Merrill Lynch Consults® Program: An Analysis of Performance

Megha Bisarya[1]

Edward Tower, Faculty Advisor

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Abstract

Compared to mutual funds, separately managed accounts are a relatively new product for the financial services industry. They are customized portfolios of stocks or bonds that are monitored by professional investment managers but owned by the individual. This study analyzes the performance of Merrill Lynch's separately managed accounts program, known as the Consults® program. I find that on average, the funds in the Consults® program generated lower returns than their respective style indices during July 2005 to June 2006. The funds also under performed a Vanguard basket of index funds during this same time period. Moreover, I find that there is a significant relationship between the returns for the funds in the Consults® program for the first half of July 2005 to June 2006 with the second half.

I. Introduction

Paul Samuelson once said, "It is not easy to get rich in Las Vegas, at Churchill Downs, or at the local Merrill Lynch office," (BrainyQuote, 2008). As far as Merrill Lynch is concerned, was he right? The research in this paper will attempt to analyze the performance of Merrill Lynch's separately managed accounts program, known as the Consults® program.[2]

Compared to mutual funds, separately managed accounts are a relatively new product for the financial services industry as they only gained foothold in the 1990s (Young, 2005). The new product, which is targeted at wealthier individuals, is one step beyond mutual funds because whereas mutual fund investors must pool, or share, their assets, separately managed accounts allow for individual, and often customized, portfolios of stocks and bonds.[3] Similar to mutual funds, theses portfolios are still managed and monitored by professional money managers, even though they are owned by the individual (Chuck ReCorr, personal communication, February 28, 2008).[4] In 2006, there were approximately 2 million separately managed accounts and that number is expected to approximately sextuple in the near future (Jackson, 2006, para. 2). In addition to the fact that the investor owns the underlying securities, the other key characteristics that have led to the success of separately managed accounts are detailed in the subsequent paragraphs.

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[2] Other than what is in this paper, more information about the program can be found at
http://careers.ml.com/index.asp?id=76716_79985_86658_47761_47763_47800.
[3] In this paper, the word "investor" and "client" will be used interchangeably.
[4] The word "owned" means that the stocks and bonds in the portfolio are the individuals and that if the individual were to terminate management of the portfolio at any time, the assets in the portfolio would still belong to the individual.

First, unlike mutual funds, separately managed accounts allow for customization. All separately managed accounts money managers begin with a "model" portfolio that constitutes their investment strategy, investment style, and the set of assets that they feel will generate the highest return. However, investors are allowed to customize their portfolio if they have strong preferences in terms of certain social agendas or legal issues, such as insider information (LeBlanc, 2005, para. 9). For example, if the investor is strongly opposed to drinking, then he or she may put a restriction on the manager to not invest in alcohol related stocks. Similarly, if the investor works for Company X, the investor can tell the money manager to either include or eliminate Company X stock. The purpose of a professional money manger would be negated if investors were to micro-manage all decisions, so for the most part, investors do not deviate much from the model portfolio. In fact, Chuck ReCorr (personal communication, February 28, 2008), a Merrill Lynch financial advisor, mentioned that less than 5.0% of his clients opt to customize their separately managed accounts portfolio. However, to the extent that the portfolio is customized, the client's returns differ from the returns of the model portfolio. A critique could then be that the fund's return for a given month or year do not truly reflect the returns generated by the money manager because they are influenced by client preferences. However, portfolio customization is only exercised to a limited degree and monthly or annual returns for a fund usually represent a composite monthly or annual return for all individuals who invest in the model portfolio. Thus, I believe the reported monthly returns or annual returns closely represent the returns of the model portfolio.

In addition to customization, tax efficiency is another asset of separately managed accounts. While mutual funds are considered tax inefficient by some, the tax structure of

separately managed accounts is considered efficient for two reasons. First, unlike mutual funds, there are no embedded taxable events (Chuck ReCorr, Personal Communication, February 28, 2008). In other words, investors are not responsible for capital gains generated before they invest in the portfolio. Second, separately managed accounts allow investors to manage or minimize their capital gains tax liability. For example, the client could tell the manager to sell two securities such that the gains would compensate for the losses and the client would not incur any capital gains tax liability (LeBlanc, 2005, para. 6).

So how do investors have access to separately managed accounts and all the benefits theoretically associated with them? Investors can go directly to the money manager or they can participate in separately managed account programs that are offered through financial institutions. Institutions such as Morgan Stanley, Merrill Lynch, Smith Barney, etc. offer about 80% of all separately managed accounts (Jackson, 2006, para. 3). Each of these institutions has access to the same professional money managers, but after evaluation, the institutions ultimately pick the ones that they believe are best suited for their individual programs.

During a summer internship with Merrill Lynch, I spent some time analyzing the performance of the funds in their separately managed accounts program, known as the Consults® program. The data collection and research that I did during my internship helped to motivate this study. In this paper, the word "Consult funds" refers to the funds that are a part of the Consults® program.

In its role as a financial institution, Merrill Lynch essentially acts as a third party contractor between the investor and the money manager. Merrill Lynch selects funds that

they want represented in their program, and then the Merrill Lynch financial advisor provides information about the funds and answers questions for clients. As described in the Merrill Lynch Consults® packet created by Merrill Lynch & Co., Merrill Lynch selects the professional money managers whose funds best match the criteria needed for a Consult fund through a meticulous selection process. Thus, with a $100,000.00 investment minimum, Merrill Lynch offers its clients a separately managed accounts program that is comprised of money managers whose funds represent differing asset classes, investment styles, and risk categories. The various assets (stocks, bonds, etc), sizes (large-, mid-, small-cap), equity investment styles (growth, value, core), and regions (US and international) enable the clients to strategically allocate their assets and diversify their portfolios. In any given year, the investment managers in the program are variable. Investment managers come and go as some are added and others are removed if they do not meet retention standards (Merrill Lynch, Pierce, Fenner & Smith Inc., 2006). Further, it is important to note that Consult funds have expenses associated with them. According to Chuck ReCorr (personal communication, February 28, 2008), clients at Merrill pay 1.5% to 2.5% of assets per year.

