

## Can Financial Services Mutual Fund Managers Add Value?

James Philpot

### Abstract

Prior research suggests that mutual fund managers operating in specific sectors may be able to take advantage of “pockets of inefficiency” and thus produce positive abnormal returns. I examine the performance of financial sector mutual funds over the time period 2002-2005, which was a unique market for financial services marked by low interest rates, strong mortgage loan demand and completion of several rounds of bank deregulation. During this time period, financial sector indices outperformed general market indices. Financial fund managers on average produced positive abnormal returns as measured using both a single-and multi-factor returns model. In cross section, these abnormal returns are unrelated to fund size. There is marginal evidence that fund returns are inversely related to portfolio turnover rates and directly related to fund expense ratios.

### Introduction

Most finance scholars hold that mutual fund managers in the aggregate do not enhance investment returns enough to offset the expenses of their management activity. In addition, empirical literature and observation of performance of the average mutual fund versus unmanaged market indices generally suggest that less-active managers produce higher risk-adjusted returns than more-active mutual fund managers. Despite these academic admonitions and evidence, the investing public continues to invest heavily in actively-managed portfolios. Some recent studies provide evidence that active management may improve mutual fund returns when managers are limited to a specific sector. When confined to a particular market sector, managers may develop valuable expertise, and certain sectors may contain “pockets” of inefficiency that can be exploited.

I examine the performance of U.S. financial sector specialty mutual funds over the period 2002-2005 and the ability of their managers to enhance returns and thus shareholder value. During the last two decades of the twentieth century, the United States financial sector, and banking in particular, underwent a deregulation process that brought substantial changes to the industry. During that process, and since the last major deregulation brought by the Financial Modernization (Gramm-Leach-Bliley) Act in 1999, firms in the U.S. financial sector have increased their efficiency and profitability. Consequently since 2000, indices tracking stock-price performance of the financial sector have advanced at a greater rate than those tracking

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stocks in general, and the number of U.S. financial sector specialty mutual funds has increased over 4-fold from 1991 to 2005.

Given the fast growth and high returns in the financial sector, the question arises as to whether mutual fund managers can enhance risk-adjusted returns when limited to a high-return sector. I examine this question; specifically, I measure risk-adjusted returns for the funds using single and multi-factor models, and I model fund risk-adjusted returns as a function of fund characteristics and management activity.

### **Equity and Sector Fund Manager Performance**

Many studies have examined the performance of equity mutual funds. In his pioneering study, Jensen (1968) examines a sample of 115 equity mutual funds over the time period 1945-1964. Jensen finds that when evaluated versus a variant of the Capital Asset Pricing Model, the average fund in his sample earned less than predicted by the model, given the fund's risk. In fact only one of the 115 returned more than the CAPM predicted. Some ensuing studies, most notably Ippolito (1989), report evidence that mutual fund managers generate risk-adjusted returns that are zero or even positive. That is, managers appear to have enough access to private information to justify their fees. Ippolito notes that this condition is consistent with an efficient market where information is costly.

In a more recent important update to the Jensen study, Malkiel (1995) finds that the population of mutual funds in existence from 1971-1991 in aggregate underperformed unmanaged indices both on a gross (before expenses) and a net (after expenses) basis. Malkiel attributes the some of the findings of the interim studies that find positive average abnormal performance to survival bias in those studies' samples. Fortin and Michelson (2002) also examine the performance of actively-managed mutual funds. They find that while most types of equity mutual funds underperform the unmanaged indices over the period 1976-2000, actively managed small company and international sector funds significantly outperform (returns adjusted for taxes, but not for risk) their respective sector indices. Fortin and Michelson make a qualified suggestion that sector fund managers operating in less efficient markets may be able to identify and capitalize on mispricing in those markets.

Khorana and Nelling (1997) compare the performance of sector funds from several different sectors to the performance of equity mutual funds in general and to market and sector indices over the period 1989-1992. They find that sector funds generally perform (after adjusting for risk) as well as equity funds as a whole, and that for some sectors the average sector fund outperforms both market and industry sector indices. Specifically, Khorana and Nelling find that this is the case for their sample of 9 financial sector funds, although they do not report any statistical tests. More recently, Dellva (2001) examines the performance of Fidelity Investments' family of sector funds over the period 1989-1998. Dellva finds that when their performance is compared to the corresponding Dow Jones industry group index, the average fund provides positive risk-adjusted performance. Dellva cites this result as evidence of superior security selection ability on the part of sector mutual fund managers, a result consistent with the conjecture of Fortin and Michelson (2002). In separate tests, Dellva finds evidence of poor market timing ability by sector fund managers. O'Neal and Page (2004) examine the performance of real estate mutual funds over the time period 1996-1998. They use a multi-factor performance evaluation model and find that in the aggregate, real estate mutual funds do not provide positive average abnormal returns. However, when modeling fund abnormal returns as a

function of fund characteristics, O'Neal and Page find that abnormal returns are directly related to trading activity as measured by portfolio turnover.

