

Undiscovered Managers, LLC

**Mutual Funds and Taxes:
Myths, Life Cycles and Strategies**

Research Report
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Overview and Executive Summary

Few issues generate a more visceral reaction from Americans than the topic of taxes. Our country was created out of a tax rebellion. Voting for a tax increase is tantamount to political suicide for most elected officials and recent Congressional hearings on the Internal Revenue Service showed that few jobs in our country are less popular than that of the tax collector.

Taxes and their impact on the returns actually realized by investors have also recently become an important topic to consumers. As a result, after many years of ignoring this issue, the mutual fund industry now must explain why its products make sense to consumers that get to keep only the after-tax portion of their returns.

This paper has three objectives. First, we want to examine and "debunk" three commonly held myths about taxes and mutual funds. Second, we want to introduce the concept that each mutual fund has a tax life cycle that benefits some shareholders and reduces the after-tax returns of others. Third, we propose an approach to selecting mutual funds that should increase the likelihood that an investor can get the best after-tax returns over time.

In meeting our first objective, our research shows that:

- ◆ Investing in mutual funds with historically low portfolio turnover does not necessarily result in great after-tax returns, can potentially *reduce* an investor's after-tax returns, and is a less important indicator of great after-tax returns than a manager's ability to deliver great pre-tax returns.

- ◆ Index funds are not necessarily the most tax efficient vehicles, could be perilous to an investor's after-tax returns should we suffer a prolonged bear market, and have significantly lagged many actively managed funds on an after-tax basis.
- ◆ "Tax efficient" funds often are not that tax efficient and many traditional actively managed mutual funds have and are likely to continue to deliver substantially better after-tax results to their investors.

Our second goal is to introduce the idea that each fund has a tax life cycle that benefits some investors and punishes others. In particular:

- ◆ The tax efficiency of a fund changes over time although a manager's investment process and rate of portfolio turnover may remain constant;
- ◆ By picking the right point in a fund's tax life cycle at which to invest, an individual can defer the payment of taxes (and thereby increase his after-tax returns) by shifting a portion of his capital gains onto subsequent investors in the fund;
- ◆ By selecting the wrong point in a fund's tax life cycle at which to invest, an individual will likely inherit a portion of earlier shareholders' capital gains, which, in turn, will accelerate his payment of taxes and lower his after-tax returns; and
- ◆ The keys to benefiting from a fund's tax life cycle are avoiding those funds with large embedded tax gains and seeking those funds that will likely experience a high rate of growth from net new cash flow.

Finally, we believe that investors should follow the following four steps (in this order of priority) when investing in mutual funds with taxable assets:

- 1. Pick only good, experienced money managers with proven investment strategies;**
- 2. Invest in those funds that are at the optimum point in their tax life cycle;**
- 3. Select those managers whose investment processes are coincidentally tax efficient; and**
- 4. Invest only in funds that use FIFO ("Highest Cost-First Out") accounting.**

Introduction

Taxes can have an enormous impact on the returns that investors ultimately realize. While many funds may report similar pre-tax returns, Table 1.1 shows that their after-tax returns vary considerably. The five funds in this exhibit each generated cumulative pre-tax returns of about 128% to 135% over the last five years. However, their after-tax returns varied dramatically. The top performing fund had a 101% after-tax return, while three funds delivered after-tax results that were as much as 21% lower to their investors.

Table 1.1

Funds with similar pre-tax returns can have dramatically different after-tax returns

Fund Name	5 Year Pre-tax Return¹	Est. 5 Year After-tax Return²
Janus Growth & Income	135%	100%
Brandywine	133%	83%
Dreyfus Appreciation	131%	101%
MSDW American Value B	129%	80%
Columbia Growth	128%	90%

¹Source: Morningstar Principia & RogersCasey Investworks.

²Calculated utilizing proprietary model: Please see model methodology in Appendix A for further details.

Understandably, consumer interest on this topic has increased significantly as investors try to find ways to reduce their tax burden. This interest in taxes has also spawned numerous strategies and investment rules designed to improve an investor's after-tax returns.

Three Great Myths

In the midst of all this attention on the issue of mutual funds and taxes, three great myths have emerged:

Myth #1: When investing taxable money in a mutual fund, investors should simply select those funds that have low portfolio turnover. If a portfolio manager does not turn over his portfolio with great frequency, the fund can have lower tax distributions and, ultimately, better after-tax returns.

Myth #2: Investing in index funds is almost always a better deal on an after-tax basis for investors than actively managed funds. While some active managers may outperform index funds on a pre-tax basis, index funds are substantially more tax efficient and ultimately deliver some of the best after-tax returns to their investors.

Myth #3: "Tax efficient" funds deliver the best after-tax returns to investors. Several investment management companies have rushed to market new funds that are specifically designed to generate the best

after-tax deal for investors. These new funds are managed by portfolio managers who have been very successful in the past on a pre-tax basis and who have altered their investment strategies in order to be more tax efficient.

While each of these theories sounds very plausible to the average investor, they are only partially correct and ignore many factors that independently affect a mutual fund's after-tax returns. Successful after-tax investing requires a more complex analysis that considers 1) the overall quality of the manager; 2) the tax efficiency of his investment process; and 3) an understanding that each mutual fund has a tax life cycle that will substantially benefit some shareholders and disadvantage others.

However, before going too far into what we believe investors should consider when selecting mutual funds, we will explain why we believe that the three widely held taxes and mutual funds theories are actually myths.

**Myth Number #1
Invest in Low
Turnover Funds**

The theory that investors should seek mutual funds that have low portfolio turnover in order to get great after-tax returns is only partially correct. Low turnover can be good for a mutual fund investor for two reasons.

First, an investor does not have to pay taxes on gains in his funds until either the fund recognizes a gain by selling a stock whose value has appreciated or until he sells his shares in the fund.

In other words, when a portfolio manager buys a stock and holds onto it for a long period of time, the investors in the fund get to defer paying taxes on any gains in that stock. The compounding effect (which we more fully describe later in Tables 2.3 - 2.5) of this tax deferral can add substantially to an investor's after-tax return if the stock continues to appreciate and the investor does not sell his shares in the fund.

**Short-term capital gains are
taxed at a much higher rate
than long-term
capital gains**

The second reason that low turnover can be good for investors' after-tax returns is due to the way the tax code treats short-term capital gains. If a mutual fund buys and sells a stock in less than one year, any gain in the stock would be classified as a short-term capital gain. Under current tax law, short-term capital gains in mutual funds are taxed at the same rate as income.

Consequently, two similar mutual funds could generate the exact same pre-tax return. But, if one fund has higher portfolio turnover than the other fund, they will have different types of capital gains. The high turnover fund will probably have a greater percentage of short-term capital gains and the low turnover fund, on the other hand, will likely have a higher percentage of long-term capital gains.

Under current tax law, short-term capital gains are taxed at a 39.6% marginal rate and long-term capital gains are taxed at a rate of only 20%¹. Because a larger percentage of the high turnover fund's capital gains will

¹For purposes of our research, our analysis assumes that investors pay the highest marginal federal tax rates.

Table 2.1

Low turnover *alone* is not the best indicator of great after-tax returns. Pre-tax returns are the most important determinant of great after-tax returns to an investor.

