FINANCIAL SERVICES REVIEW

Financial Services Review 28 (2020) 49-65

Are multiple share class funds poorly governed?

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Abstract

Utilizing independent Morningstar Stewardship Grades, this article finds that multiple share class mutual funds (MS funds) have lower quality governance. Ordered probit regressions indicate MS funds are more likely to have lower board quality ratings and managerial incentive ratings, additional evidence the MS structure has not provided the benefits initially put forth by supporters. The results continue to demonstrate that less sophisticated investors seeking financial advice (those typically utilizing MS funds) may potentially be directed to funds that underperform and have higher costs.

JEL classification: G180; G230; G340

Keywords: Mutual fund; SEC; Corporate governance; Shareholders; Investor protection

1. Introduction

With the 1995 establishment of the Securities and Exchange Commission Rule 18f-3 (Securities and Exchange Commission, 1995), came the widespread use of multiple share class mutual funds (MS funds). MS funds are designed to have a single investment portfolio with a variety of combinations of commission structures and ongoing expense structures. Individuals choose a particular combination from those available, the class, and invest in the fund. O'Neal (1999) points out that such funds are complex and that choosing the most advantageous combination of fund and class may be difficult for investors. In most situations

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where MS funds are utilized, the investment is made with the aid of a financial advisor/broker. However, research shows there is confusion among advisors as to the most appropriate MS fund class based on expected investor holding period (Jones, Lesseig, and Smythe, 2005a). Moreover, recent research finds that MS funds have higher expense ratios than single-class (Non-MS) funds when taking fund governance quality into consideration (Handy, Nichols, and Smythe, 2018). Because fund expenses are directly correlated with investor returns, one might expect advisors/brokers to place great emphasis on them when recommending funds to clients, but research by Jones, Lesseig, and Smythe (2005b) suggests that they rarely do. Because previous research ties fund expenses to governance quality, and prior results indicate that advisors/brokers may not use fund expenses as a major selection criteria, this article investigates the relative governance quality of MS and Non-MS funds so that investors and advisors/brokers are better informed regarding their investment selections.

While motivated by O'Neal (1999), which explores differences across *fund classes*, this article explores differences across *fund structure*. Specifically, this article explores a more subtle issue in the mutual fund market: whether MS funds have differing levels of governance quality compared with Non-MS funds. To do so, we use independent governance ratings data from Morningstar.

Beginning in 2004, Morningstar began publishing Stewardship Grades for mutual funds based on five criteria: board quality, managerial incentives, fees, corporate culture (of the fund sponsor), and regulatory ratings. Each grade provides information on fund management in the context of governance and administrative functionality, and as stated by Morningstar, "helps investors to assess funds based on the degree to which the funds' parent—the management company offering the fund—has its interests aligned with those of fund shareholders." Over the last 10 years, a growing stream of research examines whether the stewardship grade, or its components, have any relationship to fund performance and/or fund costs. To date, this is the first article using stewardship grades to analyze whether there are differences in fund governance across MS and Non-MS funds.

Our analysis utilizes components of the Morningstar Stewardship Grade (MSG) to gauge the degree of governance alignment between retail investors and fund management companies. More specifically, we analyze whether funds selected by investors choosing to use financial advisors have systematically different governance ratings from funds offered to retail investors not using financial advisors.[1] To be clear, we are not suggesting financial advisors consciously recommend funds with differential governance; however, the primary pool of funds from which financial advisors make recommendations does consist of MS funds. In fact, for advisors who work for large securities firms, the pool of funds from which they choose is preselected at the firm level, and so advisors may be forced to suggest such funds. Ultimately, it follows that if MS funds are generally more likely to have lower governance ratings, then retail investors utilizing advisors are more likely to be steered towards funds with lower governance quality and need to know this.

Our findings identify significant differences in Morningstar governance ratings across fund structures. MS funds are more likely to have lower board quality ratings and lower managerial incentive ratings than Non-MS funds (traditional no-load funds). Examining predicted probabilities, the results indicate that MS funds have a significantly lower probability of having high governance ratings when compared with Non-MS funds. Additionally,

a fund sponsor's corporate culture, as rated by Morningstar, has predictable independent influences on fund board quality and managerial incentives. Finally, funds with better board quality ratings have higher managerial incentive ratings. Our findings provide additional evidence that the MS structure is associated with largely detrimental effects on a less informed group of investors.

The balance of the article proceeds as follows. In Section 2, we review mutual fund literature to place this work in context. In Section 3, we develop our hypotheses. In Section 4, we introduce the data, build the empirical model, and discuss the variables of interest. In Section 5, we present primary empirical results, and in Section 6, we present our concluding remarks.

2. Previous literature

Over the years, the use of mutual funds for investing has increased tremendously. Fund assets increased from $11.1 trillion at year-end 2009 to $17.7 trillion at year-end 2018 (2010 and 2019 Investment Company Fact Books, respectively). Accordingly, mutual fund research remains a growing specialty. For brevity, our literature review focuses on the three areas of fund research most related to this article: research focusing on the nature of multiple-share class funds, research focusing on the intersection of retail investors and financial advisors, and research focusing on Morningstar Stewardship Grades (MSG).

2.1. Multi-share class mutual funds

Despite the fact that the SEC has allowed mutual fund sponsors to offer MS funds since 1995, little analytical research into MS funds and the MS structure exists. This article, to the best of its authors' knowledge, is the first to analyze whether there are differences in independently rated governance quality between MS and Non-MS funds. The main theoretical multi-share class research comes from Livingston and O'Neal (1998), O'Neal (1999), and Nanda, Wang, and Zheng (2009). Lesseig, Long, and Smythe (2002) and Handy, Nichols, and Smythe (2018) provide empirical results.

Livingston and O'Neal (1998) and O'Neal (1999) focus on MS fund costs and the incentives provided to investors and brokers.[2] Livingston and O'Neal (1998) concludes that, because little evidence supports mutual fund performance persistence, investors should select funds based on costs because higher costs uniformly lead to lower returns. They identify the most common MS fund cost distribution types, derive a series of mathematical equations expressing the costs as a present value, and provide a comprehensive set of optimal investment strategies for investors given specific investment time horizons. However, when considering the results of Barber, Odean, and Zheng (2005), which demonstrates investor confusion with fund costs, the challenge facing MS fund investors becomes clear: investors must not only choose which fund to invest their assets but also which combination of commissions and ongoing expenses best suits their needs (i.e., they must choose the right class).