To the best of my knowledge, extremely limited research has been done on the performance of separately managed accounts. An article published in *Business Week*, states that two thirds of the audience polled believes that separately managed accounts tend to have better rates of return compared to mutual funds (Young, 2005). Therefore, I was curious to asses the performance of Merrill Lynch's Consults® program. Specifically, I would like to study how well the Consult funds performed with respect to their benchmark indices during the July 2005 to June 2006 time frame. Particularly, how well

do they perform against the benchmarks that Merrill Lynch generally compares them to, and is there perhaps a better set of indices that should be used as a benchmark? Further, during my internship with Merrill Lynch I was asked to recommend certain Consult funds based primarily on past performance. Thus, I wanted to determine if there is significant consistency between the returns for Consult funds for the first half of July 2005 to June 2006 with the second half.

The remainder of this paper is formatted as follows: Section II presents a review of the literature, Section III provides a brief overview of the data, Section IV presents the methodology behind the calculations, Section V discusses the results, and Section VI provides concluding remarks and implications for the investor.

II.   Literature Review

In an attempt to review the literature on this topic, I found the research done on separately managed accounts to be quite limited. While some of the papers and articles discuss the benefits and characteristics of separately managed accounts (Updegrave, 2005; Young, 2005; Savage 2005), none of the papers consider the performance of separately managed accounts. This could be because tracking the performance of separately managed accounts is difficult since composite returns are available but are not generally volunteered (Chuck ReCorr, personal communication, April 14, 2008). However, significant research has been done on the performance of mutual funds. This research would be relevant to consider because separately managed accounts are like mutual funds in that they are also actively managed by an investment manager.

Lattman (2005) published an article discussing the performance of Perkins Opportunity Fund, a mutual fund that is managed by Perkins Capital Management. From January 1, 2005 to September 2005, the fund had returned -13.6%. Further, the study found that over five years, the S&P 500 had done better than the mutual fund by about 4.0% a year. Thus, the article indicates that an investor would have done better investing in the stock market rather than investing in the Perkins Opportunity Fund, a managed fund.

Malkiel (1995) studied the returns on equity mutual funds form 1971-1991. Using the CAPM model to calculate alphas and betas, he found that on average the equity mutual funds underperformed set benchmarks both gross and net of management fees. By examining the alphas, he also found that there was some consistency in fund performance in the 1970s, but this same consistency did not exist in the 1980s. In the 1970s, the "Hot Hand" phenomenon existed. This means that positive alphas led to positive alphas about two-thirds of the time. He also found that during the 1970s, negative alphas in one period were more likely to be followed by negative alphas in the next period. However, the results for the 1980s were different as he was not able to find a significant relationship between the mutual fund returns. Further, Malkiel (1995) showed the importance of survivorship bias, or the idea that mutual fund data sets are biased because they only show the funds that are currently active and do not show the returns of the funds that were unsuccessful. This is where Malkiel (1995) makes a significant contribution to the literature as it is an idea that previous studies had not given enough weight to.

Malkiel's study of the importance of survivorship bias is evident in *On Persistence in Mutual Fund Performance* (Carhart, 1997). In this paper, Carhart controls for survivorship bias and shows that the predictability in mutual fund returns is not due to a successful investment strategy or the manager's stock picking ability. Rather, the persistence in mutual fund returns can be accounted for by expense ratios, transaction costs, and common stock factors (Carhart, 1997, p.79-80). Carhart also found "that expense rations, portfolio turnover, and load fees are significantly and negatively related to performance" (Carhart, 1997, p. 80).

Edward Tower and Wei Zhang (2006) assessed the performance of 51 mutual fund families over an 11 year time frame. They found that families that charge loads and have high turnovers tend to not perform well, even gross of expenses. On the other hand, gross of expenses, mutual fund families that do not charge loads, have low minimum expenses, and have low turnover generally outperform their respective indices.

Kenneth Reinker and Edward Tower (2004) further look at funds managed by Vanguard over a 27 year period to determine if there is reason to invest in managed mutual funds or if indexing might be better. Vanguard was specifically chosen because of the low fees it charges on its managed funds. They conclude that the time frame is what determines whether or not it is better to invest in managed mutual funds or an index; however, when compared to the index fund, the managed mutual funds typically have a lower standard deviation of return.

In addition to the performance of managed funds, it is important to consider how investors choose to allocate their investments among funds, especially since portfolio diversification plays a considerable role in portfolio returns. Sharpe (1992) develops an

asset class factor model that would help investors make informed decisions about how to best allocate their money. The model that Sharpe developed allows investors to select a set investment managers and the exact exposure of each manager in the overall portfolio. From there, the investor is able to evaluate the effectiveness of her overall portfolio by using the asset class factor model to determine if a particular investment manager adds any value to the fund's performance. With the model, investors are also able to compare the performance of their portfolio to a benchmark(s) of asset mixes.

Tower and Yang (2007) extend the asset class factor model developed by Sharpe (1992). They develop a program that would allow an investor to evaluate the performance of a portfolio to the performance of a basket of benchmark indices whose returns closely track the returns of the portfolio. Particularly, they examine how well a DFA portfolio has done compared to a basket comprised of Vanguard index funds. Their main result is that during 1999-2006, the DFA portfolio outperformed the style-mimicking Vanguard basket by 2.4% per year, before advisor fees. They also expect that the results will carry over to a longer time period as the results are significant. However, if the returns to different styles alter dramatically, the overall DFA portfolio may not out-perform the Vanguard portfolio.

.   Finally, it is interesting to review what some of the prominent entrepreneurs in the field of finance have said about the performance of managed funds. John Bogle, founder and retired CEO of The Vangaurd Group, says in his speech to the American Association of Individual Investors Philadelphia Chapter, "…beating the stock and bond markets is a zero-sum game before intermediation costs, and a loser's game thereafter," (Bogle, 2005,

para. 12). Thus, he believes that investors as a whole always lose to the stock market at least by the amount of intermediation costs they pay.

This paper will add to the literature by addressing some of the same issues and using some of the same technologies discussed in the abovementioned papers. Specifically, the paper will analyze the performance of Merrill Lynch's separately managed accounts program, known as the Consults® Program.