	Fund Name	1997 Turnover ¹	5 Year Pre-Tax Return ¹	Est. 5 Year After-Tax Return ²
High Turnover	Strong Total Return Fund	405%	117%	62%
	Brandywine	192%	133%	83%
	Fidelity Dividend Growth ³	141%	191%	140%
	Janus	132%	108%	69%
	Janus Twenty	123%	149%	101%
	Columbia Growth	96%	128%	90%
Low Turnover	Clipper Fund	31%	145%	104%
	Vanguard/Windsor II	30%	156%	108%
	Dodge & Cox Stock	19%	161%	120%
	Anchor Capital Accumulation	4%	49%	37%
	Armstrong Associates	7%	80%	62%

¹Source: Morningstar Principia & RogersCasey Investworks.

²Calculated utilizing proprietary model: Please see model methodology in Appendix A for further details.

³After-tax and pre-tax returns calculated from inception date (1/30/93) through 12/31/97.

be short-term, its investors will pay a higher tax rate on their returns. Consequently, their after-tax returns will be less than those of the low turnover funds.

Low Turnover Is Only One of Many Factors that Affect After-Tax Returns

While in certain cases low portfolio turnover can help increase a fund's after-tax returns, investors should not simply select mutual funds with low turnover if they hope to get great after-tax returns. Such a strategy ignores the fact that after-tax returns are the result of several independent factors. There are many high turnover mutual funds that have substantially better after-tax performances than their low turnover counterparts.

In Table 2.1, we estimated the after-tax returns of several high and several low turnover mutual funds. As you can see, there are several high turnover mutual funds with exceptional after-tax returns. Likewise, there are some low turnover funds with very poor after-tax returns. Clearly, low turnover *alone* is not necessarily the best indicator of great after-tax returns.

Good Pre-Tax Returns Are Necessary For Good After-Tax Returns

Pre-tax returns are the single biggest determinant of great after-tax returns

One reason some of the high turnover funds depicted in Table 2.1 had better after-tax performance is that their pre-tax returns were substantially better than those of several of the low turnover funds. *Pre-tax returns are the single biggest determinant of great after-tax returns.*

Regardless of how efficient a mutual fund is at avoiding taxes, after-tax returns are only a percentage of pre-tax returns. *And, 100% of nothing is nothing.* No matter how tax efficient a money manager might be, if he doesn't generate great pre-tax returns, his investors are not going to make a lot of money.

In addition, a fund's tax efficiency is the result of many factors and not just low turnover. A manager's style of investing combined with an investor's entry point into the fund make low turnover an indicator of either a great opportunity for the investor or a costly one.

Investing in a Large Mutual Fund with Low Turnover Could Result in Lower After-Tax Returns

Under certain circumstances, investing in a large mutual fund that has had exceptional long-term returns and historically low turnover could actually be a great way to quickly *increase* an investor's tax burden. The problem is that, by its very definition, a mutual fund that has historically high returns and low turnover will likely have a very large unrecognized or *embedded* capital gain, a portion of which a new investor will inherit.

Table 2.2

Embedded gains - the difference between the current price of a stock and its original purchase price

Mutual Fund #1 - Sample Portfolio

Holding	# of shares	Current Price	Current Value	Original Value	Embedded Gain
ABC Dept. Store	1,000,000	\$25/sh	\$25.00mm	\$10.00mm	\$15.00mm
XYZ Forestry	500,000	\$20/sh	\$10.00mm	\$7.50mm	\$2.50mm
SRD Utilities	750,000	\$15/sh	\$11.25mm	\$8.25mm	\$3.00mm
AZ Oil & Gas	1,000,000	\$20/sh	\$20.00mm	\$5.00mm	\$15.00mm
AAA Technology	750,000	\$12/sh	\$9.00mm	\$7.50mm	\$1.50mm
Total			\$75.25mm	\$38.25mm	\$37.00mm

Embedded Gain = Current Value - Purchase Price

These examples represent hypothetical situations and are provided for illustrative purposes only. They are not intended to represent the past or future performance of any specific fund.

Table 2.2 shows an example of this dilemma. Mutual Fund #1 owns five stocks that have substantially risen in value. When originally purchased, these holdings were worth about \$38.25mm. Today, they are worth more than \$75mm. But, the fund and its investors do not have to pay taxes on this capital gain until the fund sells these stocks. Thus, the fund has a \$37mm embedded gain.

Existing Embedded Gains Are Shared by All Current Shareholders

Embedded gains pose a substantial threat to the after-tax returns of new investors of many established funds. Under Subchapter M of the Internal Revenue Code, each year a mutual fund must distribute all capital gains that are recognized during that year to the fund's shareholders. This tax distribution occurs *regardless of whether or not a shareholder received any economic benefit from the gain*. Consequently, a new investor in a fund that has a large embedded gain could wind up inheriting a portion of the tax gains of some of the fund's existing shareholders.

An example of the tax transfer that occurs when new investors enter established funds is shown in Figure 2.1. Mr. Jones invests \$10,000 in Mutual Fund #1 in the middle of the year and the fund does not appreciate in value during the remainder of the year.

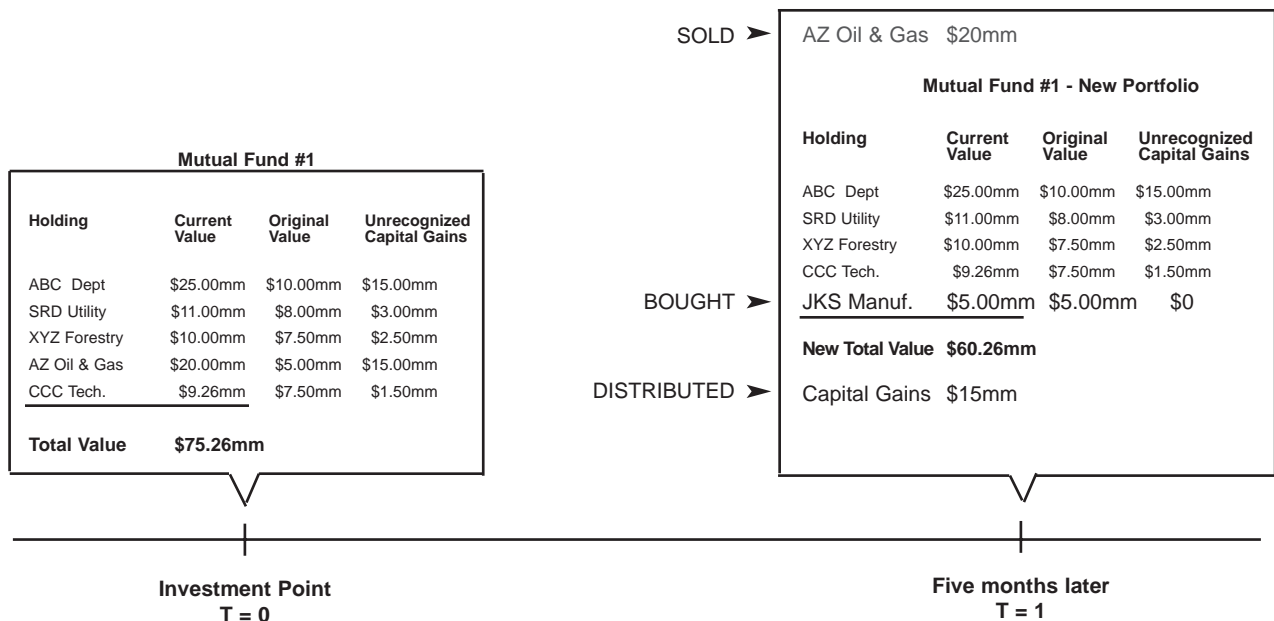
Sometime late in the year, the portfolio manager decides to sell the fund's holdings in AZ Oil's stock and to invest \$5mm of the proceeds in JKS Manufacturing. The remaining \$15mm of cash must be paid to shareholders as part of a tax distribution. The fund has recognized a \$15mm capital gain that must be distributed pro-rata across all of the fund's investors, regardless of when they invested in the fund.

