, they find a positive relation between governance and fund performance, with Board Quality and Fees providing the most explanatory power. Boyd and Yilmaz (2007) find a positive relation between governance and raw three-year fund returns.

In this paper we provide a comprehensive study of mutual fund governance, measured by Morningstar Stewardship Grade components, and mutual fund performance, measured by the information ratio. We utilize a sample of 4,334 mutual funds with available Morningstar Stewardship Grade data as of the end of 2006. Our results extend and confirm those in Wellman and Zhou (2007) in that there is a positive relation between fund governance and risk-adjusted fund performance and that this result is driven by Board Quality and Fees. We also find that the result is driven by Manager Incentives (pay for performance).

## 3. Data

We obtain data on mutual fund governance and performance from Morningstar. Morningstar provides stewardship data based on its evaluation of five areas of corporate governance. We also obtain data on mutual fund performance, investment objective, size, and expenses from Morningstar. All of our data is from the database ended 2006.

### 3.1 Morningstar Stewardship Data

Morningstar began assigning a Morningstar Stewardship Grade™ for mutual funds in August 2004. The purpose of the grade is to assist investors in evaluating funds that align manager interests with the interests of fund shareholders. Morningstar compiles the grades based on public filings and the judgment of Morningstar analysts. Morningstar notes that the Stewardship Grade is independent of the more quantitative Morningstar Rating™ (the “star rating”) for mutual funds. The Stewardship Grade is based somewhat on quantitative metrics, but is primarily qualitative.

Funds are assigned a letter grade from A (best) to F (worst), with all funds graded on an absolute basis. Funds are evaluated in five governance areas—Regulatory Issues, Board Quality, Manager Incentives, Fees, and Corporate Culture. Each area is worth a maximum of 2 points, resulting in an overall possible score of 10 points. Points for each area are awarded in increments of 0.5. Except for regulatory issues, the minimum score a fund can receive in each area is zero. For regulatory issues, a fund can receive a minimum score of -2.

Each area score corresponds to the following points: Excellent—2.0 points, Good—1.5 points, Fair—1.0 points, Poor—0.5 points, Very Poor—0 or fewer points. The overall Stewardship Grade is based on the sum of the scores from each of the five areas as follows: A—9.0-10 points, B—7.0-8.5 points, C—5.0-6.5 points, D—3.0-4.5 points, F—2.5 or fewer points.

We quantify this data to develop numerical governance metrics for the Morningstar Stewardship Grade and for each of the five governance areas as follows. The Stewardship Grade is converted to a numerical core with A=5, B=4, C=3, D=2, and F=1. Regulatory Issues, Board Quality, Manager Incentives, Fees, and Corporate Culture are converted to numerical scores with Excellent=5, Good=4, Fair=3, Poor=2, and Very Poor=1. Under this scheme, higher governance scores imply better governance.

The five areas considered in the fund governance ratings capture a variety of issues that have been considered in the literature. The areas consider problems with regulators, board characteristics, manager compensation, fees and expenses, and fund family attributes.

#### 3.1.1 Regulatory Issues

Morningstar examines regulatory issues at the fund company for the past three years. Funds with no regulatory concerns are assigned 2 points, while funds with serious breaches of fiduciary duty are assigned a score of -2.

#### 3.1.2 Board Quality

Morningstar assesses four factors of board quality, each worth a total of 0.5 points. Funds receive either zero or 0.5 points for each factor. The first factor considers whether or not the board has

taken action in cases where the fund clearly has not served investors well.

The second factor considers whether independent directors have meaningful investment in the fund. To earn the maximum score, at least 75 percent of a board’s independent directors must have more money invested in the funds they oversee than the money they receive in aggregate annual compensation for serving on the board. Aligning manager and shareholder interests through equity ownership has been widely discussed in the corporate finance literature (see Jensen and Meckling, 1976). Cremers, Driessen, Maenhout, and Weinbaum (2005) find that funds with a higher proportion of director investment have better performance.