III.   Data

For the purpose of this study, the monthly returns for each of the 43 funds were obtained from Merrill Lynch. The data represents 43 funds, in 11 different style categories, that were in the Consults® program as of July 2006. The 11 style categories include: Small Cap Value, Small Cap Growth, Small Cap Core, Mid Cap Value, Mid Cap Growth, Mid Cap Core, International Value, International Growth, International Core, Large Cap Value, and Large Cap Growth. All 43 funds represent equity funds, which means that since inception, the fund has kept at least 90.0% of total assets invested in stocks and the rest of the assets invested in cash and cash equivalents (Chuck ReCorr, personal communication, February 28, 2008). Merrill Lynch directly contacted each of the managers to get monthly, gross returns for the period of July 2005 to June 2006. The managers reported the returns as composite returns. This means that the monthly return for Fund X is an average of the returns for all individuals who invest in Fund X. The Renissance Small Cap Growth fund and the Franklin Mid Cap Growth fund did not report monthly returns and only provided quarterly performance data for the period of July 2005

to June 2006.[5] Also, the Columbus Large Cap Growth Fund and the Janus Large Cap Growth Fund only had monthly returns available from April 2006, as the fund had just opened in April. I have included these funds in my analysis and have properly adjusted my calculations for the funds to reflect the shorter time period. Table 1 provides the summary statistics for this data.

For each of the 9 style indices, the monthly returns were taken from the Morningstar Principia Pro Disk. The 9 style indices are comprised of the Russell style indices and Morgan Stanley's EAFE index. These indices represent the indices that Merrill Lynch generally benchmarks the Consult funds against (Chuck ReCorr, personal communication, February 28, 2008).[6] Please see Table 2 for a breakdown of how each of the 9 style indices was matched up with a fund category.

The monthly returns for July 2005 to June 2006 for the Vanguard Index funds were also taken from the Morningstar Principia Pro Disk. The Vanguard Index funds are used to find a basket of indexes that most closely tracks the returns of the Consult fund. All Vanguard Index funds are equity funds that represent a certain investment style. The 18 Vanguard Index funds include: 500 Index, Growth Index, Total Stock Market Index, Value Index, Mid Cap Growth Index, Mid Capitalization Index, Small Cap Growth Index, Small Cap Index, Small Cap Value Index, Emerging Markets Index, European Index, Pacific Index, Total International Stock Index, International Explorer, International Growth, International Value, Developed Market Index, and Large Cap Index. It is important to note the Mid Cap Growth, International Explorer, International

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[5] I interpolated the quarterly returns to generate monthly returns. I did this by dividing each of the quarterly returns by 3.
[6] Throughout this paper, the notation "Russell/EAFE" refers to the indices that Merrill Lynch generally uses as a benchmark.

Growth, and International Value are not actual index funds. They are similar to managed funds. However, similar to Tower and Yang (2007), I decided to still incorporate these funds because I wanted the particular style categories in my analysis and Vanguard does not have index funds in these categories. Thus, like Tower and Yang (2007), I will treat these managed funds as Vanguard Index funds. The Vanguard Index funds all have "…low turnover, low cost, and constant style," (Tower and Yang, 2007, p. 3). The summary statistics for the monthly returns of all 18 Vanguard Index funds are shown in Table 3.

IV.   Methodology

I employ a number of different strategies to analyze the performance of the Consult funds. First, using the monthly returns for the 43 funds, I calculate the annualized return and standard deviation for each of the funds and style indices. Annualized returns are the returns per year for a fund and are calculated based on the following equation:

Annualized return = $(((1 + R_1) * (1 + R_2) * …..(1 + Rn))^{12/n}) - 1,$ (1)

where n is the number of months, R_1 is the return in the first month, R_2 is the return in the second month, and Rn is the return in the nth month.

I subtract the annualized return for the style index from the average annualized return for all funds in the respective style index's category. I perform a similar calculation using standard deviations. The result is the amount by which the fund outperformed or underperformed the style index independent of risk, and the amount by which the fund's returns varied when compared to the style index (Table 4).

In addition to calculating annualized performance, I compute risk adjusted

performance of the funds and volatility of the funds relative to the stock market. To do

this, I regress the monthly net return of the fund on the monthly net return of the style

index to calculate alpha and beta for each of the portfolios for July 2005 to June 2006

(Table 4). The formula is given by:

$$[R_{fund} - R_{risk\ free\ asset}] = B\ [R_{style\ index} - R_{risk\ free\ asset}] + alpha, \qquad (2)$$

where R denotes return in percentage points and B denotes beta. Alpha is a measure of

risk adjusted performance. The higher the alpha, the better the fund has performed

(Bloomberg.com, 2008). Beta is defined as the risk level of the fund as compared to the

market. If Beta is greater than 1, then the fund takes on more risk than the market, and if

Beta is less than 1 then the fund takes on less risk than the market (Bloomberg.com,

2008). It is important to note that the calculations were done using the return of the style

indices rather than the return of the overall market (S&P 500) because Consult funds are

specifically style allocated. Also, the return of the risk free asset is the return of the 10

year treasury in July 2006.

Chuck ReCorr mentioned that sometimes investment managers believe that their

style benchmark is different from the style benchmark that Merrill Lynch boxes them

into. Thus, some managers would like to have their performance benchmarked against an

index that is different from the one used by Merrill Lynch. Since it would be near

impossible to test every possible index to see if the index return closely matches the

returns of a particular Consult fund, I try and find a group of indices whose returns

closely match the returns of a Consult fund. This group of indices is referred to as the

basket index (Sharpe, 1992). To construct the most optimal basket index, I use 18

Vanguard Index funds. The Vanguard Index funds were chosen because they have expenses embedded in their returns. Since the Consult funds also have expenses associated with them, I thought it would be interesting to compare the Consult funds to a benchmark that has costs netted out, but one that has fairly low costs so that it is a reasonable alternative choice for investors. The Russell and EAFE style indices used in the previous calculations are indices (not index funds), and thus do not have any expenses associated with investing in them. To construct the basket index, I use a methodology first developed by Sharpe (1992). Below is a discussion of the methodology behind the basket index calculation. It has been slightly modified from the discussion presented in Tower and Yang (2007).