At the end of the year, Mr. Jones receives a tax distribution of \$1,993.09 from the fund. This distribution reduces the total assets of the fund and thus, lowers the value of his shares by an equal amount. Under the new tax laws, Mr. Jones must pay the government a 20% capital gains tax on this distribution totaling \$398.62.

The net result is that Mr. Jones has just inherited a portion of the other shareholders' tax gain and the value of his assets has fallen. To sum up, (as shown in Figure 2.1) his shares in Mutual Fund #1 are now worth \$8,006.91 and he has \$1,594.47 of cash that he can either re-invest in the fund or put to work elsewhere. Mr. Jones started with \$10,000 and now has \$9,601.38 although Mutual Fund #1 did not lose money that year. Mr. Jones wound up paying someone else's tax liability and his investment is worth substantially less.

However, to be clear, this does not mean that Mr. Jones has no hope of recapturing this missing \$398.62. Mr. Jones can recapture the lost value from his mutual fund investment, but only by selling his shares in the fund, which would create a capital loss for tax purposes.

Figure 2.1



<p>Mr. Jones invests \$10,000 in Mutual Fund #1</p> <p>He now owns .013287% of Mutual Fund #1</p>	<p>Mr. Jones receives a tax distribution from Mutual Fund #1 (.013287% x \$15mm) \$1,993.09</p> <p>Mr. Jones pays a capital gains tax on the tax distribution (20% x \$1,993.09) (\$398.62)</p> <p>Value of Mr. Jones' shares in Mutual Fund #1 after the distribution (.013287% x \$60.26mm) \$8,006.91</p>
Total Value of Mr. Jones' investment \$10,000	Total Value of Mr. Jones' position \$9,601.38

These examples represent hypothetical situations and are provided for illustrative purposes only. They are not intended to represent the past or future performance of any specific fund.

If Mr. Jones sells his shares in the fund, he would have a capital loss of \$1993.09 (\$10,000 initial investment - \$8,006.91 current market value of the shares). This capital loss would be worth \$1993.09 x the 20% capital gains tax rate, or \$398.62.¹

But, Mr. Jones may not want to sell his shares in the fund and, depending upon the fund, might incur transaction costs such as a back-end load or redemption fee. In addition, Mr. Jones might not realize that he needs to sell his shares before year-end. Otherwise, he would not be able to use the tax loss this year. Next year, assuming he already has at least \$3,000 in capital losses, Mr. Jones might not have any capital gains that could offset this loss.

¹For purposes of this example, we assume that Mr. Jones would sell his shares within six months of his initial purchase.

A Key Issue in Getting Good After-Tax Returns Is Timing

If an investor can defer paying taxes and can get the benefits of compounding, his after-tax returns will soar

A key issue involving mutual funds and taxes is not *whether* an investor will have to pay taxes on his capital gains from investing in a mutual fund. The IRS will eventually collect taxes on all of an investor's gains. Rather, the key issue is *when* an investor will have to pay capital gains taxes.

If an investor can find a means of deferring the payment of taxes, his after tax returns will soar. However, *if an individual buys shares in a mutual fund that has large embedded gains, it is more likely that he will have to pay capital gains taxes sooner rather than later.*

Deferring Taxes Can Boost After-Tax Returns through Compounding

The ability to defer taxes is very powerful because an investor is able to benefit from any appreciation on the money that would normally have been paid to the government. For example, as shown in Table 2.3, let us assume that two investors each invest \$10,000 in two almost identical mutual funds, No Tax Distribution ("NDIST") Fund and Large Tax Distribution ("LDIST") Fund, and that each appreciates in value by 20% per year. The only difference between the funds is that NDIST Fund is managed in such a way that it pays out no tax distributions and LDIST Fund pays out a capital gain equal to the fund's gain each year, or 20%.

Let us also assume that the investor in LDIST Fund reinvests the after-tax portion of any tax distributions back into the fund and both investors decide to sell their shares at the end of Year 2. After all taxes were paid, the investor who purchased NDIST Fund had \$64 more than the investor who purchased LDIST Fund.

Where did this difference come from? As shown in Table 2.3, the investor in LDIST Fund had to pay \$400 in taxes at the end of Year 1. The investor in NDIST Fund, on the other hand, was able to defer paying any taxes until he exited the fund. As shown in Table 2.4, the \$400 remained in the fund and appreciated by 20%, or \$80 the following year. The investor in NDIST Fund was able to capture this appreciation less the capital gains of 20%, or \$16.

Table 2.3

	NDIST Fund No tax distributions	LDIST Fund 20% tax distributions
Initial Investment	\$10,000.00	\$10,000.00
Appreciation Year 1	\$2,000.00	\$2,000.00
Less:		
Tax Distributions	(\$0.00)	(\$2,000.00)
Plus:		
Reinvested After-Tax Dividends	\$0.00	\$1,600.00
Value of Shares at End of Year 1	\$12,000.00	\$11,600.00
Appreciation Year 2	\$2,400.00	\$2,320.00
Less:		
Tax Distributions	(\$0.00)	(\$2,320.00)
Plus:		
Reinvested After-Tax Dividends	\$0.00	\$0.00
Value of Shares at End Of Year 2	\$14,400.00	\$11,600.00
Assuming Shares Are Sold At End of Year 2:		
Proceeds From Sale of Shares	\$14,400.00	\$11,600.00
Plus:		
Cash From Tax Distribution	\$0.00	\$2,320.00
Less:		
Taxes	(\$880.00)	(\$464.00)
Final After-Tax Proceeds	\$13,520.00	\$13,456.00
Difference = \$64		

The point at which an investor has to pay taxes is key to achieving good after-tax returns

These examples represent hypothetical situations and are provided for illustrative purposes only. They are not intended to represent the past or future performance of any specific fund.

Table 2.4

Why the Two Funds' After-Tax Returns Differ

NDIST Fund – No tax distributions and all capital gains remain in the fund

Embedded Gain Not Distributed from Fund	=	\$400
Multiplied by:		
Year 2 Pre-Tax Return	x	<u>20%</u>
Sub-Total		\$ 80
Less:		
20% Capital Gains Tax		<u>(\$ 16)</u>
Total Increased After-Tax Return		\$ 64

These examples represent hypothetical situations and are provided for illustrative purposes only. They are not intended to represent the past or future performance of any specific fund.

Deferring Taxes for Many Years Can Significantly Increase After-Tax Returns

Assuming NDIST Fund continues to appreciate and is able to defer making any tax distributions for a long period of time, the difference in after-tax returns between the funds will increase dramatically as existing tax deferrals appreciate and new tax deferrals are created.

Table 2.5 provides an example of how dramatic this difference can be. It assumes that both investors hold their shares for five years, that both funds continue to appreciate on a pre-tax basis by 20% per year, and that all after-tax dividends are reinvested into the funds.