O'Neal (1999) derives commission-based incentives for fund brokers/advisors and finds conflicts of interest between advisors and investors. O'Neal (1999) indicates that this is particularly dangerous to MS fund investors, given that those most likely to seek out advisors are those who are relatively uninformed. Nanda et al. (2009) largely focus their analysis around a fund's decision to switch from single-class to the multiple-class structure and find that switching to the MS structure negatively impacts performance. While similar to O'Neal (1999), this article analyzes the relationship between fund *sponsors* and investors by examining Morningstar's independent board quality and managerial incentive ratings to determine if there are differences between MS and Non-MS funds.

Finally, Lesseig, Long, and Smythe (2002) and Handy, Nichols, and Smythe (2018) also focus on MS structure by examining differences in expense ratios between MS and Non-MS funds. Lesseig et al. (2002) analyzes the claim made by fund sponsors when the MS structure was introduced that it allows funds to decrease fund expenses. Their results suggest the opposite—overall net expense ratios for MS funds are higher than for Non-MS funds. Handy et al. (2018) examines a longer and more recent sample and find results consistent with Lesseig et al. (2002).

2.2. Retail investors and the financial advisor

While literature focusing on the MS structure is scarce, literature focusing on the intersection between financial advisors, mutual funds, and the retail investor is abundant. Nofsinger and Varma (2007) analyzes survey results and find that financial advisors are on average more analytical than the general population, that they are more financially patient, and that they perform better in intertemporal choice problems. Bergstresser, Chalmers, and Tufano (2009) analyzes broker-sold (MS) and direct-sold (Non-MS) funds from 1996 to 2004 and do not find any evidence brokers offer substantial benefits to clients.[3] Additionally, Bergstresser et al. (2009) finds that broker-sold funds are no more skilled at aggregate-level asset allocation than funds sold through the direct channel.

While early literature focuses on how individual investors make fund investment decisions (e.g., Alexander, Jones, and Nigro, 1998; Capon, Fitsimmons, and Prince, 1996), Jones et al. (2005a) surveys over 500 financial advisors on what criteria and information sources they use in the fund recommendation process. They find that the two most important information types used are comprehensive data sources and independent rankings from firms such as Morningstar and Lipper (now part of Thomson-Reuters). However, they also find that advisors rank fund costs very low as recommendation criteria. Jones et al. (2005b) also examines survey data from financial advisors regarding their compensation and investment recommendations as it relates specifically to MS funds. They find advisors are more likely to recommend a specific MS class based on the commission received rather than the appropriateness of the class for the client. Additionally, when the funds are firm proprietary funds, advisors are more likely to recommend the class most profitable for the firm, usually to the detriment of investors. The results from Jones et al. (2005b) are consistent with the cautions presented by O'Neal (1999).

2.3. Morningstar Stewardship Grades

MSGs were first introduced in 2004 to "help investors further research, identify, and compare fund managers and fund companies that do a good job—or poor job—of aligning their interests with those of fund shareholders" (Fact Sheet, 2006). In short, the ratings are designed to help investors and advisors evaluate a fund's effectiveness at mitigating the principal-agent problem between investors and fund management. This article brings attention to the grades as an empirical tool, but more importantly, it examines whether there are differences in the governance ratings across fund structure, MS versus Non-MS funds.

Recent work analyzing MSG ratings includes Moore and Porter (2017). They analyze a 2007 cross-section of funds and report that increased mutual fund governance quality, as measured by Morningstar ratings, lead to lower fund expenses. Cao, Ghosh, Goh, and Ng (2014) establishes that MSGs have Granger Causality on long-term risk adjusted returns and can offer an explanation for fund performance, even when Morningstar Star Ratings are considered. Chou, Ng, and Wang (2011) finds that firms with better governance practices, as measured by Morningstar, tend to vote more responsibly on corporate governance proposals of portfolio firms and generally provide better return performance.

This article, as it relates to MSG ratings, is most similar to work by Handy et al. (2018), which examines whether Morningstar's board quality and managerial incentive scores are correlated with fund net expense ratios. Handy et al. (2018) argues that investors should seek to minimize fund expenses and analyze MSG ratings and their relationship to fund expenses as a potential tool for investors to gauge a fund's attractiveness. Of particular interest to the current article is that Handy et al. (2018) find that the relationships between MSG ratings and fund expenses differ between MS funds and Non-MS funds. This article should be considered a more general extension of their work. Rather than focus on MSG ratings in the context of fund expenses, this article looks at the more general question of whether governance ratings differ across distribution channels.

Given the empirical results cited above, the importance of this article should be clear. If lower governance ratings are associated with higher expenses and thereby lower returns, then investors investing in funds with such ratings are being negatively impacted and should be made aware. Consequently, exploring whether or not MS funds have better or worse governance ratings than non-MS funds is a valid pursuit.

3. Hypothesis development

MS funds are targeted primarily to more vulnerable investors, suggesting the need for strong fund-level governance.[4] Thus, our focus is on whether MS funds and Non-MS funds have differences in governance quality as reflected by MSG ratings. When MS funds were introduced, the SEC was concerned about inequitable treatment of shareholders *across* fund classes. However, Handy et al. (2018) shows that MS *funds* have higher net expenses than Non-MS funds and that governance measures have differential effects on expenses across fund structure. As such, our analysis is at the *fund level* and focuses on differences across *fund structure*.

The *Board Qual Rate* and *Manager Incent Rate* variables are evaluated independently. The variables are measured on a scale of 1 (lowest) to 5 (highest). As promoted by Morningstar, each should provide information to investors/financial advisors about the relative quality of fund governance along these dimensions, each of which is important in mitigating the principal-agent problem between fund sponsors and investors.