"We describe the monthly real return of the [Consult fund] as the real monthly return of a comparison basket of Vanguard index funds plus a constant term. The constant term reflects what is special about [Consult funds] relative to the Vanguard funds. If the term is positive it might reflect lower published expenses, lower brokerage costs, inexpensive block trades, the return from lending securities, better stock picking, or better screens used in selecting stocks for [Consult funds]. We want to select the Vanguard basket that as nearly as possible is made up of the same type of securities as in the [Consult fund] portfolio. Since we don't observe the securities, we pick the basket which generates a set of returns which, apart from the constant term, most closely follows the [Consult fund] returns. More precisely, we select the weights on the Vanguard index funds and the constant term which minimizes the variance of the difference in returns of the [Consult fund] portfolio and the Vanguard mimicking index augmented by the constant term." (Tower and Yang, 2007, p. 5).

To perform the calculations, I use the program developed by Tower and Yang (2007) in Microsoft Excel Solver. "We [use] program solver to select the weights on the returns of the Vanguard funds and the constant term which minimize the variance of the return differential between the [Consult fund] portfolio and the Vanguard basket augmented by the constant term such that no weight is negative (signifying that no Vanguard fund is sold short) and the weights add up to one (signifying that the various Vanguard funds in the Vanguard portfolio comprise the entire portfolio so their proportions in the portfolio sum to one)" (Tower and Yang, 2007, p. 6).

The constant term generated is the arithmetic alpha for the Consult fund. The arithmetic alpha is the intercept of the regression in formula 2 and is the amount by which the return of the Consult fund exceeds the return of the tracking index from July 2005 to June 2006 (Rodriguez and Tower, 2007, p. 6). After I find the appropriately weighted Vanguard basket index, I can also calculate the geometric alpha for the Consult fund from continuously compounded returns. Although Table 7 only presents the arithmetic alphas, my calculations find the arithmetic and geometric alphas to be similar.

Since the returns for the Vanguard Index funds had already been adjusted to real returns in the Microsoft Excel Solver program that I used, I also convert the monthly returns for each of the 43 Consult funds to real returns. The formula used to convert nominal returns to real returns is:

$$1 + R = [1 + N]/[1 + I],$$

Where R is the real rate of return, N is the nominal rate of return, and I is the inflation rate as given by the Consumer Price Index. The results of the basket index calculation are shown in Table 7. Note that real returns are used only in the basket index calculations. In

all other sections of the paper, calculations are done using nominal returns. By using real

returns and the basket index methodology, I believe that I have improved the

conventional alpha calculations in two ways.

Finally, to determine if there is significant consistency between the returns of the

funds for Period 1 (July 2005 to December 2005) and Period 2 (January 2006 to June

2006), I calculate Period 1 and Period 2 alphas using formula 2. The Period 1 and Period

2 alphas are shown in Table 6. I then look at the correlation of the Period 1 and Period 2

alphas to determine if there was any consistency in the returns over the entire period.

V.   Results

Table 4, The Table Consult funds and Russell/EAFE Index Return Over 1 Year

and the Standard Deviation of the Returns, shows the annualized return and the standard

deviation of the returns for each of the Consult funds from July 2005 to June 2006. Out of

the 11 style categories, only 3 had a higher average annualized return than their

respective indices, while 8 had lower returns. After taking an average across all style

categories, the Consult funds had a return of 12.683% but that return was 1.370% less

than the average style index return during the same period. This difference is not

statistically significant. Using Microsoft Excel's t test the t statistic is -0.787, and luck

could account for the underperformance of the Consult fund with 21.69% probability.

Given the short time frame and the fact that the number of observations is small (n = 43),

I would not expect the difference to be statistically significant. It should be noted that the

-1.370% differential might be explained by cash drag, high transactions costs, or high

turnover rates for the Consult funds. Also, given that Merrill Lynch clients pay about

2.0% of assets in fees, the return on the Consult fund must be at least 2.0% greater than the return on any alternate investment. Further, even though the results are not statistically significant, to the extent that they are economically significant, the finding is consistent with the efficient market hypothesis. The efficient market hypothesis states that it is not possible to consistently outperform the financial market because markets already have the important information built into the price of assets (Bloomberg.com, 2008).

In addition to the actual returns, it is also important to analyze the standard deviation of those returns. Financial risk can be defined as the standard deviation, or variance, of the returns. A higher standard deviation indicates more variance in the returns, and thus, a riskier asset (Reuters, 2006). The standard deviation of the monthly returns for each of the Consult funds can also be found in Table 4. Eight out of the 11 style categories had a higher standard deviation of return when compared to their style index. It should be noted that of those 8, 5 had returns that were lower than that of their style index. This means that on average, more than half of the style categories that took more risk than the respective benchmark index also produced returns that were lower than that of the respective benchmark index. After taking an average standard deviation of return across all Consult funds and indices, the Consult funds had a standard deviation of 2.870 but that was 0.225 higher than the average style index. Using Microsoft Excel's t test, the probability that the Consult fund's higher standard deviation could be explained by luck is 17.85%, with a t statistic of 0.926.

Table 5 displays the alphas and betas for July 2005 to June 2006 using the Russell/EAFE index as a benchmark. Although both the mean and median alphas are

presented, I will focus on the mean value just as I did in the previous calculation. Therefore, when taking risk into account, Consult funds still under-perform the market during this year; however, this time they only underperformed by about -0.918% as compared to the -1.370% underperformance seen in the annualized rates calculation (both numbers reflect performance before adjusting for taxes).[7] Once again, this -0.918% alpha is consistent with what the efficient market hypothesis proposes, and it could be explained by cash drag, high transactions costs, or high turnover rates for the Consult funds. Also, it is worth pointing out that the -1.370% differential computed in the annualized rates calculation is fairly close to the -0.918% risk adjusted alpha. This is due to the fact that the average beta in Table 5 is close to 1 (beta = 0.957).