Because NDIST Fund is managed in such a manner that it does not have to make any tax distributions, a five-year investment in the funds would appreciate on an after-tax basis by \$11,906.56. But, a five year investment in LDIST Fund, which regularly recognizes capital gains and makes tax distributions, would appreciate by only \$11,003.42, or 8.21% less than that of investments in NDIST Fund.

In other words, an investor in NDIST Mutual Fund would get \$903.14 more than if he had invested in LDIST Mutual Fund. This differential would grow at an even greater rate if the investor had held the fund for a longer period of time.

Table 2.5

	NDIST Fund	LDIST Fund
Initial Investment	\$10,000.00	\$10,000.00
Value at Shares at End of Year 1	\$12,000.00	\$11,600.00
Value of Shares at End of Year 2	\$14,400.00	\$13,456.00
Value of Shares at End of Year 3	\$17,280.00	\$15,608.96
Value of Shares at End of Year 4	\$20,736.00	\$18,106.39
Value of Shares at End of Year 5	\$24,883.20	\$18,106.39
Plus: Tax Distribution	\$0.00	\$3,621.28
Less Capital Gains Taxes	(\$2,976.64)	(\$724.26)
Net After-Tax Proceeds	\$21,906.56	\$21,003.42
Less: Initial Investment	(\$10,000.00)	(\$10,000.00)
Net Appreciation	\$11,906.56	\$11,003.42

Difference in Net Appreciation
\$903.14 or 8.21%

These examples represent hypothetical situations and are provided for illustrative purposes only. They are not intended to represent the past or future performance of any specific fund.

Summary

In sum, a strategy of simply selecting a mutual fund that has low turnover ignores several other factors that are critical to getting good after-tax returns. 1) Good pre-tax returns are a necessary pre-condition to getting good after-tax returns and not all low turnover funds have good pre-tax returns. 2) Funds with historically low turnover and good returns usually have a large embedded gain. New investors to such funds inherit this tax gain which, in turn, will probably accelerate the rate at which they will have to pay taxes. *The sooner an investor has to pay taxes, the lower his after-tax returns.*

Myth #2
Index Funds Almost
Always Generate
Better After-Tax
Returns

The second widely-held mutual fund tax myth is that index funds will almost always give the investor better after-tax returns than actively managed funds. Index funds are those funds whose investments replicate a particular index. The goal of this type of fund is to give its investors a return equal to the index, as opposed to an actively managed fund whose goal is to outperform the index.

Index funds are allegedly tax efficient because, by simply holding the stocks of a particular index, they have very little or no portfolio turnover. Without high portfolio turnover, these types of funds rarely recognize any capital gains, and thus, have very small tax distributions.

According to this myth, while some actively managed funds have better pre-tax returns, they are not as tax efficient as index funds. Consequently, the after-tax returns of index funds are almost always higher than their actively managed counterparts.

However, this school of thought is misguided. First, while many index funds are very tax efficient, there are several actively managed mutual funds that have historically been even more tax efficient. Second, as we discussed earlier, after-tax returns are the result of several independent factors and not just the tax efficiency of the fund. Third, similar to actively managed mutual funds with historically low turnover, index funds also often have high embedded gains that are inherited by new investors.

As part of our research, we constructed a mathematical model that estimates the tax efficiency of a mutual fund. In Table 3.2, we have listed several well-known mutual funds (both index and actively managed) and, using our model, estimated their after-tax returns.

TEQ – Tax Efficiency Quotient

Table 3.2 includes a column of TEQ's or "tax efficiency quotients." The formula for calculating tax efficiency quotients is as follows:

$\text{Tax Efficiency Quotient} = \frac{\text{After-Tax Return}}{\text{Pre-Tax Return} \times (1 - \text{Long-Term Capital Gains Tax Rate})}$

TEQs compare the relative tax efficiencies of various mutual funds over different time periods. In order to determine each fund's TEQ, we first calculated its after-tax return using our model, and then divided this return by its pre-tax return times one minus the long-term capital gains rate (currently 20%).

Perfectly Tax-Efficient Funds Have a TEQ of 100%

For example, a fund whose TEQ was 100% would be perfectly tax efficient – that is, it would not have any tax distributions and its shareholders would only pay taxes on their investment when they sold their shares in

the fund. Its investors would receive after-tax returns of about 80% of its pre-tax returns, or [100% x (1 - 20%)].

Tax Efficiency Quotient: a relative measure of the percentage of pre-tax returns that a fund shareholder keeps *after taxes*

$$100\% = \frac{\text{After-Tax Return}}{\text{Pre-Tax Return} \times (1 - 20\%)}$$

$$100\% \times (1 - 20\%) \times \text{Pre-Tax Return} = \text{After-Tax Return}$$

$$80\% \times \text{Pre-Tax Return} = \text{After-Tax Return}$$

If a fund had a TEQ of 80%, an investor's estimated after-tax return would be [80% x the fund's pre-tax return x (1 - 20%)], or 64% of its pre-tax return. TEQ's and their equivalent pre-tax returns are shown in Table 3.1.

Table 3.1

TEQ	After-Tax Return Equals
80%	64% x Pre-Tax Return
70%	56% x Pre-Tax Return
60%	48% x Pre-Tax Return
50%	40% x Pre-Tax Return

A TEQ Is Only a Measure of Tax Efficiency in the Past

Tax Efficiency Quotients are only a snapshot of how tax efficient money managers have been in the past

It is important to remember that a TEQ is only a snapshot of how tax efficient a money manager has been in the past over a specific time period. Going forward, a manager's tax efficiency could change if market conditions change or if the fund has a large embedded gain that did not exist in earlier years.

In addition, when calculating a TEQ for a fund, an investor should analyze the fund's tax distributions over a long (usually five years or longer) time period. A TEQ is only an indicator of a manager's tax efficiency. The shorter the period considered when calculating a TEQ, the less accurate it is in predicting the future tax efficiency of a manager.

Some Actively Managed Funds Are More Tax Efficient than Index Funds

In Table 3.2, we have listed several well-known mutual funds (both index and actively managed) and, using our model, estimated their after-tax returns. As you can see from Table 3.2, index funds often have very high

Table 3.2

There are several actively managed funds that have had substantially better pre-tax returns than their comparable index fund. When combined with their high TEQs, these funds deliver significantly higher after-tax returns.

	Fund Name	1997 Assets Under Mgmt. ¹	1997 Turnover ¹	1997 Embedded Gain ¹	5 Year Pre-Tax Return ¹	Est. 5 Year After-Tax Return ²	TEQ
Actively Managed	Fidelity Dividend Growth ³	\$6,996	141%	19%	191%	140%	92%
	Torrey	\$1,564	12%	25%	190%	145%	95%
	Oakmark	\$8,923	24%	29%	179%	132%	92%
	Dodge & Cox Stock	\$4,730	19%	28%	161%	120%	93%
Index	Vanguard Index 500	\$60,840	5%	46%	150%	113%	94%
	T. Rowe Price Equity Index	\$2,511	1%	35%	147%	109%	93%
	Dreyfus S&P 500 Index	\$1,938	2%	29%	145%	108%	93%
	Vanguard Small Cap Index	\$2,910	29%	29%	124%	86%	86%

¹Source: Morningstar Principia & RogersCasey Investworks.

²Calculated utilizing proprietary model: Please see model methodology in Appendix A for further details.