### **Deregulation and the U.S. Financial Sector**

During the latter part of the twentieth century, at least three major market and environmental changes took place in the U.S. financial services (particularly banking) industry. First, technological development changed financial institutions operations and financial consumers' habits. Second, interest rates increased in volatility. Third, competition in the financial services industry increased, as institutions began to offer non-traditional products or products traditionally offered by other types of financial institutions. These market and environmental changes both motivated and equipped financial institutions to increase the efficiency of their operations.

Recognizing and accommodating the new market environment, Congress passed several acts deregulating the banking industry, and some of these acts also affected financial institutions other than banks. Very briefly, the major acts and their results are:

Depository Institutions Deregulation and Monetary Control Act of 1980 (DIDMCA).

Eliminated restrictions on banks' product offerings and their pricing, as well as reducing operating differences among different types of depository institutions.

Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994 (Riegle-Neal).

Removed federal restrictions on interstate branching by banks and the purchase of out-of-state banks by holding companies.

Financial Modernization Act of 1999 (Gramm-Leach-Bliley). Removed the division of investment and commercial banking activities, allowing financial institutions to offer a full range of financial products and services.

The ultimate desired result of two decades of deregulation is a financial services market environment in which sound financial institutions can achieve economies of scale, offer their customers a complete set of products and services, and compete with each other on a level playing field.

Since the turn of the century, when the latest of the deregulation acts took effect, the financial institutions industry appears to have benefited from the new environment, as measured by returns to the stocks of financial firms. Over the period January 2000-October 2005, the Dow Jones Industrial Average lost 3.08 percent, the Standard and Poor's 500 index lost 17.49 percent, and the NASDAQ Composite Index lost 45.86 percent. However, over the same time period, the NASDAQ Financial 100 gained 76.59 percent. The financial services sector has clearly been a strong-performing sector of the equity market. Given the speculation by Fortin and Michelson (2002) that sector fund managers may have specialized security selection skill within their sectors, and also given the superior performance of the financial services sector since 2000, the research question becomes: Can sector mutual fund managers add value through returns-enhancing management when they are confined to a market sector that is itself a strong performer?

## Data and Method

I examine a sample of financial sector mutual funds in existence over the period September 2002-September 2005. I choose this three-year time period as it was a time during which financial industry indices were high performers as a result of deregulation in the industry. I choose a three-year period because it is long enough to allow modeling of abnormal returns with monthly returns data, yet short enough to limit the amount of survival bias introduced by our sampling. Malkiel (1995) shows that survival bias increases dramatically as the observation period increases. I collected returns data from those supplied by Morningstar via Yahoo! Finance. I include funds with 36 months of returns data, and in the event of multi-share class funds, I use returns data of the largest class. The sampling procedure results in a final sample of 37 mutual funds; Morningstar data indicate 45 such funds (excluding multi-classes) in existence in 2005. Table I lists the sampled funds.

I test for managerial effectiveness by measuring average risk-adjusted returns in the sample over the time period. First I do this with a single-factor model using the Standard and Poor's 500 Index as a market proxy. I also evaluate returns using a multi-factor model (after Elton, Gruber, Das and Hvlaka [1993] and O'Neal and Page [2000]), that includes the S&P 500 Index, the Russell 2000 Index, and the NASDAQ Financial 100 Index. If the sample produces positive average abnormal returns, particularly after evaluation with a multi-factor model, then there is evidence that managers were able to add value in these sector funds.

After computing the funds' abnormal returns, I model the returns using a regression equation after O'Neal and Page (2000). I model a fund's risk-adjusted return as a function of the fund's age, average asset size, average expense ratio, and average portfolio turnover rate over the sample time period. Market efficiency, as well as the results of most prior studies suggests that returns should be inversely related to trading activity as measured by expense ratios and turnover rates. Returns may be positively related to assets, given the likelihood of economies of scale. A fund's return may be related to its age if its management increases its skill through experience. Table II displays descriptive statistics for the sample data.