I thought it would be interesting to consider whether or not there is a better set of indices that should be used as a benchmark for the Consult funds. Table 7 compares the arithmetic alphas previously found using the Russell/EAFE index (Table 5) to the arithmetic alphas found using the Vanguard basket index calculation. First, it is important to point out that from the basket index calculation, both the mean and median alpha are negative for the period July 2005 to June 2006. Thus, on average, the Consult fund is not superior to the Vanguard basket index even though costs have been netted out from the Vanguard indices. This underperformance might reflect poor stock picking on average for the Consult fund or higher expenses for the Consult fund. Specifically, the annual mean alpha for the Vanguard basket index is -1.510%, but this value only accounts for the expenses associated with Vanguard's Investor share class (i.e. a class of funds that have a

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[7] Throughout this paper, taxes are ignored. Therefore, this analysis applies to Consult funds held in a tax sheltered account. According to Chuck ReCorr (personal communication, February 28, 2008), about 33.3% - 50.0% of the Consult fund accounts are held in tax deferred accounts. The introduction explains the theoretical tax advantages associated with separately managed accounts.

low investment minimum). Since the Consult funds have a $100,000.00 investment minimum, the relevant comparison would be with Vanguard's Admiral™ share class, which also requires a $100,000.00 investment minimum (Vanguard, 1995-2008, bullets 1 and 2). From the Morningstar Principia Pro Disk's presentation of expense ratios of Vanguard index funds, I found that the Admiral™ share class had an expense ratio that was about 0.10% less than the Investor share class expense ratio. Therefore, if we consider the expenses for the Vanguard Admiral™ Share class, the annual mean alpha value for the Consult fund relative to the basket index decreases from -1.510% to -1.610%. This means that the Vanguard indices seem to be a reasonable alternative for investors given that they have low costs associated with them, and on average, they performed better than the Consult fund by about 1.610% from July 2005 to June 2006.

Further, as seen in the Table 7, the annual mean alpha for the Consult fund relative to the Russell/EAFE index is -3.182.[8] Thus, compared to the -1.510% basket index alpha, for July 2005 to June 2006, the Russell/EAFE index generates a return for the Consult fund that is about 1.6 72% less than the return from the Vanguard basket index. This indicates that perhaps there is a better set of indices that could be used as a benchmark for the Consult funds. The 1.672% differential between the Russell/EAFE index alpha and the Vanguard basket index alpha is not statistically significant. Using Microsoft Excel's t test the t statistic is -0.85, and randomness could have accounted for the higher basket index alpha with 19.78% probability.

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[8] The mean and median alphas presented in Table 7 for the Russell/EAFE index are different from the mean and median alpha presented in Table 4. This is because the two funds that opened in April were not included in the basket index calculation, and thus their values were also removed from the left hand column of Table 7.

However, the result is still what we would expect to see. The higher mean alpha generated from the basket index calculation can partly be attributed to the fact that the expenses (although minimal) lower the returns for the Vanguard indices, and thus the Vanguard basket index generates a higher mean alpha for the Consult fund than the Russell/EAFE index. The higher mean alpha generated from the basket index calculation might also indicate that Merrill Lynch is not biased when picking the Russell/EAFE indices as a benchmark. Also, the lower variance of 25.758 in the alpha values for the Vanguard basket index is to be expected given that the basket index benchmark closely tracks the returns of the Consult funds; whereas other than being style indices, the Russell/EAFE benchmarks do not have a specific relation to the returns of any particular Consult fund.

So are Merrill Lynch's expenses justified? Although the average all-inclusive 2.0% fee that covers commissions, manager fees, analytic services, custodial fees, etc. may seem like a good bargain, the expense ends up removing a large, unnecessary chunk from already meager returns (Chuck ReCorr, personal communication, February 28, 2008). As we have seen for the period July 2005 to June 2006, the Consult funds under perform the style indices by about -1.370% in terms of annualized rates. In terms of an annual risk adjusted return with the Russell/EAFE index as a benchmark, the Consult funds under perform by -3.182%, and when using a basket index and real returns as a comparison, the Consult funds still lose on average by about -1.510%.[9] If we were to add the 2.0% fee, the annual underperformance would be reported as -3.370%, -5.182%, and -3.510%, respectively. Jeremy Siegal (2008) found that from 1990 to 2006, the average annual return on diversified portfolio of stocks was about 6.5% in the United States (p.

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[9] The -3.182% mean alpha for the Russell/EAFE index is the value from Table 7.

19). The comparison of the annual returns for the Consult funds and the 6.5% average annual stock return reported by Siegal shows that the Consult fund managers are not adding any value, and the 2.0% fees only exacerbate the Consult fund's lower returns and the underperformance. This result supports what some of the previous literature has said regarding managed funds and the impact of expenses (Carhart, 1997; Bogle, 2005).

Further it is of interest to study whether or not the returns from one period predict the results for the next period. For the July 2005 to June 2006 period of interest, Table 6 displays the alphas for the first period (July 2005 to December 2005) and second period (January 2006 to June 2006).[10] Theses results are graphed in Graph 1, Period 1 vs. Period 2 Alpha. The R-squared value is 0.176, which indicates that 17.6% of the variance in the alphas for period 2 is explained by period 1 alphas. From the R-squared value, I calculate a correlation of 0.420, which indicates that the Period 1 and Period 2 alphas show an economically strong relationship. Further, the slope for the line of best fit is 0.41 and it is statistically significant at a 1% level.[11] This indicates that a 1% increase in the alpha for one period would lead to a 0.41% increase in the alpha for the next period. Since the correlation is economically significant and the 0.41 point estimate is statistically significant, investors could bet on a high alpha in the subsequent period.

VI.   Conclusion

The results indicate that from July 2005 to June 2006, the Consult funds under perform the style indices by about -1.370% in terms of annualized rates. If risk is taken into account and the Russell/EAFE index is used as a benchmark, on average, the Consult

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[10] The two funds that opened in April were not included in the Period 1 Period 2 calculations (Table 6 and Graph 1).
[11] The t-value is 2.890, which yields a p value of 0.006258.

funds under perform their respective style indices by -0.918%. As seen in Table 7, if the

two funds that opened in April 2006 are removed, the risk adjusted alpha relative to the

Russell/EAFE benchmark decreases to -3.182%. However, when using a Vanguard

basket index fund benchmark and performing the analysis using real returns, the Consult

funds still lose on average by -1.510%. The basket index and real returns methodology

adds two improvements to the conventional alpha calculation and thus may be a

reasonable alternative for evaluating the performance of managed funds. The

underperformance is increased when Merrill Lynch's 2.0% fee is taken into account. The

above numbers become -3.370%, -2.918%, -5.182%, and -3.510%, respectively. Since

tax advantages are one of the main benefits of separately manages accounts, it would be

interesting to explore if each investor's unique tax situation compensates for Consult

funds' underperformance.

The results also indicate that for July 2005 to June 2006 there is an economically

and statistically significant relationship between Period 1 and Period 2 returns.