When estimating the empirical model for each dependent variable, we include the dummy variable, *MS*, equal to 1 if the observation is an MS fund and 0 otherwise. Given that the primary investors in MS funds are considered less knowledgeable, the funds may take additional steps to promote good governance practices. If so, we expect *MS* to have a direct relationship with the governance metrics *Board Qual Rate* and *Manager Incent Rate*. As such,

Hypothesis 1(a): MS funds have higher board quality ratings (*Board Qual Rate*) than Non-MS funds.

Hypothesis 1(b): MS funds have higher managerial incentive ratings (*Manager Incent Rate*) than Non-MS funds.

While examining differences in governance ratings across fund structure is our primary focus, we also are interested in whether the corporate culture of the fund the fund sponsor influences fund governance. As such, we include Morningstar's *Corp Culture Rate* in the empirical models (a variable ranging from 1 [lowest] to 5 [highest]). *Corp Culture Rate* is meant to "assess how seriously a firm takes its fiduciary duty to its fund shareholders." It is an indirect measure of how fund sponsors may influence the governance process *within* funds they operate. We expect more highly rated fund sponsors to have boards that are of higher quality and stronger managerial incentives. As such,

Hypothesis 2(a): Funds whose sponsor has a higher corporate culture rating (*Corp Culture Rate*) have a higher board quality rating (*Board Qual Rate*).

Hypothesis 2(b): Funds whose sponsor has a higher corporate culture rating (*Corp Culture Rate*) have a higher managerial incentive rating (*Manager Incent Rate*).

Finally, once a board is in place, it has the authority to influence contracts between fund managers and the fund as it pertains to managerial incentives. While the board has sole authority to negotiate fund expenses, it is also likely that the board will have an influence on how much fund managers must own to align the interests between the two groups. Therefore, we expect funds with more highly rated boards to have higher managerial incentive ratings.

Hypothesis 3: Funds with higher board quality ratings (*Board Qual Rate*) have higher managerial incentive ratings (*Manager Incent Rate*).

4. Data and empirical model

4.1. Data

The data for the analysis comes from Morningstar and includes year-end data from 2005 to 2009.[5] Our sample only includes funds in the investment objectives Growth and Income,

Growth, Aggressive Growth, and Small Cap for two reasons. First, early mutual fund literature commonly examined these investment categories. Second, and more importantly for this article, the identification of classes in the same fund portfolio had to be identified and coded by hand across all years in the sample, a time consuming process.

Morningstar observations are often referred to as "a fund," but they are not. Morningstar captures data at the *class* level, reflecting differences across share classes that a MS fund has. Handy et al. (2018) describes the issues, both practical and statistical, of conducting analysis with class level data. That article analyzes class level net expense ratios, prompting them to conduct their initial analysis at the class level. However, Handy et al., also introduce a robustness technique, whereby they examine data at the fund level by identifying all classes of a MS fund by hand. As they discuss, some variables are representative of the class, for example, commission structure (front-end load or redemption fee) and class level net assets, while others, such as *MS*, board quality rating, and turnover are unique to the fund, that is, is the same for all classes.

We analyze data at the fund level, using the Stata Collapse command to create a single observation for each unique fund in the sample. The fund is the appropriate unit of analysis because governance ratings are for a fund, not for individual classes, regardless of whether the fund is MS or Non-MS. While using the fund level data ignores subtlety that class level characteristics bring to the analysis, we are interested in fund governance. As such, the traditional sample of class level observations is reduced from over 8,000 to approximately 2,300.

4.2. Empirical model

While Morningstar's Stewardship ratings are discrete rankings ranging from 1 to 5, the actual shift from one level to another is unobservable. As such, we use an ordered probit model to examine the relationship among fund characteristics and governance ratings. The model takes the following form:

$$y^*_i = X_i\beta + e_i, \; where \; e_i \sim n(0,1). \tag{1}$$

'y^*_i' takes on the values 1 to 5, corresponding to the ordinal ranking values for *Board Qual Rate* and *Manager Incent Rate* separately. 'X_i' is a vector of independent control variables. All regression models include year-fixed effects, and standard errors are robust to heteroscedasticity.

The primary variable of interest is *MS* to test Hypothesis 1 (a, b), but *Corp Culture Rate* is also included as an independent variable of interest to test Hypotheses 2 (a, b). When *Manager Incent Rate* is the dependent variable, we include *Board Qual Rate* as an additional variable of interest to test Hypothesis 3.

Analyzing Morningstar component ratings is new; therefore, so is the empirical model. The choice of independent variables reflects possibly predictable relationships between the variables and ratings. If Morningstar's evaluation process is perfectly efficient, then we would have no a priori expectation that fund characteristics are related to ratings. However, Morningstar's process is partially judgment based, likely introducing measurement error. As such, we include variables in the model that may be correlated with governance ratings.

There are 11 common control variables across the ratings' models. *Agg Growth*, *Growth*, and *Small Cap* identify funds that are in Morningstar's aggressive growth, growth, and small cap investment objectives, respectively. Growth and income funds are the omitted category. Each variable is a dummy equal to 1 if the fund is in the respective category and 0 otherwise. *Instl* identifies funds attracting institutional investors and is a dummy variable equal to 1 if the fund, or a class in the fund, is targeted to institutional investors and 0 otherwise. *Load* identifies funds attracting retail investors in the advisor-sold channel and is a dummy variable equal to 1 if the fund, or at least one class of the fund, has a front-end load, a contingent deferred sales charge, or a level load commission structure, and 0 otherwise. *12b-1* identifies funds charging a 12b-1 fee and is a dummy equal to 1 if the fund, or at least one class of a fund, has a 12b-1 fee, and 0 otherwise. 12b-1 fees have become a primary form of compensation in advisor-sold funds, and as such, we identify this characteristic separately from *Load*. *Fund Assets* and *Family Assets* are included to capture size at the fund and fund family level, respectively. They are measured as assets under management and transformed as the natural logarithm. *Fund Age* is the age of the oldest class in the fund, and manager tenure (*Mgr Tenure*) is the longest recorded manager tenure of a class in the fund. Each variable is log transformed. Both variables, before log transformation, are measured in years. *Year* is included to control for trends in the data and takes the values 2005–2009 for each year a fund appears in the sample. Finally, when *Manager Incent Rate* is the dependent variable, we control for the fund's net expense ratio (*Netexpense*), measured as the average expense ratio across all classes of MS funds.[6]

5. Primary empirical results

5.1. Summary statistics

Summary statistics for the sample are presented in Table 1. There are over 2,300 observations across the years meeting the data analysis requirements. In column (1), approximately 73% of observations are MS funds. The results suggest that ratings are higher for Non-MS funds, with *Board Qual Rate* and *Corp Culture Rate* statistically significant at the 1% level. The average ratings for MS funds versus Non-MS funds, respectively, are: *Board Qual Rate* 3.646 versus 3.926; *Manager Incent Rate* 3.272 versus 3.322; and *Corp Culture Rate* 3.520 versus 4.206.