The third factor considers the number of funds that the board oversees. Overseeing too many funds may compromise the board’s ability to protect the interests of shareholders of a specific fund. Ferris, Jagannathan, and Pritchard (2003) postulate a busyness hypothesis whereby independent directors with many funds to oversee may be too busy to provide effective monitoring. Ferris and Yan (2007) find some evidence that funds with directors overseeing more funds are associated with higher fees. Tufano and Sevik (1997) find that directors who sit on a higher proportion of a fund company’s boards are associated with lower fund fees, suggesting better governance when directors sit on multiple boards. Del Guercio, Dann, and Partch (2003) find similar results.

The fourth factor considers whether or not the fund meets the SEC requirement for the proportion of independent directors. The SEC proposes that at least 75% of a fund’s board should be comprised of independent directors and that the board chairman should be an independent director. Weisbach (1988) argues that independent directors may have stronger incentives than inside directors to monitor managers. Hermalin and Weisbach (2003) note that firm performance and the number of independent directors are not found to be related in the corporate governance literature. Jensen (1993) argues that the board chairman should be independent to better discharge the board’s oversight responsibilities, while Brickley, Coles, and Jarrell (1997) note higher costs associated with an independent chairman. Ferris and Yan (2007) find that neither the proportion of independent directors nor an independent director serving as board chairman is related to the likelihood of a fund scandal or fund performance.

#### 3.1.3 Manager Incentives

Morningstar assesses two factors related to manager incentives, each worth a maximum of 1 point. The first factor is based on fund ownership. Managers with more than \$1 million or more than one-third of their liquid net worth in the funds they run receive the full 1 point. Managers with at least \$500,000 receive partial points. Funds that are inappropriate for large investments and other

circumstances that prevent a manager from investing in his or her fund are also considered.

The second factor is based on compensation structure. Compensation plans that reward long-term performance and asset growth are awarded 1 point, while plans that encourage short-term performance are awarded less points. Ferris and Yan (2007) find that funds with higher excess director compensation are associated with higher fees.

### 3.1.4 Fees

Morningstar assesses two factors related to fees, each worth a maximum of 1 point. The first factor compares the fund's fees to other funds in its share class. A fund receives 0.5 points if its expense ratio is lower than the median for its type of share class in its comparison group. A fund receives an additional 0.5 points if its expense ratio falls below the 25<sup>th</sup> percentile for its type of share class within its comparison group. Tufano and Sevick (1997) and Dann, Del Guericco, and Partch (2003) argue that lower fees are a measure of board effectiveness and effective corporate governance.

The second factor examines trends in a fund's fees. A fund receives 1 point if its expense ratio has declined materially as assets have grown or if there is evidence that this will occur, for example, a management contract with significant fee breakpoints.

### 3.1.5 Corporate Culture

To assess how seriously a fund firm takes its fiduciary duty to fund shareholders, the final governance area considers the corporate culture of the fund firm. Factors considered include: whether the firm launches "trendy" funds in an attempt to attract assets, whether the firm closes funds at an appropriate size, whether the firm uses redemption fees or other measures to discourage rapid trading, whether the firm effectively retains key personnel, the strength of the firm's shareholder communications, and whether or not the firm uses soft dollars.

### 3.2 Fund Performance Data

Many past studies of mutual fund performance use the Shape ratio or alpha to measure risk-adjusted performance. While these are widely-accepted and reasonable measures, it can be argued that the information ratio is a better and more-informative performance metric (Goodwin, 1998). The information ratio is computed as:

$$IR = \frac{(R_p - R_i)}{S_{p-i}} \quad (1)$$

where:

IR = the information ratio

RP = the return on the mutual fund

Ri = the return on the benchmark

Sp-i = tracking error.

The information ratio measures the consistency of a fund's excess return relative to its benchmark, e.g., whether the fund manager beats the benchmark on a consistent basis month-to-month, or on an inconsistent basis by a large amount in a small number of months. The information ratio takes into account the tracking error, which is the standard deviation of the monthly excess returns. The numerator indicates the portfolio manager's ability to generate a return that differs from the benchmark. The denominator indicates the amount of unsystematic risk generated by the portfolio manager in seeking excess returns. Overall, the information ratio shows the benefits to cost of active management. See Goodwin (1998) and Reilly and Brown (2006) for a more detailed discussion of the information ratio.