Specifically, a 1% increase in the alpha for one period leads to a 0.41% increase in the

alpha for the next period. Additionally, the correlation between the Period 1 and Period 2

returns is 0.420 and the R-squared is 0.176.

The evidence presented in this paper has three main implications for investors: (1)

Be cautious when investing in Consult funds, or other separately managed accounts

because the active management and high investment minimums may not necessarily

generate the most profitable return and a well diversified portfolio; (2) Managed funds

tend to have a lower rate of return than the market by at least the amount paid in fees; and

(3) Investors in Merrill Lynch's Consult funds can predict fund returns for the subsequent

period with a fair amount of confidence. However, it might be better for investors to

diversify their portfolio rather than invest in one Consult fund with a particular style. This

would minimize the risk of losing a large value of assets with one wrong bet.

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Table 1:		Consult Fund Monthly Returns				
		Summary Statistics				
Fund	**Observations**	**Mean**	**Standard Deviation**	**Minimum**	**Median**	**Maximum**
Small Cap Value						
TCW	12	0.995	4.433	(6.29)	(0.110)	10.24
First Quadrant	12	0.902	4.137	(5.31)	0.275	7.58
Small Cap Growth						
Eagle	12	0.669	3.578	(4.47)	0.540	6.84
Gartmore	12	1.499	4.871	(6.81)	1.115	10.22
Renissance	4	1.453	6.491	(2.70)	(1.275)	11.06
Small Cap Core						
Earnest	12	0.285	3.954	(6.06)	(0.090)	7.69
Symphony	12	1.905	4.272	(5.92)	1.300	7.87
Mid Cap Value						
NFJ/Allianz	12	0.953	2.628	(3.98)	1.205	4.46
Perkins/Janus	12	0.984	2.473	(2.67)	0.615	5.00
Md Cap Growth						
Gartmore	12	0.997	3.665	(5.88)	0.135	6.43
TCW	12	2.022	4.394	(6.25)	1.335	10.66
Franklin Portfolio	4	3.218	5.472	(4.33)	4.650	7.90
Mid Cap Core						
AIM MCC	12	0.777	3.114	(4.33)	0.770	5.36
International Value						
INVESCO	12	1.923	2.906	(3.25)	2.450	5.42
Lazard	12	1.663	2.739	(3.68)	2.475	5.00
Alliance Bernstein	12	2.703	4.053	(4.69)	4.190	8.92
International Growth						
MFS	12	2.424	3.224	(3.82)	3.440	7.39
William Blair	12	2.028	4.074	(5.90)	3.115	8.30
AIM Intl	12	2.075	3.448	(3.86)	3.330	6.67
International Core						
JPMorgan	12	2.008	2.856	(3.32)	2.670	6.26
Brandywine	12	1.924	3.385	(4.61)	2.355	7.09
Large Cap Value						
TCW	12	1.003	1.938	(2.41)	0.705	4.08
Eaton Vance	12	1.195	2.066	(2.29)	1.070	4.28
Goldman Sachs	12	0.923	1.933	(2.30)	1.105	3.26
Davis Advisors	12	0.972	1.605	(2.32)	1.100	3.46
TSW-Eq. & Res	12	1.210	3.072	(3.75)	1.225	5.87
MFS	12	1.523	1.313	(0.99)	1.270	3.22
TSW-bal	12	0.773	1.985	(2.55)	0.940	3.79
Neuberger	12	0.894	2.304	(3.41)	0.715	4.24
AIM	12	0.629	2.411	(3.48)	0.860	3.94
Harris	12	0.457	1.752	(1.28)	0.110	3.96
OFI Gulf	12	0.655	2.094	(2.80)	0.080	3.50
OFI	12	0.677	2.092	(3.14)	0.970	3.16
Dreman	12	0.808	1.865	(2.60)	0.715	3.57
Large Cap Growth						
Janus	3	(1.183)	2.843	(4.45)	0.170	0.73
Marsico	12	0.555	2.227	(4.03)	0.205	4.27
Loomis Sayles	12	0.193	3.626	(7.96)	(0.310)	5.23
Munder	12	0.505	2.085	(3.52)	0.375	3.95
Columbus	3	(1.060)	3.197	(4.74)	0.530	1.03
Neubreger	12	0.811	2.893	(3.78)	0.310	6.66
William Blair	12	0.517	2.216	(4.62)	0.430	3.61
Lighthouse	12	0.447	2.447	(5.53)	0.945	3.34
Gartmore	12	0.719	2.771	(5.14)	0.450	5.11

Table 2:

Breakdown of Consult Fund Data

Fund Category (Index Fund)	Number of Consult funds	Fund Category (Index Fund)	Number of Consult funds
Small Cap Growth (Russell 2000 Growth)	3	International Growth (EAFE)	3
Small Cap Value (Russell 2000 Value)	2	International Value (EAFE)	3
Small Cap Core (Russell 2000)	2	International Core (EAFE)	2
Mid Cap Growth (Russell Midcap Growth)	3	Large Cap Growth (Russell 1000 Growth)	9
Mid Cap Value (Russell Midcap Value)	2	Large Cap Value (Russell 1000 Value)	13
Mid Cap Core (Russell Midcap)	1		

Table 3:

Vanguard Index Fund Summary Statistics

Observations	Mean Real Monthly Return (%)	Standard Deviation
216	1.1586	0.03495

Table 4:

Consults funds and Russell/EAFE Index Return Over 1 Year and the Standard Deviation of the Returns

	Return Over One Year (%)	SD of Return
Small Cap Growth		
Russell 2000 Growth Index	14.574	4.522
Eagle	7.583	3.426
Gartmore	18.042	4.664
Renissance	5.313	5.622
Consult Average	10.313	4.571
Consult Average-Index Return	-4.261	0.049
Small Cap Value		
Russell 2000 Value Index	14.600	3.585
First Quadrant	10.351	3.961
TCW	11.439	4.244
Consult Average	10.895	4.103
Consult Average-Index Return	-3.705	0.518
Small Cap Core		
Russell 2000 Index	14.551	4.035
Earnest	2.596	3.786
Symphony	24.202	4.090
Consult Average	13.399	3.938
Consult Average-Index Return	-1.152	-0.097
Mid Cap Growth		
Russell Midcap Growth Index	13.02	3.279
Gartmore	11.822	3.509
TCW	25.863	4.207
Franklin Portfolio	13.016	4.739
Consult Average	16.900	4.152
Consult Average-Index Return	3.88	0.873
Mid Cap Value		
Russell Midcap Value Index	14.267	2.279
NFJ	11.628	2.516
Perkins/Janus	12.101	2.368
Consult Average	11.864	2.442
Consult Average-Index Return	-2.403	0.163
Mid Cap Core		
Russell Midcap Index	13.666	2.730
AIM MCC	9.155	2.981
Consult Average	9.155	2.981
Consult Average-Index Return	-4.511	0.251