³After-tax and pre-tax returns calculated from inception date (1/30/93) through 12/31/97.

TEQs. However, there are several actively managed mutual funds that also have very high TEQs, including a few that are even more tax efficient than their indexed counterparts.

There are several factors that may make some actively managed funds more tax efficient than indexed ones. For example, many indices such as the S&P 500 are rebalanced on a monthly basis. When an index is rebalanced, its composition changes. Consequently, an index fund must change its portfolio, causing the fund to recognize capital gains and make a tax distribution.

In addition, the broader and larger market indices often include many companies that pay fairly high dividends. For tax purposes, these dividends are considered income that must be distributed to shareholders annually and are currently taxed at a 39.6% marginal federal rate.

Pre-tax Returns Are Critical to After-Tax Returns

While tax efficiency is important, great after-tax returns are the result of several factors. For example, as shown in Table 3.2, there are several actively managed mutual funds that have had substantially better pre-tax returns than comparable index funds. When combined with their high TEQs, these funds delivered significantly higher after-tax returns to their investors than comparable index funds.

Many Index Funds Have Large Embedded Gains

Finally, although index funds will have some turnover because of the rebalancing of their indices, over time, most index funds build very large embedded gains. For example, the average index fund with \$2B or more

In a prolonged bear market, index funds could suffer significant redemptions that would force large scale tax distributions

in assets under management currently has an embedded gain equal to 36% of the assets in the fund¹.

Similar to our earlier discussion of low-turnover funds, investing in index funds with large embedded gains could accelerate the point at which an investor pays taxes. While it is unlikely that, under normal conditions, an index fund would have to recognize a large majority of its capital gains, there is at least one potential scenario that could be problematic for new taxable investors. If an index fund suffers substantial redemptions, it may have no choice but to sell off positions with large embedded gains.

One potential cause of large-scale redemptions would be a prolonged bear market. Under such conditions, some groups of investors might decide to reduce their exposure to the stock market, and index funds could experience substantial redemptions.

Granted, any market collapse would reduce the size of many embedded gains. However, for several of the larger index funds, these gains have built up over many years during one of history's longest bull markets. Even a sharp drop in the market would not come close to wiping these gains out.

Summary

In sum, index funds are not always the most tax efficient funds and also do not necessarily deliver the best after-tax returns to their investors. Some actively-managed mutual funds are both more tax efficient than many index funds and have historically generated substantially better pre-tax returns. Consequently, taxable investors should not limit their investment alternatives when selecting mutual funds.

Myth #3 Invest In "Tax Efficient Funds"

The third widespread myth involves a recently created new class of "tax efficient" mutual funds. Many of these funds are designed to provide exceptional after-tax returns to their investors by taking a proven (on a pre-tax basis) money manager and altering his investment strategy to make it more tax efficient.

For example, as the end of a year approaches, the fund manager would review how many capital gains and losses the portfolio realized that year. If the portfolio had substantial net capital gains, the manager would sell some positions that were at a loss in order to create offsetting capital losses. Consequently, the fund would not have to make a tax distribution.

Altering an Investment Manager's Investment Process Can Reduce Both Pre-Tax and After-Tax Returns

The problem with such a strategy is that by altering an investment manager's normal strategy even by only a small amount, a fund runs a high risk of substantially lowering its pre-tax return. And, as we discussed earlier, great pre-tax returns are a critical component of achieving great after-tax returns.

¹Morningstar Principia Pro, release date 8/31/98.

Altering a manager's investment process could undercut his ability to generate good returns

Investing is a series of calculated bets based upon a manager's analysis and information, and most good managers are wrong as often as they are right. Investing is also an art whose most important tool is the judgment of the portfolio manager. Altering a manager's investment process in an attempt to be more tax efficient could upset this delicate balance and undercut the manager's ability to generate strong pre-tax returns.

For example, a study by the University of Michigan showed that nearly 85% of the S&P 500's appreciation between 1983 and 1987 occurred on fewer than 3% of its trading days. From 1963 to 1993, 95% of the equity market's appreciation occurred on only 90 trading days.

Similarly, many individual stocks experience a disproportionate amount of their appreciation in relatively few days each year. If a manager modifies his approach to investing and buys or sells investments based on tax-driven criteria, he could easily fail to take advantage of those rare instances when a stock appreciates substantially.

Several Traditional Mutual Funds Deliver Better After-Tax Returns Than "Tax Efficient" Funds

Table 4.1 shows the estimated after-tax return of two so-called "tax efficient" funds. While there are many other tax efficient funds, most have fairly short track records and it is still unclear how well they will perform. However, as shown in this table and in Table 3.2, there are many traditional funds that have delivered substantially better after-tax returns to their investors than these two funds.

Instead of trying to find a successful fund manager that has modified his approach to investing in order to be more tax efficient, an investor should select a manager whose approach to investing is *coincidentally* very tax efficient -- that is, a manager whose normal style of investing just happens to work well within the tax code and does not need to be altered in order to be tax efficient.

Table 4.1

Fund Name	1997 Turnover¹	5 Year Pre-Tax Return¹	Est. 5 Year After-Tax Return²	TEQ
Schwab 1000 Inv	2%	140%	107%	96%
USAA Growth & Tax Strategy	194%	75%	57%	94%

¹Source: Morningstar Principia & RogersCasey Investworks.

²Calculated utilizing proprietary model: Please see model methodology in Appendix A for further details.

The Tax Life Cycle of a Mutual Fund

Now that we have dissected the three myths that currently dominate most consumer finance publications about taxes and mutual funds, we want to focus on the concept of the "tax life cycle of a mutual fund."

The tax life cycle of a mutual fund refers to the different points in time in the life of a mutual fund that offer an investor the best opportunity to generate some of the best after-tax returns. By investing at these tax efficient points in time, an investor would be able to substantially delay when he will be forced to pay taxes on his capital gains.

In simpler terms, if you invest in a mutual fund at one point in time versus another, you are far more likely to defer paying taxes on your gains. This deferral (as we demonstrated earlier in Tables 2.3 - 2.5) could substantially boost your after-tax returns.

The Optimum Point in the Tax Life Cycle of a Fund

The optimum point at which to invest in a fund is when:

- a. the fund's embedded gain is small
- b. the fund is likely to experience a high rate of growth from new cash flow

As shown in Figure 5.1, the optimum point in the tax life cycle of a mutual fund at which to invest is when a fund's embedded gain is small and the fund is likely to experience a very high (greater than 100%) rate of growth from *new* cash flow. These conditions most frequently occur with small, new mutual funds.

By avoiding funds that have substantial embedded gains, an investor does not inherit a portion of the tax liability of other earlier investors in these funds. In addition, by selecting funds with very high rates of growth from new cash flow, an investor is able to shift a portion of his tax liability onto subsequent investors in the fund. This shift of liability would in turn significantly defer his payment of capital gains taxes.

New Mutual Funds Have the Smallest Embedded Gains

New mutual funds have the smallest embedded gains and the highest rate of growth from new cash flow

New mutual funds usually have the smallest embedded gains. Embedded gains occur when the stocks owned by a mutual fund increase substantially in value and the manager continues to own them in the fund's portfolio for a long period of time. The longer the manager holds on to stocks that keep appreciating, the greater the embedded gains.

