DOES 12B-1 PLAN OFFER ECONOMIC VALUE TO SHAREHOLDERS OF MUTUAL FUNDS?

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Abstract

A total of 964 mutual funds were analyzed for the period 1994. An examination of the differential effect that fund size, age, objective, load versus no-load status and the existence of 12b-1 plan have on cross-sectional differences in mutual fund expense ratios extends prior research. Results suggest that the existence of 12b-1 plan increased expenses by about 0.516 to 0.531 percent of net assets and that the plan did not offer economic value to shareholders.

INTRODUCTION

In a $2.2 trillion mutual-fund industry, competitive pressures are growing. Industry assets have soared 60-fold in two decades, but now 7400 funds are fighting for a share of the investment pool. Fund companies prefer to avoid a hard-sell image, but sell they must. The industry's withdrawal-on-demand structure has them striving to pull in new money just to stay even. In 1994, inflows into stock and bond funds, net of outflows, slumped 69% to $75.8 billion from a peak of $243.3 billion in 1993[1]. Much of that falloff was triggered by rising interest rates. Now following the stock and bond markets' disappointing 1994, the fund industry can no longer count on rapid growth; not every company will even survive. It is time mutual fund industry looked at its cost structure and especially at 12b-1 plan which authorizes mutual funds to deduct distribution fee from net assets and pay the money to selling agents.

A mutual fund is an investment company – a company that makes investments on behalf of individuals and institutions who share common financial goals. In today's complex financial market place, mutual funds offer investors a simpler, more convenient, and less time consuming method of investing a portfolio of securities than trading them individually. Through mutual funds, investors can delegate investment decisions to the fund's professional money managers – decisions such as which securities to hold, when to buy, and when to sell. Also, investors in mutual funds can access a broader diversity of securities than they could investing on their own, thereby reducing their risk.

An investment company that stands ready at all times to purchase its own shares at or near their net asset value is termed an open-end investment company (or open-end mutual fund). Most of these companies, commonly known as mutual funds, also continuously offer new shares to the public for a price at or near their net asset values. Hence their capitalization is open, with the number of shares outstanding changing on a daily basis. Some open end companies, known as no-load funds, sell their shares at a price equal to net asset value. Others known as load funds, offer shares through brokers or other selling organizations, which add a percentage load charge to the net asset value. The percentage charged is usually smaller, the greater the amount invested, and by law cannot exceed 8.5% of the amount invested.

A few funds charge a redemption fee (also known as a back-end load or exit fee or contingent deferred sales charge), which may run as high as 6% of the fund's net asset value. Typically, those funds that do charge such a fee will lower the percentage charged the longer the shareholder owns the shares.

In some funds, brokers and other representatives are compensated through a "12b-1" fee (named after a Securities and exchange Commission rule), which is authorized by the fund to pay for marketing and distribution expenses. This 12b-1 fee is charged against fund assets and is not paid directly by the investor. This 12b-1 rule permits funds to deduct as much

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as 1.25% of average net assets per year to cover distribution costs, such as advertising, commissions paid to brokers, and general marketing expenses. A large and growing number of no-load funds are adopting these 12b-1 plans, as are a few low-load funds. One can determine if a fund has a 12b-1 plan only by reading the prospectus or using an investment service that reports charges in substantial detail.

In addition to selling charges (loads or 12b-1 charges), all investment firms charge annual management fees to compensate the professional managers of the fund. Such a fee is typically a percentage of the average net assets of the fund varying from about 0.25 to 1.00 percent. Most of these management fees are on sliding scales that decline with the size of the fund. These management fees are a major factor driving the creation of new funds. More assets under management generate more fees, but the costs of management do not increase at the same rate as the assets managed because there are substantial economies of scale in managing financial assets. Once the research staff and management structure are established, the incremental costs do not rise in line with the assets under management. For example, the cost of managing $1 billion of assets is definitely not twice the cost of managing $500 million.

The argument for 12b-1 plan is that it offers brokers and other representatives compensation to sell the funds. The increase in the size of the fund then produces economies of scale. The argument against 12b-1 is that it enables no-load and low-load funds to become in fact load funds while publicly advertising their no-load and low-load status.

This study examines the impact of 12b-1 plans on mutual fund expense ratios. Since 12b-1 plans are only sales incentives, they would be expected to have no impact on return and risk of the fund. However, if the plan offers economic value to shareholders, its benefits through economies of scale should outweigh its costs and the net effect should be a reduced expense ratio.

DETERMINANTS OF EXPENSE RATIOS

Expense Ratio figure represents the percentage of fund assets paid for operating expenses and management fees, including 12b-1 fees, administrative fees, and all other asset based costs incurred by the fund, except brokerage costs. Fund expenses are reflected in the fund's *NAV* (Net Asset Value). The expense ratio is useful because it shows the actual amount that a fund takes out of its assets each year to cover its expenses. Sales charges are not included in the expense ratio. This expense ratio figure is culled directly from the "per-share and information" sections in fund shareholder reports by Morningstar.

Economies of scale typically result from centralized computer facilities, financial activities, purchasing, marketing and the like. If economies of scale are present, expense ratios will decline as an organization increases in size.

Did some mutual funds reach an output level where economies of scale typically no longer hold and expense ratios begin to rise? Increasing expense ratios at large size mutual funds are often attributed to limitations in the ability of management to coordinate an organization after it reaches a very large size. While the existence of such diseconomies of scale is disputed by some researchers, the evidence indicates that diseconomies may be significant in mutual fund industry. (Growing Pains?)

Another determinant is the age of the fund. A learning curve effect might enable older funds to achieve greater operating efficiency. The objective of the fund may also be an important determinant of expense ratio. For example, an actively traded fund may have a higher expense ratio.