International Growth

EAFE Index	26.574	3.013
MFS	32.566	3.087
William Blair	26.106	3.900
AIM	27.135	3.301
Consult Average	28.602	3.429
Consult Average-Index Return	2.028	0.416

International Value

EAFE Index	26.574	3.013
INVESCO	25.106	2.782
Lazard	21.400	2.623
AllianceBernstein	36.517	3.880
Consult Average	27.675	3.095
Consult Average-Index Return	1.101	0.082

International Core

EAFE Index	26.574	3.013
JPMorgan	26.384	2.735
Brandywine	24.929	3.241
Consult Average	25.657	2.988
Consult Average-Index Return	-0.917	-0.025

Large Cap Growth

Russell 1000 Growth Index	6.123	2.212
Janus	-13.601	2.321
Marsico	6.578	2.133
Loomis Sayles	1.589	3.471
Munder	5.980	1.997
Columbus	-12.375	2.610
Neubreger	9.681	2.770
William Blair	5.944	2.122
Lighthouse	5.144	2.343
Gartmore	8.524	2.653
Consult Average	1.940	2.491
Consult Average-Index Return	-4.183	0.279

Large Cap Value

Russell 1000 Value Index	12.076	1.982
TCW	12.499	1.856
Eaton Vance	15.056	1.978
Goldman Sachs	11.434	1.851
Davis Advisors	12.147	1.537
TSW-Eq. & Res	14.942	2.941
MFS	19.256	1.257
TSW-bal	9.451	1.901
Neuberger	10.953	2.206
AIM	7.476	2.308
Harris	5.444	1.678

OFI Gulf	7.892	2.005
OFI	8.170	2.003
Dreman	9.924	1.786
Consult Average	11.127	1.947
Consult Average-Index Return	-0.949	-0.035
Overall (Across All Categories)		
Consult Average	12.683	2.870
Index Average	14.139	2.691
Consult Average-Index Average	-1.370	0.225

Table 5:

Consult funds Annual Alpha and Beta (July 2005 to June 2006)

	12 month Alpha (%)	12 month Beta
Small Cap Growth		
Style Index: Russell 2000 Growth		
Eagle	-16.908	0.722
Gartmore	2.988	0.997
Renissance	-41.076	0.185
Small Cap Value		
Style Index: Russell 2000 Value		
First Quadrant	-2.520	1.123
TCW	-0.828	1.275
Small Cap Core		
Style Index: Russell 2000		
Earnest	-16.080	0.865
Symphony	6.264	0.935
Mid Cap Growth		
Style Index: Russell Midcap Growth		
Gartmore	1.128	1.055
TCW	16.440	1.135
Franklin Portfolio	-29.364	0.230
Mid Cap Value		
Style Index: Russell Midcap Value		
NFJ	-0.888	1.038
Perkins/Janus	-1.920	0.999
Mid Cap Core		
Style Index: Russell Midcap		
AIM MCC	-3.300	1.004
International Growth		
Style Index: EAFE		
MFS	5.028	1.011
William Blair	6.792	1.255
AIM	2.256	1.064
International Value		
Style Index: EAFE		
INVESCO	-3.588	0.913
Lazard	-8.604	0.841
AllianceBernstein	15.156	1.265

International Core
Style Index: EAFE

JPMorgan	-2.892	0.901
Brandywine	0.252	1.057

Large Cap Growth
Style Index: Russell 1000 Growth

Janus	38.136	1.550
Marsico	-3.420	0.914
Loomis Sayles	14.468	1.411
Munder	-6.298	0.872
Columbus	52.860	1.748
Neubreger	9.804	1.141
William Blair	-5.184	0.885
Lighthouse	-5.088	0.906
Gartmore	7.548	1.115

Large Cap Value
Style Index: Russell 1000 Value

TCW	-3.300	0.907
Eaton Vance	1.464	0.970
Goldman Sachs	-3.984	0.914
Davis Advisors	-12.696	0.679
TSW-Eq. & Res	15.324	1.317
MFS	-15.360	0.442
TSW-bal	-7.188	0.874
Neuberger	1.848	1.072
AIM	-1.740	1.061
Harris	-20.856	0.628
OFI Gulf	-5.376	0.961
OFI	-6.996	0.913
Dreman	-11.784	0.751
Mean Value	-0.918	0.974
Median Value	-2.520	0.970

Table 6:

**Consults Period 1 Alpha (July 2005 to December 2005) and Period 2 Alpha
(January 2006 to June 2006)**

	Period 1 Alpha (%)	Period 2 Alpha (%)
Small Cap Growth		
Style Index: Russell 2000 Growth		
Eagle	-7.986	-8.748
Gartmore	-1.518	4.536
Renissance	-30.978	-11.214
Small Cap Value		
Style Index: Russell 2000 Value		
First Quadrant	4.206	-4.704
TCW	0.078	-1.200
Small Cap Core		
Style Index: Russell 2000		
Earnest	-8.064	-8.538
Symphony	12.69	-3.864
Mid Cap Growth		
Style Index: Russell Midcap Growth		
Gartmore	-1.812	3.816
TCW	12.918	1.698
Franklin Portfolio	-14.16	-15.762
Mid Cap Value		
Style Index: Russell Midcap Value		
NFJ	0.684	-1.470
Perkins/Janus	1.032	-2.856
Mid Cap Core		
Style Index: Russell Midcap		
AIM MCC	1.980	-6.654
International Growth		
Style Index: EAFE		
MFS	1.974	2.658
William Blair	4.428	1.722
AIM	2.640	-0.516
International Value		
Style Index: EAFE		
INVESCO	-2.454	-1.038
Lazard	-7.200	-1.728
AllianceBernstein	5.664	9.552