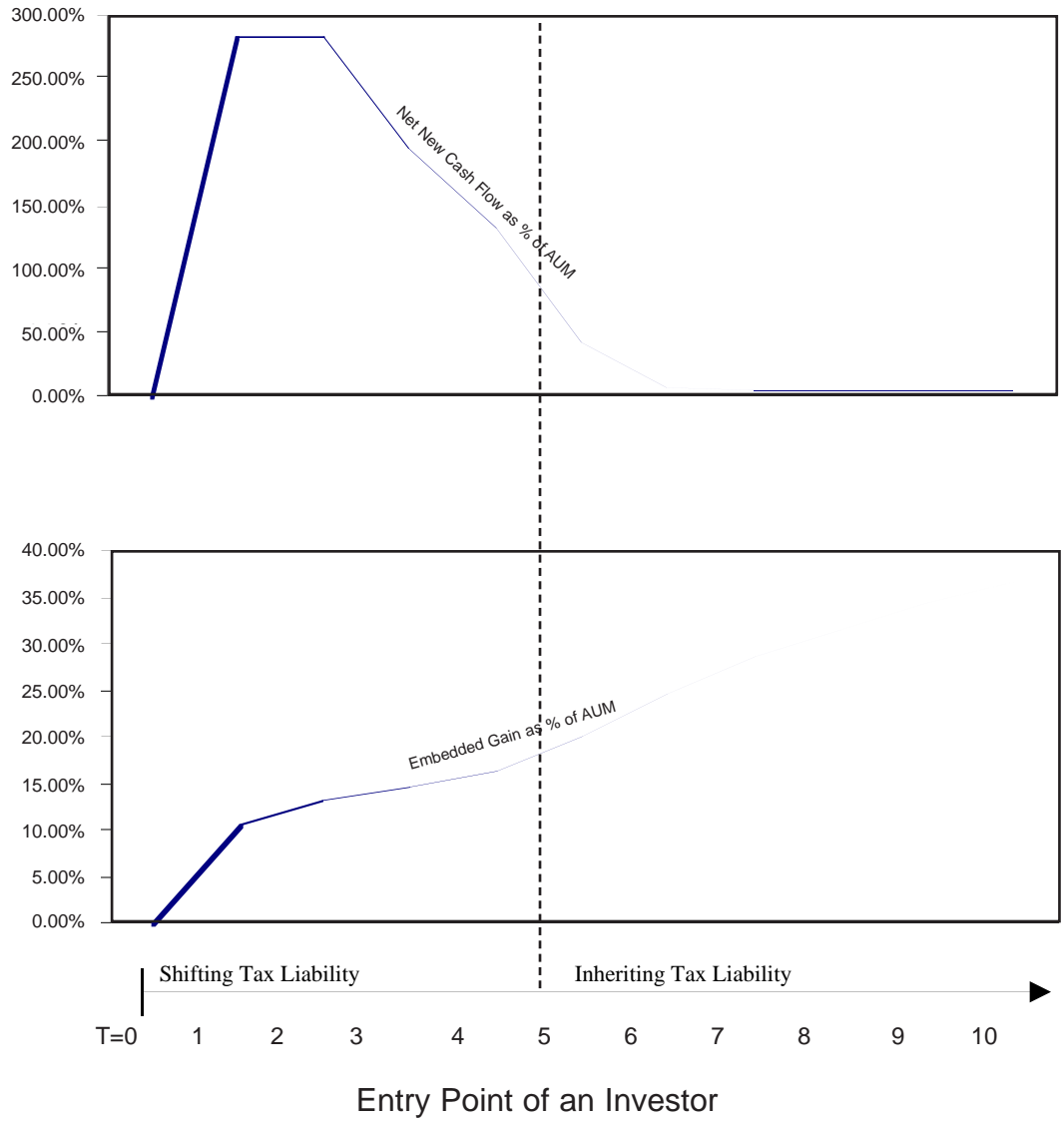
A small, new fund will usually have a fairly small embedded gain because its holdings have not had enough time to appreciate substantially. In addition, an embedded gain can never be larger than the fund's total size. So, a fund with only \$10mm in assets will normally not have an embedded gain of more than \$2mm to \$3mm.

On the other hand, large funds with relatively low turnover that have been in existence for several years will usually have a fairly large embedded gain. Currently, the average embedded gain of all relatively low turnover (25% per year or less) funds with \$2B or more in assets is 36% of assets¹.

¹Morningstar Principia Pro, release date 8/31/98.

Figure 5.1

The Tax Life Cycle of a Mutual Fund



These examples represent hypothetical situations and are provided for illustrative purposes only. They are not intended to represent the past or future performance of any specific fund.

New Funds Have the Highest Growth Rate from New Cash Flow

New cash flow - new and existing investors buying more shares in the fund - is the source of most of a new fund's growth. This is particularly true for a fund that has had exceptional results in its early years of existence.

While many older mutual funds continue to grow, over time, a greater percentage of their growth is from market appreciation and not from new cash flow. This phenomenon is partially attributable to the fact that, after five or six years of existence, a mutual fund begins to gradually experience increased redemptions as shareholders shift their money to other investments or uses. A larger portion of the new cash flow into the fund is used to meet these redemptions.

New cash flow also plays a lesser role in an older fund's rate of growth because of the effects of scale. It is much easier for a \$25mm fund to get 400% growth (\$100mm) from new cash flow than for a \$2B fund to sell \$8B of new fund shares in one year and \$40B of shares the next.

The effects of existing embedded gains combined with a lower percentage of growth from new cash flow can be seen in Table 5.1 and Figure 5.2 with two hypothetical mutual funds. The first fund we will call "Mutual Fund New". This is a traditional value fund with relatively low turnover. It was launched in 1993 and its pre-tax returns to its investors each year have been about 20%.

Table 5.1

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Mutual Fund New										
Assets Under Management (\$mm)						\$40.00	\$160.00	\$500.00	\$1,250.00	\$2,000.00
Embedded Gain						10.47%	13.09%	14.64%	16.22%	19.78%
Rate of Growth From Net New Cash Flow						280.00%	280.00%	192.50%	130.00%	40.00%
Mutual Fund Old										
Assets Under Management (\$mm)	\$40.00	\$160.00	\$500.00	\$1,250.00	\$2,000.00	\$2,500.00	\$3,100.00	\$3,820.00	\$4,684.00	\$5,720.80
Embedded Gain	10.47%	13.09%	14.64%	16.22%	19.78%	24.47%	28.33%	31.55%	34.26%	36.56%
Rate of Growth From Net New Cash Flow	280.00%	280.00%	192.50%	130.00%	40.00%	5.00%	4.00%	3.23%	2.62%	2.13%

These examples represent hypothetical situations and are provided for illustrative purposes only. They are not intended to represent the past or future performance of any specific fund.

Like many other funds, Mutual Fund New started out fairly small. Over time as it continued to perform well, the fund received a large amount of new cash flow as more investors learned about it. By the end of 1997, it had about \$2B under management.

Similar to most low turnover, value style funds, it recognized only a moderate amount of its capital gains. For purposes of this example, we assumed that the fund had about 25% turnover per year, and, without substantial new cash flow growth, it recognized in capital gains about one quarter to one third of that year's market appreciation.