## Results

I first compute abnormal returns for each fund with a single-factor model. I model the fund's return as:

$$(R_{i,j} - R_{f,j}) = \alpha_i + \beta_i (R_{S\&P500,j} - R_{f,j}), \quad (1)$$

where  $R_{i,j}$  is Fund  $i$ 's return in month  $j$ ,  $R_{f,j}$  is the return to Treasury bills during month  $j$ , and  $R_{S\&P500,j}$  is the return to the S&P 500 during month  $j$ . In the model,  $\alpha_i$  is Fund  $i$ 's risk-adjusted return. For the 37 financial sector mutual funds in the sample, the mean annual alpha is 2.792 percent, and this figure is significant at a level of less than one percent ( $t = 5.455$ ). This result supports the hypothesis that managers of financial sector mutual funds out-performed the S&P 500 during the sample period, and thus added value to their funds.

The use of a multi-factor model may be more appropriate than a single-factor model for evaluating manager performance. Elton, Gruber, Das and Hvlaka (1993) use a multi-factor model that includes a bond index and a small-capitalization stock index, arguing that single-factor models ignore the range of possible investments for fund managers, and thus may be misspecified. Additionally, if managers are limited to a sector that had good relative average performance, it would be expected that managers may have an easy time beating a single, broad index. Similar to O'Neal and Page (2000), I estimate a multi-factor model to estimate an abnormal return for each fund, using three indices: the S&P 500, the Russell 2000 (to include small-capital stocks), and the NASDAQ Financial 100 (to model industry effects). This model of abnormal returns is:

$$(R_{i,j} - R_{f,j}) = \alpha_i + \beta_{1,i} (R_{S\&P500,j} - R_{f,j}) + \beta_{2,i} (R_{Russell,j} - R_{f,j}) + \beta_{3,i} (R_{NF100,j} - R_{f,j}). \quad (2)$$

This specification parallels Equation 1 in modeling Fund *i*'s risk premium in month *j*, except for the two additional factors.<sup>1</sup> For the sampled 37 funds, the average annual risk-adjusted return is 2.477%, and this mean is significant at a level of less than one percent (*t* = 5.09). This result is particularly interesting in that it supports the ability of financial sector mutual fund managers to produce above average returns compared to a broad index, and when compared to a respective industry index. This result also provides support for the Dellva (2001) and Fortin and Michelson (2002) suggestions that mutual fund managers operating in specific sectors may have an information advantage and positive security selection ability.

I also attempt to model the funds' abnormal returns as a function of individual fund characteristics. I estimate the regression equation:

$$\alpha_i = \gamma_0 + \gamma_1 ASSETS_i + \gamma_2 TURNOVER_i + \gamma_3 EXPENSE_i + \gamma_4 AGE_i, \quad (3)$$

where  $\alpha_i$  is Fund *i*'s risk-adjusted return alternatively measured with single- and multi-factor models, ASSETS is Fund *i*'s average assets, TURNOVER is the fund's average portfolio turnover rate, EXPENSE is the fund's average annual expense ratio, and AGE is the fund's age at the beginning of the sample period. If financial sector mutual funds exhibit economies of scale,  $\gamma_1$  will be positive. If mutual fund managers enhance abnormal returns through trading activity,  $\gamma_2$  will be positive; otherwise  $\gamma_2$  will be negative. If mutual fund managers in general are able to increase returns to more than offset fees,  $\gamma_3$  will be positive; otherwise it will be negative. If financial sector mutual fund managers increase their skills through experience, then  $\gamma_4$  will be positive.

Table III displays  $\gamma$  coefficient estimates for the two model estimations alternately using single- and multi-factor model alphas as dependent variable. In analyzing the regression results, I must first note that the regression equations are significant at levels between five and ten percent, thus the estimates may provide only weak evidence. In both regression equations, it appears that scale economies do not increase fund risk adjusted returns. The coefficient estimates for TURNOVER are negative in both equations and significant at a one-tailed

<sup>1</sup> It should be noted that all three of the control indices are unmanaged indices that record capital appreciation only, while the funds being studied produce both capital and income gains. While this may bias performance estimates upward, the use of such indices reflects the industry practice of comparing mutual fund performance to popular unmanaged indices and using such indices to compute betas and alphas. It is a common practice in academic studies; see Delva (2001), O'Neal and Page (2000).

probability level of 0.05 in the single factor alpha equation and 0.07 in the regression equation with multi-factor alpha as dependent variable. This result indicates an inverse relation between fund trading activity and fund returns, consistent with the Dellva (2001) findings of generally poor market timing ability of sector fund managers. In the regression equations, the coefficient estimate for EXPENSE is positive and significant at probability levels of 0.09 and 0.07 for single- and multi-factor alphas, respectively. This result contradicts most prior work and supports the notion that financial sector mutual fund managers provide returns commensurate with their compensation and resources spent on fund management.