International Core
Style Index: EAFE

JPMorgan	-2.472	-0.666
Brandywine	0.300	-0.642

Large Cap Growth
Style Index: Russell 1000 Growth
Janus

Marsico	-3.114	2.784
Loomis Sayles	4.416	17.741
Munder	-3.912	-0.774
Columbus		
Neubreger	3.210	10.107
William Blair	-5.532	6.648
Lighthouse	-7.608	13.38
Gartmore	2.220	8.790

Large Cap Value
Style Index: Russell 1000 Value

TCW	-1.692	-1.608
Eaton Vance	4.638	-2.772
Goldman Sachs	-0.702	-3.060
Davis Advisors	-3.444	-8.682
TSW-Eq. & Res	8.934	6.864
MFS	-5.281	-10.127
TSW-bal	-2.772	-4.086
Neuberger	3.630	-1.368
AIM	3.306	-4.434
Harris	-3.822	-16.482
OFI Gulf	-3.264	-2.226
OFI	-1.926	-4.806
Dreman	-9.468	-2.412

Table 7:

Alphas from Russell/EAFE Index and Alphas from the Vanguard Basket Index for July 2005 – June 2006

	Russell/EAFE Alpha (%)	Basket Index Alpha (%)
Small Cap Growth		
Eagle	-16.908	-8.109
Gartmore	2.988	1.177
Renissance	-41.076	-9.557
Small Cap Value		
First Quadrant	-2.520	-3.408
TCW	-0.828	-4.386
Small Cap Core		
Earnest	-16.080	-14.305
Symphony	6.264	9.110
Mid Cap Growth		
Gartmore	1.128	-1.963
TCW	16.440	13.108
Franklin Portfolio	-29.364	1.304
Mid Cap Value		
NFJ	-0.888	-2.352
Perkins/Janus	-1.920	0.148
Mid Cap Core		
AIM MCC	-3.300	-4.496
International Growth		
MFS	5.028	5.943
William Blair	6.792	-2.628
AIM	2.256	0.296
International Value		
INVESCO	-3.588	-0.014
Lazard	-8.604	-3.024
AllianceBernstein	15.156	6.475
International Core		
JPMorgan	-2.892	2.040
Brandywine	0.252	-1.149
Large Cap Growth		
Janus		
Marsico	-3.420	-2.000

Loomis Sayles	14.468	-8.954
Munder	-6.298	-2.276
Columbus		
Neubreger	9.804	-1.572
William Blair	-5.184	-0.658
Lighthouse	-5.088	-5.361
Gartmore	7.548	-0.777
Large Cap Value		
TCW	-3.300	-1.406
Eaton Vance	1.464	2.656
Goldman Sachs	-3.984	-2.088
Davis Advisors	-12.696	1.756
TSW-Eq. & Res	15.324	-0.686
MFS	-15.360	6.317
TSW-bal	-7.188	-3.537
Neuberger	1.848	-0.945
AIM	-1.740	-4.767
Harris	-20.856	-2.907
OFI Gulf	-5.376	-5.583
OFI	-6.996	-7.600
Dreman	-11.784	-5.733
Mean Alpha	-3.182	-1.510
Median Alpha	-2.892	-1.963
Variance	131.488	25.758

Graph 1:

Period 1 vs. Period 2 Alpha
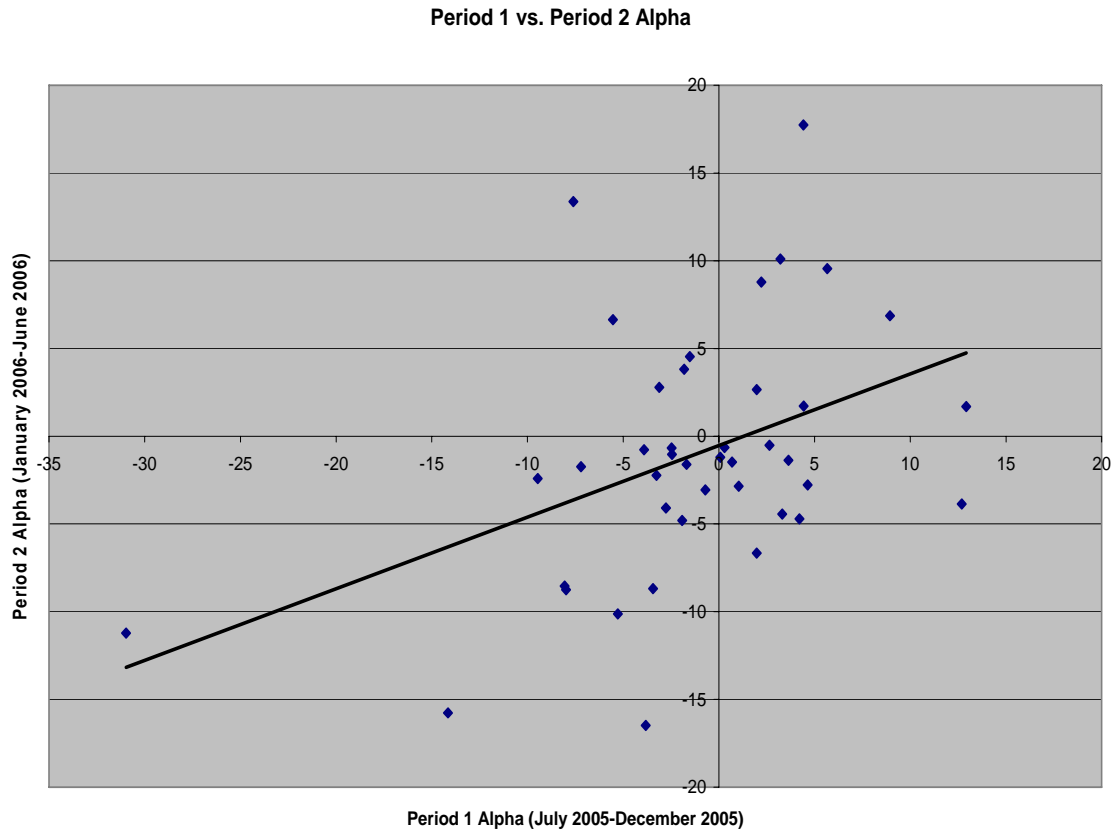
Note: Economically significant correlation between Period 1 and Period 2 Alphas (correlation of 0.420; R-squared value of 0.176)