We utilize the 3-Year Information Ratio variable from Morningstar to measure performance.

## 3.3 Control Variables

In examining the relation between governance and performance, we also control for three additional fund characteristics that may impact the governance/performance relation. We control for fund size, measured as the natural log of the fund's total net assets. We control directly for fund expenses as a continuous variable, measured by the fund's expense ratio. Finally, we control for the fund's investment objective using dummy variables for the investment objective stated in the fund's prospectus. The categories include: aggressive growth, balanced, equity income, growth, growth and income, income, small company, and other. The other category includes a variety of corporate and government bond funds, foreign stock funds, target date funds, etc.

## 4. Results

We first compile data and descriptive statistics on our dependent variable (information ratio), dependent variables (Stewardship Grade and components), and control variables (investment objective dummies, fund size, expense ratio). We then examine univariate relations between governance and performance. Finally, we employ multivariate regression to examine the relation between governance and performance.

### 4.1 Descriptive Statistics

The complete Morningstar Mutual Fund Database for 2006 contains data for 23,148 funds. Eliminating funds for which Morningstar does not report Stewardship Grades, leaves a sample of 4,334 funds. Summary statistics for these funds are shown in Table 1.

**[Insert Table 1 About Here]**

Stewardship and investment objective data is available for 4,334 funds. The information ratio is available for 3,982 funds, the expense ratio for 4,332 and net assets for 3,773. The information ratio has a mean (median) of -0.094 (-0.030), with a minimum of -11.920 and a maximum of 3.410. The Stewardship Grade and its five categories have means (medians) ranging from 3.045 (3.000) to 4.164 (5.000).

The distributions for the governance variables and investment objective dummies are shown in Table 2. Few funds receive the lowest grade for any governance measure; ranging from one fund for Board Quality to 78 funds for regulatory issues. Several funds receive the highest governance grades for some categories; 2,523 for Regulatory Issues and 1,582 for Manager Incentives. Most funds receive grades of 3 or 4. The dummy variables show that funds are distributed from a low of 55 income funds to a high of 1,212 growth funds (and 1,964 other).

**[Insert Table 2 About Here]**

#### 4.2 Univariate Analysis

We first examine the relation between the information ratio and governance score by looking at the mean information ratio for each governance score for the Stewardship Grade and each of its components. The results are shown in Table 3.

**[Insert Table 3 About Here]**

Looking at the Stewardship Grade, we observe a mostly positive relation between the information ratio and governance. As the Stewardship Grade moves from 5 to 4 to 3 to 2 to 1, the mean information ratio moves from 0.315 to 0.021 to -0.143 to -0.555 to -0.384 respectively. Observe that the mean information ratio falls off with governance up until category 1, when it becomes less negative. We observe similar positive, but not perfect, relations for Regulatory Issues, Manager Incentives, and Fees. Board quality and Corporate Culture exhibit somewhat positive relations, with the curious exception that the mean information ratio becomes large and positive for the lowest level of governance quality. Note that there are a very small number of funds in these cells with only one fund for Board Quality and seven funds for Corporate Culture.

Overall, these results provide some evidence of a positive relation between governance and performance.

To examine the statistical validity of the univariate comparisons, we run univariate OLS regressions for each of the governance metrics. The results are shown in Table 4. For Stewardship Grade and each of its five components, the coefficients for information ratio are positive and significant at the one-percent level. The F-statistics are also significant at the one-percent level. While the R-squares are relatively small, there is a statistically significant positive relation between each governance metric and

fund performance. Certainly many factors other than governance affect the returns earned by mutual funds. However, in the highly-competitive market for mutual funds, small changes in risk-adjusted returns are very important at the margin.