In the full sample, approximately 60% of funds have loads (column 1), dominated by the MS structure, where 80% of funds (column 2) have at least one load class. This is expected given that MS funds are targeted to the advisor-sold channel. However, in today's market, funds using the MS structure also include institutional classes. Sample wide, 51% of funds have an institutional representation; however, this is driven by the MS subsample, where 68% of funds have an institutional class, while only 2.6% of Non-MS funds are for institutional investors. This is evidence the MS structure has broadened since its introduction. Approximately 50% of funds have a 12b-1 fee, but again, this is driven by the MS subsample where 64% of funds have a class with a 12b-1 fee, further evidence the MS structure targets the advisor-sold channel.

Table 1 Summary statistics

Variables	Full sample			Multiple share class funds			Non-MS funds (MS = 0)			Difference	Significance
	N	(1) Mean	Standard deviation	*N*	(2) Mean	Standard deviation	*N*	(3) Mean	Standard deviation		
Board Qual Rate	2,349	3.719	0.755	1,724	3.644	0.713	625	3.926	0.825	−0.282	***
Manager Incent Rate	2,349	3.285	1.116	1,724	3.272	1.109	625	3.322	1.135	−0.049	
Corp Culture Rate	2,349	3.698	0.999	1,724	3.513	0.965	625	4.206	0.913	−0.693	***
Age in years	2,349	18.640	15.901	1,724	20.119	16.937	625	14.560	11.688	5.559	***
Fund Assets in mill	2,348	4.429	1.189	1,724	4.530	1.124	625	4.151	11.181	0.379	
Family Assets in mill	2,349	111.263	169.974	1,723	90.923	148.013	625	167.337	209.564	−76.415	***
Load	2,349	0.603	0.489	1,724	0.803	0.398	625	0.051	0.221	0.752	***
Instl	2,349	0.130	0.165	1,724	0.168	0.150	625	0.026	0.158	0.143	***
12b-1	2,349	0.303	0.248	1,724	0.401	0.210	625	0.033	0.100	0.368	***
MS	2,349	0.734	0.442	1,724	1.000	0.000	625	0.000	0.000		
Netexpense	2,349	0.940	0.369	1,724	0.945	0.346	625	0.926	0.424	0.019	
Mgr tenure in years	2,336	5.938	4.643	1,722	5.861	4.434	614	6.154	5.184	−0.293	

Note: ***$p < 0.01$.

This table presents the summary statistics for the entire sample of fund level observations in the Growth and Income, Growth, Agg Growth, and Small Cap investment objectives. We present the pooled sample results and the Non-MS and MS sub-samples for comparison. *Board Qual Rate*, *Manager Incent Rate*, and *Corp Culture Rate* are measures of board quality, managerial incentives, and fund sponsor corporate culture as evaluated by Morningstar. Each ranges from 1 (lowest) to 5 (highest). MS is equal to 1 if the fund is an MS fund and 0 otherwise. Load is a dummy equal to one if the fund has a commission structure (FEL, CDSC, or level load) associated with it and 0 otherwise. Instl equals 1 if the fund is for institutional investors or has a class for institutional investors and 0 otherwise. Fund Assets and Family Assets are measured in millions of dollars and measure the size of the fund and fund sponsor, respectively. Fund Age and Mgr Tenure are measured in years and measure the age of the fund and the length of time the manager has been with the fund. 12b-1 equals one if the fund or a class of the fund has a 12b-1 fee and 0 otherwise. Netexpense is the difference between the funds gross expense ratio and any 12b-1 fee. Year is the year in which the fund is in the sample. The final column represents the results of a *t*-test between the Non-MS and MS sub-samples for the variables. The *t*-value and the *p*-value are presented. The samples are not assumed to have equal variances. Asterisks represent significance at the 10% (*), 5% (**), and 1% (***) level, respectively.

The full sample fund family average assets under management is $111.7 billion, but this differs across fund structure. The average size for Non-MS funds (column 3) is $167.3 billion, while for the MS subsample it is $90.9 billion. The average fund has approximately $4.4 billion dollars under management, roughly equivalent across fund structure. The average fund age in the sample is 18.6 years, with MS funds having an age of 20 years versus 14.6 for Non-MS funds. The difference across structure is not surprising. From the industry's beginnings until approximately 1980, all funds were sold with a load. Many of these funds converted to the MS structure upon its approval in the 1990s. The average manager tenure is approximately 5.9 years, similar across fund structure. Finally, the average net expense ratio, defined as the fund's gross expense ratio minus the 12b-1 fee, is 94 basis points and is similar across fund structure.

5.2. Multi-variate analysis

The univariate results suggest fund governance quality may be related to fund structure. We now examine the determinants of governance ratings in a multivariate framework using

Table 2 Board Qual Rate dependent variable

Variable	(1)	(2)
Corp Culture Rate		0.417*** (0.0306)
MS	−0.333*** (0.0845)	−0.352*** (0.0794)
Load	0.132 (0.100)	0.286*** (0.0946)
Instl	−0.0403 (0.0555)	0.0222 (0.0540)
Family Assets	−0.0576*** (0.0147)	−0.0883*** (0.0148)
Family Age	−0.149*** (0.0324)	−0.0651** (0.0322)
Lnassets	0.125*** (0.0197)	0.0851*** (0.0187)
12b-1	−0.265* (0.149)	−0.0582 (0.145)
Agg Growth	−0.133 (0.110)	−0.0117 (0.114)
Growth	0.00986 (0.0540)	0.0148 (0.0541)
Small Cap	0.100 (0.0749)	0.0527 (0.0759)
Mgr Tenure	0.131*** (0.0240)	0.0807*** (0.0245)
Year	−0.0263 (0.0194)	−0.0340* (0.0193)
Year-fixed effects	Yes	Yes
Observations	2,324	2,324

Note: Robust standard errors in parentheses.