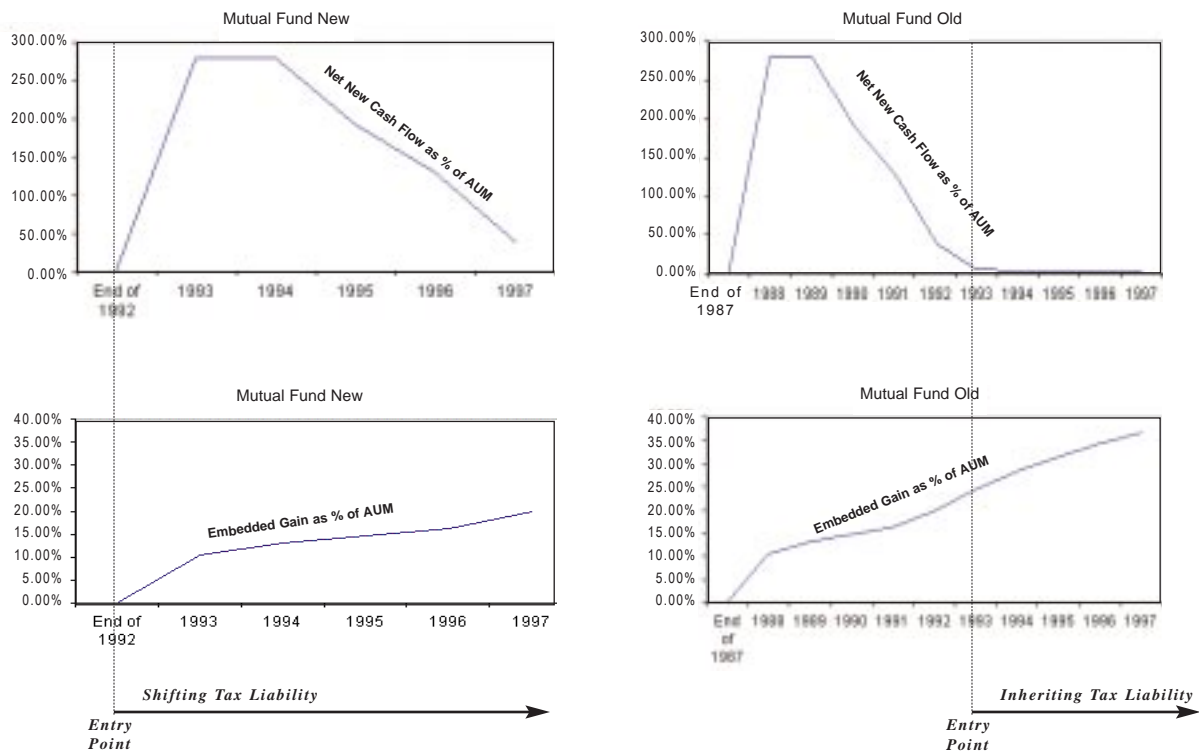
At the time that Mutual Fund New is launched, Mutual Fund Old already has \$2B in assets and an embedded gain of \$39.5mm

As you can see in Table 5.1, Mutual Fund New's embedded gain also grew over time. By the end of 1997, it had an embedded gain of \$395mm, or more than 19.8% of the fund.

The second hypothetical fund we will call "Mutual Fund Old". Mutual Fund Old is identical to Mutual Fund New except that it was launched five years earlier. It has generated a 20% pre-tax return for each of the last ten years.

Its first five years of existence were identical to Mutual Fund New's first five years and, by 1993, Mutual Fund Old had \$2B in assets and a 19.8% embedded gain.

Figure 5.2



These examples represent hypothetical situations and are provided for illustrative purposes only. They are not intended to represent the past or future performance of any specific fund.

Since 1993, Mutual Fund Old has continued to grow, and by 1998, the fund has more than \$5.7B under management. Some of this growth is from market appreciation and the remainder from new cash flow.

Older Mutual Funds Get Less Growth from New Cash Flow

However, like most other mutual funds, after four or five years of existence, Mutual Fund Old's annual rate of redemptions start to climb closer to the national average of 18% per year¹. Consequently, while the fund continues to get new cash flow, more of it is used to pay off redemptions and most of the fund's growth has been from market appreciation. By the end of 1998, Mutual Fund Old has an embedded gain of nearly 37% of assets under management or almost \$2.1B.

Let us assume that two different investors, Mr. Smith and Mr. Doe, each decide at the beginning of 1993 to invest \$10,000 into a mutual fund. Mr. Smith invests in Mutual Fund New and Mr. Doe invests in Mutual Fund Old. Both decide to reinvest the entire after-tax portion of any dividends back into the funds.

Mr. Doe selects Mutual Fund Old because it has a strong performance record and relatively low turnover. However, Mutual Fund Old has a fairly large embedded gain, and while it is growing rapidly on an absolute basis, its relative growth from new cash flow is relatively low.

Mr. Smith selects Mutual Fund New because it is managed by a proven investor who already has a long-term track record from managing money in private accounts for corporate pension plans, high net worth individuals and other mutual funds. However, since Mutual Fund New is new, it has no embedded capital gain and most of its growth over the next five years will be from new cash flow.

Table 5.2 shows the value of Mr. Doe's and Mr. Smith's shares over the past five years. Although both funds earn an identical pre-tax return, Mr. Doe receives much larger tax distributions each year than Mr. Smith because Mutual Fund Old already has a sizeable embedded capital gain. Each year, a small part of this gain is recognized, and although he was not a shareholder when the fund earned the gain, as a current shareholder, Mr. Doe inherits a portion of this gain as it is recognized.

Mr. Smith's fund, on the other hand, begins with no embedded capital gain. Although Mutual Fund New builds a capital gain over time, Mr. Smith benefits from the fact that the fund is growing substantially from new cash flow. In reality, while Mr. Doe is inheriting a portion of someone else's unrecognized capital gain, Mr. Smith is shifting a portion of his capital gain on to new investors that come into the fund after him.

The net result is that Mr. Smith has a substantially higher after-tax return than Mr. Doe. After five years, Mr. Smith's original investment has appreciated by \$11,282.99. However, Mr. Doe's after-tax gain on his investment is \$10,457.18 less than Mr. Smith's gain.

¹"1998 Mutual Fund Fact Book," Investment Company Institute, May 1998. Data reflects U.S. mutual funds over the past ten years.

Table 5.2

	Mr. Smith (Mutual Fund New)	Mr. Doe (Mutual Fund Old)
Initial Investment	\$10,000.00	\$10,000.00
Value of Shares at End of Year 1	\$11,892.60	\$11,656.32
Value of Shares at End of Year 2	\$14,143.39	\$13,583.75
Value of Shares at End of Year 3	\$16,777.64	\$15,826.93
Value of Shares at End of Year 4	\$19,844.86	\$18,437.81
Value of Shares at End of Year 5	\$21,878.96	\$19,770.35
Plus: Tax Distributions	\$1,934.87	\$2,355.02
Less: Taxes	<u>(\$2,530.84)</u>	<u>(\$1,668.19)</u>
Net After-Tax Proceeds	\$21,282.99	\$20,457.18
Less: Initial Investment	<u>(\$10,000.00)</u>	<u>(\$10,000.00)</u>
Net Appreciation	\$11,282.99	\$10,457.18
Difference in Net Appreciation		
\$825.81 or 7.90%		

These examples represent hypothetical situations and are provided for illustrative purposes only. They are not intended to represent the past or future performance of any specific fund.