**[Insert Table 4 About Here]**

#### 4.2 Multivariate Analysis

While the univariate results show a positive and significant relation between governance and performance, they do not control for other factors that may influence the governance/performance relation. They also do not control for possible interactions between the different governance factors. To address these issues, we estimate multivariate regressions. The results are shown in Table 5.

We estimate four regression specifications. Regressions 1 and 2 examine the relation between Stewardship Grade and performance and the combined components of Stewardship Grade and performance respectively. Regressions 4 and 5 estimate these same two specifications, but add in control variables for investment objective, expenses, and fund size.

Note that Regression 1 is the same as the univariate specification of the information ratio and Stewardship Grade. Stewardship Grade has a positive and statistically significant relation to fund performance.

Regression 2 examines the relation between performance and each of the five components of Stewardship Grade. In this multivariate specification, Board Quality, Manager Incentives, and Fees are all positive and statistically significant. Regulatory Issues and Corporate Culture are not significant.

Regression 3 examines Stewardship Grade, controlling for investment objective, expenses, and fund size. The coefficient for Stewardship Grade remains positive and statistically significant. Regression four examines the five components of governance with the control variables. Board Quality, Manager Incentives, and Fees remain statistically significant, while Regulatory Issues and Corporate Culture remain insignificant. Note that the F-statistic is statistically significant for all specifications.

Overall these results are robust. There is a positive relation between the quality of mutual fund governance and fund performance. This is driven mainly by Board Quality, Manager Incentives, and Fees. Funds with better Morningstar Stewardship Grade ratings deliver better risk-adjusted performance. Funds with better quality boards, stronger managerial incentives, and lower fund fees deliver better risk-adjusted performance.

### 5. Summary and Conclusion

There is a substantial finance literature on corporate governance, much of it focusing on how board of director characteristics relate to corporate policy and

firm performance. Gompers, Ishii, and Metrick (2003) develop a comprehensive corporate governance metric and find that it is positively related to firm value. More recently, Morningstar developed a comprehensive measure of mutual fund governance. The Morningstar Stewardship Grade is a measure of the strength of the corporate governance system of a mutual fund. The grade is developed by summing the grades in five areas of fund governance.

In light of the large amount of assets managed by mutual funds and numerous recent scandals rocking the industry, there is a heightened interest in fund governance and its relation to fund performance. We find that mutual fund governance is related to fund performance. Funds with higher governance ratings have higher information ratios than funds with lower governance ratings. These results are largely driven by board quality, manager incentives and fees. Funds with active boards, made up of primarily independent directors who are heavily invested in the fund, perform better than funds with weaker boards. Funds with greater manager incentives whereby managers “eat their own cooking,” i.e., are heavily invested in the fund, and are compensated based on long-term performance and asset growth, also perform better. Finally, funds that carefully manage fees, by maintaining low expense ratios and bringing down expense ratios, perform better. Conversely, corporate culture and regulatory issues, as measured by Morningstar, are not associated with better risk-adjusted performance

Overall these results add to the literature on governance of mutual funds and the relation between governance quality and fund performance. Our results suggest that fund investors should be concerned about fund governance, particularly in the areas of board quality, managerial incentives, and fees.