*$p < 0.1$, **$p < 0.05$, ***$p < 0.01$.

This table presents ordered probit results of estimating equation (1) with *Board Qual Rate* as the dependent variable. All variables are defined as in the Table 1 heading, except *Family Assets*, *Fund Assets*, *Fund Age*, and *Mgr Tenure*, which are the log transformed value of family assets, fund net assets, fund age, and fund manager tenure. Year-fixed effects are included and standard errors are robust to heteroscedasticity. Asterisks represent significance at the 10% (*), 5% (**), and 1% (***) level, respectively.

the ordered probit model described by Equation (1). The results are presented for each dependent variable separately.

5.2.1. Board Qual Rate

Table 2 presents the results analyzing the relationship between *Board Qual Rate* and the fund characteristics discussed previously. Our primary interest is on the variables *MS* and *Corp Culture Rate*. Based on Hypothesis 1(a), we expect the coefficient estimate for *MS* to be positive and statistically significant. The results in column (1) do not support the hypothesis but do corroborate the univariate analysis above. *MS* is *negative and statistically significant*. The results indicate that MS funds are less likely (likelier) to have higher (lower) board quality scores than Non-MS funds. This result is concerning given the SEC's focus on protecting individual investors, as investors in MS funds are likely to be most vulnerable to the principal-agent problem with fund management. Table 3, Panels A and B provide predicted probabilities.[7] Panel A indicates that MS funds are three times more likely to have the lowest board quality rating (a probability of 0.4% vs. 0.1%, respectively) and are consistently more likely to have below average board quality ratings. Moreover, MS funds are significantly less likely to achieve the highest board quality rating (12.2% vs. 20%, respectively).

In column (2) of Table 2, we test Hypothesis 2(a), that is, whether fund sponsors with better corporate culture, as rated by Morningstar, are more likely to operate funds with better board quality. There is strong support for Hypothesis 2(a). *Corp Culture Rate* is positive and

Table 3 Board Qual Rate predictive probabilities

Panel A:

MS	*Board Qual Rate*				
	1	2	3	4	5
0	0.001	0.017	0.277	0.505	0.2
1	0.004	0.036	0.375	0.464	0.122
Difference (basis points)	30	190	980	−410	−780
% Difference	300.00%	111.76%	35.38%	−8.12%	−39.00%

Panel B:

		Board Qual Rate				
Corp Culture Rate	*MS*	1	2	3	4	5
1	0	0.017	0.112	0.57	0.277	0.023
1	1	0.038	0.178	0.591	0.183	0.01
	Difference (basis points)	210	660	210	−940	−130
	% Difference	123.53%	58.93%	3.68%	−33.94%	−56.52%
2	0	0.006	0.057	0.485	0.396	0.056
2	1	0.015	0.102	0.561	0.295	0.027
	Difference (basis points)	90	450	760	−1010	−290
	% Difference	150.00%	78.95%	15.67%	−25.51%	−51.79%
3	0	0.002	0.025	0.361	0.493	0.119
3	1	0.005	0.05	0.467	0.414	0.064
	Difference (basis points)	30	250	1060	−790	−550
	% Difference	150.00%	100.00%	29.36%	−16.02%	−46.22%
4	0	0	0.009	0.235	0.536	0.219
4	1	0.001	0.021	0.341	0.504	0.132
	Difference (basis points)	10	120	1060	−320	−870
	% Difference	N/A	133.33%	45.11%	−5.97%	−39.73%
5	0	0	0.003	0.134	0.507	0.356
5	1	0	0.008	0.218	0.536	0.238
	Difference	0	50	840	290	−1180
	% Difference	N/A	166.67%	62.69%	5.72%	−33.15%

This table presents predicted probabilities resulting from ordered probit regressions. *Board Qual Rate* takes on an integer value between 1 and 5 reflecting the Morningstar Board Quality Rating. *MS* equals zero if the fund is a Non-MS fund and 1 if the fund is an MS fund. The values within the table, unless labelled otherwise, represent percentages in decimal form. Panel A provides predicted probabilities based on fund type alone. Panel B provides predicted probabilities for MS and Non-MS funds conditional on their Morningstar Corporate Culture rating.

significant at the 1% level. Equally important is that our primary variable of interest, *MS*, continues to be negative and significant.

Panel B of Table 3 further details the results. Across all corporate culture ratings, MS funds are more likely to have lower board quality ratings compared with Non-MS funds and in most cases are half as likely to achieve the highest board quality ratings (a rating of 4 or 5). Interestingly, as corporate culture ratings increase, MS and Non-MS funds are less likely to have poor board quality ratings and are more likely to have higher ratings, so fund sponsor culture clearly influences governance at the fund level. The general relationship continues to hold: MS funds are more likely to have lower board quality ratings compared with Non-MS Funds. When comparing funds with the worst corporate culture ratings (a score of 1), the model predicts MS funds will have the worst board quality rating (a score of 1) with a 3.8% probability. This is double the 1.7% probability associated with Non-MS funds. For the same corporate culture rating, MS funds have only a 1% chance of receiving the highest board quality rating (a score of 5) while Non-MS funds have a 2.3% chance. Focusing on sponsors