Because future fund performance is so difficult to forecast, many investors of mutual funds consider a fund's cost. Investors want to make sure that they get a low-cost fund. If no-load funds incur higher expense ratios relative to load funds, then investors will prefer load funds.

So, to sum up, it is proposed that size, age, objective, load or no-load status and existence of 12b-1 plan explain the differences in expense ratios of mutual funds.

THE DATA

The data on a total of 964 mutual funds (Sample Size) were collected for the year ending September 30, 1994 from Morning Star Mutual fund database, after deleting those mutual funds with missing data. These include all aggressive growth, growth, growth income, and income mutual funds.

The following are the variables used:

Expense Ratio: (Ratio of expenses to average net assets) These expenses are comprised of the administrative costs of operating the fund, including costs of promotion and compliance, auditors' and legal fees, and the management fee. Brokerage commissions on portfolio transactions are not included in the expense ratio but are deducted before reporting the gross return. Load charges are not included among expenses.

Size: End of year net assets as reported.

Growth: A dummy variable that equals 1 if classified by Morning Star as having a *growth* objective and 0 if not. Growth class includes firms with objectives of growth, growth stability, growth and income, and growth income.

Income: A dummy variable that equals 1 if classified by Morning Star as having an income objective and 0 if not. Firms with their objectives stated as maximum capital gains constitute the omitted class. Income class includes firms with the objectives of income, income growth, income-growth stability, and income stability.

Age: Number of months since formation of the fund.

Load: Load status where 0 = no load and 1 = load. Low load funds are treated as load funds. *A few funds which have back-end loads or redemption fees are committed.*

12b-1:   Status of 12b-1 plan, where 1 = plan in effect and 0 = plan not in effect.

MODEL SPECIFICATION

The six-factor regression models given by equations (1) through (4) which follow Ferris and Chance, are used to explain expense ratios of mutual funds.

Equation 1

$$Expense\ Ratio = \beta_0 + \beta_1.size + \beta_2.growth + \beta_3.income + \beta_4.age + \beta_5.load + \beta_6.12b$$

Equation 2

$$Expense\ Ratio = \beta_0 + \beta_1.size + \beta_2.growth + \beta_3.income + \beta_4.ln(age) + \beta_5.load + \beta_6.12b$$

Equation 3

$$Expense\ Ratio = \beta_0 + \beta_1.ln(size) + \beta_2.growth + \beta_3.income + \beta_4.age + \beta_5.load + \beta_6.12b$$

Equation 4

$$Expense\ Ratio = \beta_0 + \beta_1.ln(size) + \beta_2.growth + \beta_3.income + \beta_4.ln(age) + \beta_5.load + \beta_6.12b$$

RESULTS

Table 1 presents the results. Regression models 1 and 2 yielded similar results, each explaining about 15 percent of the variability in expense ratios, with most of the proposed variables behaving in expected manner. Results are better with models 3 and 4, with the multiple R-square being close to 23 percent. The *Ln(size)* was significant and negative, suggesting that larger funds are able to capture economies of scale. Growth and income dummy variables were not significant, meaning that the objective classification of the fund did not produce differences in expense ratios. The Age-variable effect was ambiguous. The coefficient was negative and significant at 1 percent level in equation 1 but lost its significance in equation 3. The coefficient of *Ln(Age)* was negative and significant at 7 percent level in equation 2 and positive and significant at zero percent level in equation 4. The load variable was negative and significant in all equations.

12b-1 effect is evident. In equations 3 and 4, the 12b-1 dummy variable was positive and significant. The existence of 12b-1 plan increased expenses by about *0.516 (t=10.81)* and *0.531 (t=11.15)* percent of net assets. The results clearly suggest that the plan is only a dead-weight cost. The 12b-1 plan did not offer economic value to shareholders; in fact, the existence of the plan resulted in increased expense ratio.

CONCLUSIONS

This study examines the empirical relation between 12b-1 plans and the mutual fund expense ratios in a cross-sectional sample of 964 mutual funds. By developing a model of factors influencing expense ratios, the impact of 12b-1 plan was examined simultaneously with other factors such as size, age, objective, load vs no-load status. The main conclusion is that the 12b-1 plan did not offer economic value to shareholders; in fact, the existence of the plan resulted in increased expense ratio.

TABLE 1

Variable	Regressions Of MF Expense Ratios (1994 Data Equation)			
	Model 1	**Model 2**	**Model 3**	**Model 4**
Intercept	1.181	1.273	1.631	1.406
Size	-0.329E-04 (-2.42)	-0.364E-04 (-2.68)	—	—
Ln(size)	—	—	-0.117 (-10.12)	-.1345 (-11.00)
Growth	Variable Not Used Tolerance = 0.0000	Variable Not Used Tolerance = 0.0000	Variable Not Used Tolerance = 0.0000	0.043 (0.47)
Income	-0.127 (-1.32)	-0.121 (-1.25)	-0.055 (-0.6)	Variable Not Used Tolerance =0.000
Age	-0.389E-03 (-2.74)	—	0.126E-03 (0.88)	—
Ln(age)	—	-0.034 (-1.81)	—	0.069 (3.46)
Load	-0.278 (-5.49)	-0.281 (-5.5)	-0.285 (-5.91)	-0.314 (-6.47)
12b-1	0.582 (11.75)	0.575 (11.47)	0.516 (10.81)	0.531 (11.15)
Multiple R-square	0.1521	0.1483	0.2292	0.2382
Observations	964	964	964	964

*t-statistics are in parentheses.
space limits prevent showing beyond the first three digits.

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