## References

1. Bhagat, S. and B. Black, 2002. The Non-Correlation Between Board Independence and Long-Term Firm Performance. *Journal of Corporation Law* 27, 231-273.
2. Boyd, D. P. and M. Yilmaz, 2007. Stewardship as a Factor in the Financial Performance of Mutual Funds. *Journal of Business and Economics Research* 5, 11-17.
3. Brickley, J., J. Coles, and G. Jarrell, 1997. Separating the CEO and Chairman of the Board. *Journal of Corporate Finance* 3, 189-220.
4. Cremers, M., J. Driessen, P. Maenhout and D. Weinbaum, 2005. Does Skin in the Game Matter? Director Incentives and Governance in the Mutual Fund Industry. Working Paper. Yale University.
5. Cremers, M. and V. B. Nair, 2004. Governance Mechanisms and Equity Prices. *Journal of Finance* 60, 2859-2894.
6. Dann, L., D. Del Guercio, and M. Partch, 2003. Governance and Boards of Directors in Closed-End Investment Companies. *Journal of Financial Economics* 69, 111-152.
7. Ding, B. and R. Wermers, 2005. Mutual Fund Performance and Governance Structure: The Role of Portfolio Managers and Boards of Directors. Working Paper. University of Maryland.
8. Ferris, S., M. Jagannathan, and A. Pritchard, 2003. Too Busy to Mind the Business? Monitoring by Directors with Multiple Board Appointments. *Journal of Finance* 58, 1087-1111.
9. Ferris, S.P. and X. S. Yan, 2007. Do Independent Directors and Chairmen Matter? The Role of Boards of Directors in Mutual Fund Governance. *Journal of Corporate Finance* 13, 392-420.
10. Gompers, P. A., J. A. Ishii, and A. Metrick, 2003. Corporate Governance and Equity Prices. *Quarterly Journal of Economics* 118, 107-155.
11. Goodwin, T. H., 1998. The Information Ratio. *Financial Analysts Journal* 54, 34-43.
12. Hermalin, B. and M. Weisbach, 2003. Boards of Directors as an Endogenously Determined Institution: A Survey of the Economic Literature. *Economic Policy Review* 9, 7-26.
13. Houge, T. and J. Wellman, 2005. Fallout from the Mutual Fund Trading Scandal. *Journal of Business Ethics* 62, 129-139.
14. Jensen, M. and W. Meckling, 1976. Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure. *Journal of Financial Economics* 3, 305-360.
15. Jensen, M. 1993. The Modern Industrial Revolution, Exit, and the Failure of Internal Control Systems. *Journal of Finance* 48, 831-880.
16. Khorana, A., P. Tufano, and L. Wedge, 2007. Board Structure, Mergers, and Shareholder Wealth: A Study of the Mutual Fund Industry. *Journal of Financial Economics* 85, 571-598.
17. Larcker, D. F., S. A. Richardson, and A. I Tuna, 2006. How Important is Corporate Governance? Working Paper. University of Pennsylvania.
18. Reilly, F. K., and K. C. Brown, 2006. *Investment Analysis and Portfolio Management*, 8<sup>th</sup> edition, Southwestern Publishing.
19. Shleifer, A. and R. W. Vishny, 1997. A Survey of Corporate Governance. *Journal of Finance* 52, 737-783.
20. Tufano, P. and M. Sevick, 1997. Board Structure and Fee-Setting in the Mutual Fund Industry. *Journal of Financial Economics* 46, 321-355.
21. Weisbach, M. 1988. Outside Directors and CEO Turnover. *Journal of Financial Economics* 20, 431-460.
22. Wellman, J. and J. Zhou, 2007. Corporate Governance and Mutual Fund Performance: A First Look at the Morningstar Stewardship Grades. SSRN Working Paper.
23. Zitzewitz, E., 2003. How Widespread is Late Trading in Mutual Funds? *American Economic Review* 96, 284-289.

## Appendices

**Table 1**

Summary statistics for dependent variable, independent variables, and control variables. All data is from the Morningstar Mutual Fund Database for the year ended 2006. Information Ratio is the 3-year information ratio. Stewardship Grade is converted to a numerical core with A=5, B=4, C=3, D=2, and F=1. Regulatory Issues, Board Quality, Manager Incentives, Fees, and Corporate Culture are converted to numerical scores with Excellent=5, Good=4, Fair=3, Poor=2, and Very Poor=1. Dummy variables are for Prospectus Objective.