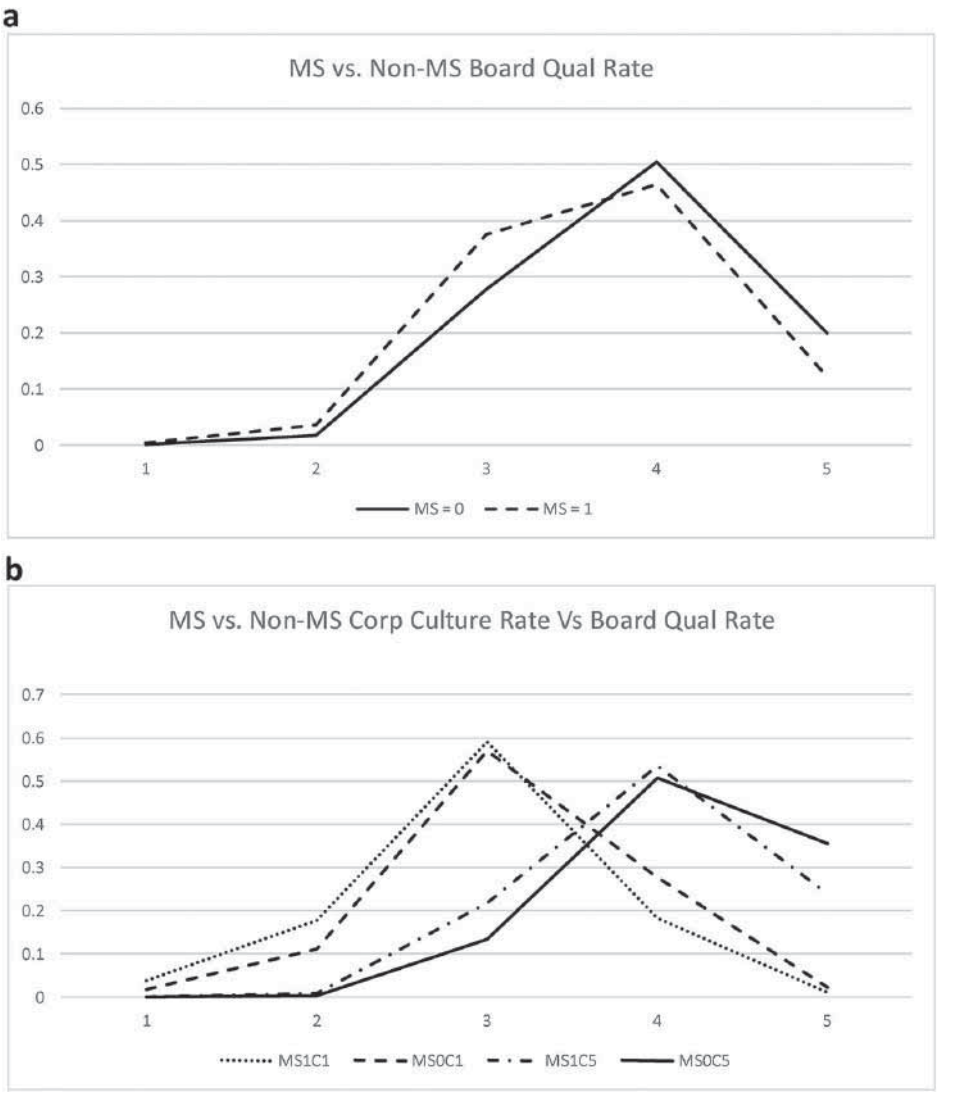

Fig. 1. MS versus Non-MS Board Qual Rate Fig. 1 compares Board Qual Rate across fund type (MS vs. non-MS; Fig. 1a) and across both fund type and Corp Culture Rate (Fig. 1b) Series *MS* = 0 reflects non-MS funds in Fig. 1a. Series *MS* = 1 reflects MS funds in Fig. 1a. Series MS1C1 graphs predicted probabilities for MS Funds with the lowest *Corp Culture Rate* (*Corp Culture Rate* = 1; Fig. 1b). Series MS1C5 graphs predicted probabilities for MS Funds with the highest *Corp Culture Rate* (*Corp Culture Rate* = 5; Fig. 1b). Series MS0C1 graphs predicted probabilities for non-MS Funds with the lowest *Corp Culture Rate* (*Corp Culture Rate* = 1; Fig. 1b). Series MS0C5 graphs predicted probabilities for non-MS Funds with the highest *Corp Culture Rate* (*Corp Culture Rate* = 5; Fig. 1b).

with only the highest corporate culture rating (a score of 5), no firms have a board quality score of 1; however, MS funds are twice as likely to receive the next worse rating (0.8% vs. 0.3%, respectively) and are significantly less likely to achieve the highest board quality score (23.8% vs. 35.6%).

A visual representation of predicted probabilities is useful. Fig. 1 provides a graphical comparison of *Board Qual Rate* across mutual fund types (MS vs. non-MS, Fig. 1a) and across mutual fund type and *Corp Culture Rate* (Fig. 1b).[8] Both figures show that non-MS funds have lower probabilities of receiving lower board quality ratings and higher

probabilities of higher board quality ratings (MS0C1 and MS0C5). At the most extreme, Fig. 1b shows that non-MS funds with the higher corporate culture ratings have approximately a 40% higher chance of receiving a top board quality rating than MS funds with the lowest corporate culture rating.

We next discuss the results for the control variables in Table 2, although for space considerations we do not provide or discuss predicted probabilities. The variables *Agg Growth*, *Growth*, and *Small Cap* are not statistically significant. However, other fund characteristics are significantly correlated with board quality. Funds with 12b-1 fees (*12b-1*) have significantly lower board quality ratings than those without a 12b-1 fee in column (1). However, when *Corp Culture Rate* is included in column (2), *12b-1* is no longer statistically significant. In contrast, *Load* is positive but not significant in column (1), but when *Corp Culture Rate* is included in column (2), *Load* is positive and statistically significant.

Looking at characteristics related to family/fund size, age, and manager tenure tells a mixed story. Larger fund families (*Family Assets*) are associated with lower *Board Qual Rate*, independent of the effect of corporate culture, as are older funds (*Fund Age*). Both results are consistent with fund families (older funds) being complacent, possibly because of prior success. Also, larger fund families may be more likely to use "captured boards," that is, board members sit on multiple boards within a family, receiving significant levels of compensation from the family.