Finally, the coefficient estimate for AGE is negative and significant at probability levels of 0.05 for both dependent variables, indicating that younger financial sector mutual funds outperform older funds. While prior studies (See O'Neal and Page [2000].) use fund age to proxy for manager experience, this variable may not be a good proxy. Alternatively, this study's result may support the conventional wisdom in the industry that mutual fund families put their most talented managers on their newest funds, in order to enhance the efforts of marketing of those new funds to the investing public.

### **Conclusion**

I examine the performance of financial sector mutual funds over the period 2002-2005. During this time period, the financial sector performed well, likely due to the completion of two decades of banking deregulation. If mutual fund managers are able to add value by enhancing returns, this was a good time and sector for them to do so; if they could not produce risk-adjusted returns in such an environment, particularly using a single-factor returns model, there would be very strong evidence against the value of mutual fund management.

Using both single- and multi-factor models to adjust for risk, the average financial sector mutual fund provided positive risk-adjusted returns over the sample period. Thus, I am unable to flatly reject the value of active sector mutual fund management. Regression models of fund abnormal returns as a function of individual fund characteristics lend marginal support to the notion that fund managers produce returns commensurate with their fees and expenses, but may not be good market timers.

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Table I  
List of Sampled Financial Sector Mutual Funds

AIM Financial Services  
AXA Enterprise Global Financial Services A  
Burnham Financial Services B  
Constellation TIP Financial Services  
Davis Financial A  
Diamond Hill Bank and Finance A  
FBR Large Cap Finance  
Fidelity Adv. Financial Services  
Fidelity Select Banking  
Fidelity Select Brokerage and Investments  
Fidelity Select Financial Services  
Fidelity Select Home Finance  
Fidelity Select Insurance  
Forward Emerald Banking and Finance  
Gartmore Global Finance A  
Hartford Global Financial Services A  
Huntington Dividend Capture  
Icon Financial  
ING Financial Services A  
Jennison Financial Services B  
John Hancock Financial Industry A  
John Hancock Regional Bank A  
Legg Mason Financial Services  
Merrill Lynch Global Financial Services I  
Morgan Stanley Financial Services B  
Mutual Financial Services A  
ProFunds Ultra Banking Inv.  
ProFunds Ultra Sector Financial  
Rydex Banking Inv.  
Rydex Financial Services Adv.  
Saratoga Financial Services B  
Schwab Financial Services  
Scudder Dreman Financial Services A  
SenBanc  
Smith Barney Financial Services B  
T. Rowe Price Financial Services  
Wells Fargo Advantage Special Financial Services A

Table II  
 Sample Data Descriptive Statistics for Financial Sector Mutual Funds over the Time Period  
 2002-2005. n = 37.

Variable	Mean	Standard Deviation
Annual Total Return	15.87%	44%
Expense Ratio	1.5585%	0.3835%
Portfolio Turnover Rate	231.53%	373.35%
Assets	\$243.14 million	\$373.36 million
Age as of September 2002	9.71 years	7.25 years
Standard and Poor's 500 Mean Annual Return	14.33%	
Russell 2000 Mean Annual Return	21.79%	
NASDAQ Financial 100 Mean Annual Return	12.36%	

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Table III  
Coefficient Estimates from Regression Equation of Financial Sector Mutual Fund Risk-adjusted  
Return on Individual Fund Characteristics, n = 37.

Variable	Parameter Estimate (t-statistic)	
	Model 1 Single-Factor Alpha	Model 2 Multi-Factor Alpha
ASSETS	-0.0000014 (1.21)	0.0000013 (1.22)
TURNOVER	-0.0000015 (-1.76)	-0.00000125 (-1.56)
EXPENSE	0.00163 (1.38)	0.00170 (1.53)
AGE	-0.0000083 (-1.69)	-0.0000092 (-2.00)
Model F-value	2.27 (p = 0.0831)	2.59 (p = 0.0551)
Model Adjusted R <sup>2</sup>	0.123	0.150

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