<b>Dependent Variable:</b>	N	Mean	Median	Minimum	Maximum	Std. Dev.
Information Ratio	3,982	-0.094	-0.030	-11.920	3.410	0.990
<b>Independent Variables:</b>	N	Mean	Median	Minimum	Maximum	Std. Dev.
Stewardship Grade	4,334	3.388	3.000	1.000	5.000	0.781
Regulatory Issues	4,334	4.164	5.000	1.000	5.000	1.065
Board Quality	4,334	3.717	4.000	1.000	5.000	0.745
Manager Incentives	4,334	3.045	3.000	1.000	5.000	1.082
Fees	4,334	3.644	4.000	1.000	5.000	1.300
Corporate Culture	4,334	3.530	3.000	1.000	5.000	0.811
<b>Control Variables:</b>	N	Mean	Median	Minimum	Maximum	Std. Dev.
Aggressive Growth Dummy	4,334	0.019	0.000	0.000	1.000	0.137
Balanced Dummy	4,334	0.040	0.000	0.000	1.000	0.196
Equity Income Dummy	4,334	0.026	0.000	0.000	1.000	0.159
Growth Dummy	4,334	0.273	0.000	0.000	1.000	0.446
Growth and Income Dummy	4,334	0.109	0.000	0.000	1.000	0.311
Income Dummy	4,334	0.012	0.000	0.000	1.000	0.111
Small Company Dummy	4,334	0.078	0.000	0.000	1.000	0.268
Other Dummy	4,334	0.443	0.000	0.000	1.000	0.497
Expense Ratio	4,322	1.256	1.210	0.000	3.030	0.548
Ln Net Assets	3,773	4.931	5.192	-2.303	11.340	2.551

**Table 2**

Distribution for corporate governance variables and control dummy variables. Shown are the number and percent of funds for each governance score. All data is from the Morningstar Mutual Fund Database for the year ended 2006. Information Ratio is the 3-year information ratio. Stewardship Grade is converted to a numerical core with A=5, B=4, C=3, D=2, and F=1. Regulatory Issues, Board Quality, Manager Incentives, Fees, and Corporate Culture are converted to numerical scores with Excellent=5, Good=4, Fair=3, Poor=2, and Very Poor=1. Dummy variables are for Prospectus Objective.

Corporate Governance Variables:	N	5	4	3	2	1
Stewardship Grade	4,334	254 5.73%	1,737 39.17%	1,961 44.23%	438 9.88%	44 0.99%
Regulatory Issues	4,334	2,523 56.90%	451 10.17%	1,202 27.11%	180 4.06%	78 1.76%
Board Quality	4,334	566 12.76%	2,261 50.99%	1,394 31.44%	212 4.78%	1 0.02%
Manager Incentives	4,334	537 12.11%	731 16.49%	1,918 43.26%	891 20.09%	357 8.05%
Fees	4,334	1,582 35.68%	964 21.74%	996 22.46%	511 11.52%	381 8.59%
Corporate Culture	4,334	517 11.66%	1,699 38.32%	1,842 41.54%	369 8.32%	7 0.16%
Control Dummy Variables:	N	%				
Aggressive Growth Dummy	85	1.96%				
Balanced Dummy	177	4.08%				
Equity Income Dummy	115	2.65%				
Growth Dummy	1,212	27.97%				
Growth and Income Dummy	482	11.12%				
Income Dummy	55	1.27%				
Small Company	344	7.94%				
Other Dummy	1,964	45.78%				
Total	4,334	100.00%				

**Table 3**

Mutual fund performance by corporate governance variables. Shown are the mean information ratio for each governance score, with the number of observations in parentheses. All data is from the Morningstar Mutual Fund Database for the year ended 2006. Information Ratio is the 3-year information ratio. Stewardship Grade is converted to a numerical core with A=5, B=4, C=3, D=2, and F=1. Regulatory Issues, Board Quality, Manager Incentives, Fees, and Corporate Culture are converted to numerical scores with Excellent=5, Good=4, Fair=3, Poor=2, and Very Poor=1. Dummy variables are for Prospectus Objective.