In contrast to family size and fund age, larger funds (*Fund Assets*) and funds with longer tenured managers (*Mgr Tenure*) have higher measures of *Board Qual Rate*. The finding for *Fund Assets* may be indicative of larger funds being in the spotlight and responding to implicit pressure to provide strong governance. The finding for longer tenured managers is consistent with these managers finding value in strong governance. The final control, *Year*, indicates that on average *Board Qual Rate* is declining over the sample period, although only significantly so when *Corp Culture Rate* in included in the model.

5.2.2. Manager incent rate

Results from estimating Equation (1) with *Manager Incent Rate* as the dependent variable are presented in Table 4. As discussed above, we augment the control variables by including *Corp Culture Rate* (Hypothesis 2(b)) and *Board Qual Rate* (Hypothesis 3) in the model. Additionally, we include *Netexpense* as an additional control variable. When analyzing Hypothesis 1(b), column (1) in Table 4 shows that *MS* is negative and significant, indicating MS funds are less (more) likely to have higher (lower) managerial incentive ratings than Non-MS funds, which does not support Hypothesis 1(b).

Table 5, Panels A and B provide predicted probabilities of the variables of interest, similar to Table 3. Panel A focuses strictly on the fund structure's relationship to the managerial incentive rating. MS funds are twice as likely to have the lowest managerial incentive rating (7.3% vs. 3.5%, respectively) and are significantly less likely to achieve the highest managerial incentive rating (15.4% vs. 25.6%). In total, the findings suggest that managerial incentives are less likely aligned with retail investors in the advisor-sold channel, giving rise to a more pronounced principal-agent problem between shareholders and fund management.

Table 4 Manager Incent Rate dependent variable

Variable	(1)	(2)	(3)	(4)
Board Qual Rate		0.140*** (0.0314)		0.0955*** (0.0324)
Corporate Cult Rate			0.158*** (0.0285)	0.134*** (0.0296)
MS	−0.411*** (0.0830)	−0.385*** (0.0830)	−0.416*** (0.0842)	−0.398*** (0.0844)
Load	0.149 (0.0983)	0.133 (0.0984)	0.198* (0.102)	0.179* (0.102)
Instl	−0.144** (0.0573)	−0.139** (0.0573)	−0.118** (0.0575)	−0.118** (0.0575)
Netexpense	−0.0163 (0.0821)	0.0215 (0.0823)	0.0243 (0.0823)	0.0437 (0.0827)
Family Assets	−0.113*** (0.0164)	−0.105*** (0.0164)	−0.121*** (0.0165)	−0.115*** (0.0167)
Fund Assets	0.152*** (0.0172)	0.143*** (0.0171)	0.138*** (0.0173)	0.134*** (0.0173)
12b-1	0.450*** (0.121)	0.475*** (0.118)	0.542*** (0.122)	0.546*** (0.121)
Mgr Tenure	0.182*** (0.0240)	0.171*** (0.0242)	0.163*** (0.0241)	0.158*** (0.0242)
Fund Age	−0.0956*** (0.0293)	−0.0817*** (0.0296)	−0.0607** (0.0302)	−0.0565* (0.0303)
Agg Growth	0.114 (0.112)	0.117 (0.112)	0.153 (0.112)	0.149 (0.112)
Growth	0.0752 (0.0545)	0.0681 (0.0550)	0.0707 (0.0553)	0.0666 (0.0555)
Small Cap	0.110 (0.0753)	0.0895 (0.0762)	0.0796 (0.0765)	0.0701 (0.0769)
Year	0.133*** (0.0185)	0.136*** (0.0185)	0.132*** (0.0183)	0.134*** (0.0184)
Year-Fixed Effects	Yes	Yes	Yes	Yes
Observations	2,324	2,324	2,324	2,324

Note: Robust standard errors in parentheses.

*$p < 0.1$, **$p < 0.05$, ***$p < 0.01$.

This table presents ordered probit results of estimating Equation (1) with *Manager Incent Rate* as the dependent variable. All variables are defined as in the Table 1 heading, except *Family Assets*, *Fund Assets*, *Fund Age*, and *Mgr Tenure*, which are the log transformed value of family assets, fund net assets, fund age, and fund manager tenure. Year-fixed effects are included and standard errors are robust to heteroscedasticity. Asterisks represent significance at the 10% (*), 5% (**), and 1% (***) level, respectively.

As argued above, corporate culture and board quality may influence managerial incentive quality independently. The results in columns (2–4) of Table 4 provide support for the hypotheses that higher corporate culture ratings lead to higher managerial incentive ratings (Hypothesis 2(b)) and higher board quality ratings lead to higher managerial incentive ratings (Hypothesis 3), independently, and when both are included in the model (column (4)). Funds with higher *Corp Culture Rate* and higher *Board Qual Rate* are more likely to have higher managerial incentive ratings, a sign of strong sponsor and fund level governance. MS funds continue to have lower managerial incentive ratings. The significance of the *MS* variable in Table 4 when compared with the univariate findings in Table 1 highlights the importance of multivariate analysis.

Panel B of Table 5 presents the analysis of how the predicted probability of achieving a certain managerial incentive rating changes across fund type and either, the corporate culture rating or the board quality rating. The results are similar across rating type and echo results in Panel B of Table 3. MS funds with the lowest corporate culture ratings are likelier to have the lowest managerial incentive ratings with a 12.9% probability (compared with Non-MS' 6.9% probability). Additionally, MS funds with the lowest corporate culture ratings are also significantly less likely to have the highest managerial incentive ratings (8.8% vs. 16.2%, respectively). As corporate culture improves, both MS and Non-MS funds are more likely to achieve higher managerial incentive ratings; however, MS funds are more likely to achieve lower scores and less likely to achieve higher scores compared with Non-MS funds. For example, funds having a corporate culture rating of 5, Non-MS funds have a 31% probability of achieving the highest managerial incentive rating, while MS funds only have a 19.5%

Table 5 Manager Incent Rate Predictive Probabilities Man*ager Incent Rate* takes on an integer value between 1 and 5 reflecting the Morningstar

Panel A:

	Manager Incent Rate					
	MS	1	2	3	4	5
	0	0.035	0.119	0.342	0.248	0.256
	1	0.073	0.182	0.384	0.209	0.154
Difference (basis points)		380	630	420	−390	−1020
% Difference	108.57%	52.94%	12.28%	−15.73%	−39.84%	