Corporate Governance Variables:	N	5	4	3	2	1
Stewardship Grade	3,982	0.315 (221)	0.021 (1,583)	-0.143 (1,755)	-0.555 (379)	-0.384 (44)
Regulatory Issues	3,982	-0.052 (2,285)	-0.138 (406)	-0.156 (1,042)	-0.080 (171)	-0.330 (78)
Board Quality	3,982	0.172 (529)	-0.092 (2,034)	-0.153 (1,244)	-0.516 (174)	0.62 (1)
Manager Incentives	3,982	0.216 (500)	0.060 (638)	-0.145 (1,750)	-0.287 (763)	-0.146 (331)
Fees	3,982	0.024 (1,420)	-0.117 (887)	-0.079 (886)	-0.350 (460)	-0.225 (329)
Corporate Culture	3,982	0.169 (464)	-0.084 (1,512)	-0.150 (1,638)	-0.235 (361)	0.574 (7)

**Table 4**

Univariate regression results. Dependent variable is the 3-year information ratio. All data is from the Morningstar Mutual Fund Database for the year ended 2006. Stewardship Grade is converted to a numerical core with A=5, B=4, C=3, D=2, and F=1. Regulatory Issues, Board Quality, Manager Incentives, Fees, and Corporate Culture are converted to numerical scores with Excellent=5, Good=4, Fair=3, Poor=2, and Very Poor=1. T-statistics are shown in parentheses.

Corporate Governance Variables:	Intercept	Coefficient	R-Square	F-Statistic	N
Stewardship Grade	-0.887 (-12.86)***	0.234 (11.79)***	0.034	139.07***	3,982
Regulatory Issues	-0.286 (-4.55)***	0.046 (3.15)***	0.002	9.94***	3,982
Board Quality	-0.705 (-8.82)***	0.164 (7.79)***	-0.015	60.65***	3,982
Manager Incentives	-0.477 (-10.30)***	0.125 (8.77)***	0.019	76.96***	3,982
Fees	-0.380 (-8.10)***	0.078 (6.46)***	0.01	41.74***	3,982
Corporate Culture	-0.488 (-7.10)***	0.112 (5.882)***	0.009	34.60***	3,982

\*\*\* Significant from zero at the 0.01 level

**Table 5**

Multivariate regression results. Dependent variable is the 3-year information ratio. All data is from the Morningstar Mutual Fund Database for the year ended 2006. Stewardship Grade is converted to a numerical core with A=5, B=4, C=3, D=2, and F=1. Regulatory Issues, Board Quality, Manager Incentives, Fees, and Corporate Culture are converted to numerical scores with Excellent=5, Good=4, Fair=3, Poor=2, and Very Poor=1. Dummy variables are for Prospectus Objective. T-statistics are shown in parentheses.

Corporate Governance Variables:	Regression 1	Regression 2	Regression 3	Regression 4
Intercept	-0.887 (-12.86)***	-1.201 (-11.951)***	-1.154 (-10.866)***	-1.290 (-9.703)***
Stewardship Grade	0.234 (11.79)***		0.177 (7.893)***	
Regulatory Issues		0.022 (1.254)		-0.009 (-0.486)
Board Quality		0.119 (4.665)***		0.117 (4.316)***
Manager Incentives		0.122 (8.600)***		0.099 (6.507)***
Fees		0.049 (3.802)***		0.043 (3.066)**
Corporate Culture		0.005 (0.195)		-0.013 (-0.455)
Aggressive Growth Dummy			0.181 (1.501)	0.140 (1.156)
Balanced Dummy			-0.892 (-10.562)***	-0.947 (-11.209)***
Continue from table 5				
Equity Income Dummy			0.543 (5.276)***	0.558 (5.425)***
Growth Dummy			-0.015 (-0.373)	-0.012 (-0.292)



Growth and Income Dummy			0.043 (0.792)	0.003 (0.063)
Income Dummy			0.211 (1.192)	0.264 (1.495)
Small Company Dummy			0.454 (7.304)***	0.460 (7.360)***
Expense Ratio			0.046 (1.387)	-0.003 (-0.074)
Ln Net Assets			0.069 (8.732)***	0.068 (8.514)***
R-Square	0.034	0.038	0.113	0.120
F-Statistic	139.07***	31.027	43.18***	32.938***
N	3,982	3,982	3,396	3,396

\*\*\* Significant from zero at the 0.01 level

\*\* Significant from zero at the 0.02 level