Panel B:

	Manager Incent Rate							*Manager Incent Rate*					
Corp Culture Rate	*MS*	1	2	3	4	5	*Board Qual Rate*	*MS*	1	2	3	4	5
1	0	0.069	0.175	0.381	0.213	0.162	1	0	0.056	0.159	0.376	0.225	0.184
1	1	0.129	0.24	0.383	0.16	0.088	1	1	0.11	0.225	0.389	0.174	0.103
	Diff. (BPs)	600	650	20	−530	−740		Diff. (BPs)	540	660	130	−510	−810
	% Diff	86.96%	37.14%	0.52%	−24.88%	−45.68%		%Diff	96.43%	41.51%	3.46%	−22.67%	−44.02%
2	0	0.054	0.153	0.37	0.228	0.194	2	0	0.047	0.143	0.366	0.235	0.209
2	1	0.106	0.219	0.388	0.179	0.109	2	1	0.094	0.209	0.39	0.187	0.119
	Diff. (BPs)	520	660	180	−490	−850		Diff. (BPs)	470	660	240	−480	−900
	%Diff	96.30%	43.14%	4.86%	−21.49%	−43.81%		%Diff	100.00%	46.15%	6.56%	−20.43%	−43.06%
3	0	0.042	0.133	0.355	0.241	0.229	3	0	0.039	0.128	0.354	0.244	0.235
3	1	0.085	0.197	0.387	0.197	0.134	3	1	0.081	0.193	0.388	0.2	0.138
	Diff. (BPs)	430	640	320	−440	−950		Diff. (BPs)	420	650	340	−440	−970
	%Diff	102.38%	48.12%	9.01%	−18.26%	−41.48%		%Diff	107.69%	50.78%	9.60%	−18.03%	−41.28%
4	0	0.032	0.113	0.336	0.251	0.268	4	0	0.032	0.114	0.34	0.251	0.263
4	1	0.068	0.175	0.381	0.214	0.162	4	1	0.068	0.177	0.384	0.212	0.158
	Diff. (BPs)	360	620	450	−370	−1060		Diff. (BPs)	360	630	440	−390	−1050
	%Diff	112.50%	54.87%	13.39%	−14.74%	−39.55%	%Diff	N/A	55.26%	12.94%	−15.54%	−39.92%	
5	0	0.025	0.095	0.313	0.257	0.31	5	0	0.027	0.101	0.324	0.256	0.292
5	1	0.054	0.153	0.37	0.229	0.195	5	1	0.058	0.161	0.377	0.224	0.18
	Diff. (BPs)	290	580	570	−280	−1150		Diff. (BPs)	310	600	530	−320	−1120
	%Diff	116.00%	61.05%	18.21%	−10.89%	−37.10%		%Diff	114.81%	59.41%	16.36%	−12.50%	−38.36%

Managerial Incentive rating. *MS* equals zero if the fund is a Non-MS fund and 1 if the fund is an MS fund. The values within the table, unless labelled otherwise, represent percentages in decimal form. Panel A provides predicted probabilities based on fund type alone. Panel B provides predicted probabilities for MS and Non-MS funds conditional on their Morningstar Corporate Culture rating or the Morningstar Board Quality rating.

probability. The board quality results echo the corporate culture findings. In short, governance matters and appears stronger in Non-MS funds, as rated by Morningstar.

The results for the control variables capturing load status, fund objectives, family size, fund age, fund size, and manager tenure are all similar to those in Table 2. In all columns of Table 4, *Instl* is negative and statistically significant, indicating funds having an institutional presence have lower managerial incentive ratings. In all columns, the presence of a 12b-1 fee leads to increased *Manager Incent Rate*. Finally, the inclusion of *Netexpense* to the models adds no explanatory power. Finally, unlike in Table 2, *Year* is positive and significant, indicating that on average managerial incentive ratings are increasing during the sample period.

6. Conclusion

While mutual funds have been widely studied, the bulk of the work has been in the area of performance and cost structure. There has been much less work, theoretical or empirical, examining the MS fund structure introduced widely in 1995. The evidence that does exist is not complimentary of the structure.

The analysis in this article finds further evidence highlighting problems with the MS structure. MS funds have board quality and managerial incentive ratings that would suggest that they, and the companies sponsoring them, tend to align themselves with investor interests less. Specifically, the governance quality appears lower than in Non-MS funds as determined by an independent rating source, Morningstar. While we do not attribute causality to these results, they do identify another unfavorable characteristic associated with the MS structure. The results remain consistent as we account for changes in other governance variables.

The findings in this article suggest that in addition to the risk of being directed toward classes with suboptimal costs, as suggested by O'Neal (1999), advisor-led retail investors are also, simply by investing in MS funds, investing in funds whose governance is subpar compared with Non-MS funds. This is concerning as investors in the advisor-sold distribution channel have been shown to be less financially savvy. In total, evidence is mounting against the MS structure.

Notes

1 We take the Morningstar ratings as given and assume that they are unbiased and useful as tools to evaluate board quality and managerial incentives, that is, this article does not evaluate board or managerial effectiveness directly.
2 Here, the term "costs" encompasses commissions *and* ongoing fund expenses. Often, the term cost is used interchangeably with "ongoing fund expenses" or the "expense ratio."
3 It is important to note that the authors do not mean the fund's investment advisor when referencing "advisor" but rather mean the investor's financial advisor (broker, wealth manager etc.).
4 We recognize that a financial advisor could also fulfill some, or all, of this oversight role, although literature cited above suggests that they may not.

5 In an effort to update the sample used in this article, the authors contacted Morningstar sales and research departments and were advised that Morningstar stopped providing stewardship ratings in approximately 2017. Additionally, Morningstar indicated that historical data was no longer available.
6 See Handy et al. (2018) for how fund expenses and managerial incentives may be related.
7 The results remain consistent when evaluating predicted probabilities holding all other variables at the mean here and in the remainder of the article.
8 We provide the graphical representation for the results in Table 2 only. To conserve space, we do not provide figures for Table 4, although the conclusions mirror those in Figure 1 and are available upon request.

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