By picking the right point in time at which to invest in an otherwise identical mutual fund, Mr. Smith has been able to defer paying capital gains taxes. This deferral has boosted Mr. Smith's after-tax gain by 7.9%. Another way of looking at this difference in after-tax returns is to consider fund expense ratios. Virtually every consumer financial publication emphasizes that investors need to consider mutual fund expense ratios when selecting their investments. Mr. Smith's increased after-tax return is the equivalent of selecting a mutual fund with an annual expense ratio that is 1.52% lower than that of Mr. Doe's fund.

The Tax Efficiency of a Fund Declines Over Time

As this example shows, although a manager's investment process and portfolio turnover may remain constant, the tax efficiency of a fund can

decline over time. This decline occurs for two reasons. First, over time, most funds will build up embedded gains that new investors will inherit and that will accelerate the rate at which they will have to pay taxes.

Second and more important to a fund's existing shareholders, as the fund gets larger, its *rate of growth* from new cash flow declines. The more that a fund grows from new cash flow, the more its existing shareholders can shift a portion of their capital gains onto subsequent shareholders.

For example, if a \$10mm fund had an embedded gain of \$2mm, the average shareholder would have a potential tax liability equal to 20% of the current value of their shares. If, over the next year, the fund grew by \$40mm from new cash flow, this \$2mm tax liability would now be spread across \$50mm and would equal only 4% of the current value of the fund's shares.

On the other hand, if the fund was \$500mm in size and had a 20% or \$100mm embedded gain, it would need to get nearly \$2B of new cash flow in order to dilute the embedded gain to 4% of the current value of the shares. As the fund gets larger, the absolute levels necessary to maintain its high rate of growth from new cash flow become unsustainable.

As demonstrated in Table 5.2, if you invest early in the life of a mutual fund and the fund grows substantially from new cash flow, you can potentially defer your payment of taxes by accelerating the tax payments of those who invest in the fund after you. Likewise, if you invest in a large fund with a substantial embedded capital gain, you could potentially enable existing investors in the fund to defer paying taxes while accelerating the rate at which you must pay these taxes.

Four Steps To Successful After-Tax Investing

An investor's first objective should be to select a proven, experienced money manager

What Should Investors Do?

Simply picking the right part in the tax life cycle in a fund at which to invest will not necessarily result in great after-tax returns for investors. As we pointed out earlier, many factors have to work together to deliver great after-tax returns and some of them are more important than others. We have listed below in order of priority, those steps that we believe an investor should consider when investing taxable money in a mutual fund.

1. Pick only exceptional, experienced money managers with proven investment strategies

As we noted earlier, the single most important factor in getting great after-tax returns is getting great pre-tax returns. An investor keeps only a percentage of pre-tax returns and if his fund has poor pre-tax results, he will have poor after-tax results.

While it is impossible to accurately predict future investment results based on past returns, you can increase the odds of getting good pre-tax returns by following many of the same criteria that large sophisticated pension plans use when selecting the managers for their funds, including:

- a. *Select experienced, disciplined managers* – Identify those managers who have experienced several types of market environments and who have a disciplined investment strategy and process which have performed well over a long period of time;
- b. *Use managers who use concentrated portfolios* – Select managers who limit the number of holdings in their portfolios so that they invest only in their very best ideas;
- c. *Make sure that it is very unlikely that the fund will change managers any time in the foreseeable future* – When an individual invests in a fund, he is simply buying the skills of a particular manager or portfolio team. If they change, he then owns a completely different fund. Several large pension plans prefer to use managers that own their own firms or at least have large equity stakes in the companies for which they work, making it very unlikely that the managers will leave; and
- d. *Select only those managers who do not have too much money to manage* – Three recent independent research reports by Undiscovered Managers, LLC, Numeric Investors, L.P., and Litman/Gregory¹ each show that trying to invest too much money significantly lowers a fund's returns. Investing money is a *diseconomy of scale* business – that is, the more money that a manager has under management, the harder it is for him to get good returns.

¹For a free copy of Undiscovered Managers, LLC's or Litman/Gregory's research on size, contact us at (888) 242-3514.

2. Invest only in those funds that are at the optimum point in their tax lifecycles.

Under normal circumstances, the best point in the tax life cycle of a fund at which to invest is when:

- a. The fund is fairly new;
- b. It has a small (in absolute terms) embedded capital gain; and
- c. It is likely to grow substantially from new cash flow. Ideally, the amount of new cash flow into the fund will be several times greater than its current size.

The ultimate point at which to invest in the tax life cycle is when a fund is small and has an embedded loss

However, *the ultimate point in the tax life cycle of a fund at which to invest is that rare instance when a small, new fund has an embedded loss*. Such embedded losses usually occur when a fund is fairly new and the market suffers a major correction, similar to the one that occurred during the last two weeks of July and the entire month of August 1998.

By investing into the fund when it has an embedded loss, new investors have two opportunities. First, similar to investing in a relatively new fund, they will likely shift a portion of their future tax gains on to those investors that buy the shares of the fund at a later point in time. In addition, *these new shareholders will inherit a portion the tax loss currently embedded in the fund* and owned by the fund's existing investors. The combination of both of these factors will boost the after-tax returns of the new investors in the fund.

3. Select those funds whose investment processes are coincidentally tax efficient

The next step is to understand the tax efficiency of a fund manager's investment process. As shown in Table 1.1, two great managers may have identical pre-tax returns but substantially different after-tax returns. This differential is tied to how the manager actually invests his portfolio.

There are several factors that an investor should consider when evaluating the tax efficiency of a fund and its investment process including:

- a. *Portfolio turnover* – As we discussed earlier, the higher the level of turnover in a fund, the less the manager is allowing the fund's shareholders to defer paying capital gains taxes and, thus, the lower the after-tax return.
- b. *Manager's sell disciplines* – While turnover is important, it is more critical that an investor understand what factors will lead a manager to sell a holding, or in other terms, the manager's sell disciplines. Understanding the sell disciplines is important for two reasons.

First, some investment processes may have high turnover but still may be incredibly tax efficient. For example, some managers may quickly sell any stock that drops in value but will hold their winners for a long time. Consequently, an investment strategy with high turnover may actually generate substantial short-term capital losses and long-term capital gains and be very tax efficient.

Second, a manager's historical portfolio turnover rate is only a measure of what the manager has done in the past. However, some funds experience significant increases in both turnover and tax distributions as a manager's investment strategy adjusts to changing market conditions. By understanding a manager's sell disciplines, an investor can better predict how the fund's tax efficiency may shift over time.

For example, some investment strategies are heavily weighted towards concentrating the fund's holdings in a few sectors of the market. While a manager may rarely change these sectors, when he does, a fund will likely see a significant jump in the fund's turnover level as well as substantial tax distributions.

- c. *Types of holdings in the portfolio* - Major detriments to tax efficiency in a fund are stocks that pay substantial dividends. Most dividends are considered income and are subject to the highest marginal federal tax rate. The greater the number of high-dividend stocks in a mutual fund's portfolio, the lower its tax efficiency.

4. Invest only in funds that use FIFO (Highest Cost – First Out) accounting

HIFO Accounting - Highest cost shares are sold first

The manner in which a mutual fund accounts for its holdings can also significantly impact the after-tax returns of its shareholders. Mutual funds do not buy entire holdings at once. When investing in a particular stock, the fund will likely build its position over time, purchasing shares at different prices and adding to positions as new cash is invested into the fund.

On the other hand, when reducing the size of a particular holding, a fund will ideally always first sell those shares (that have been held for one year or longer) for which it paid the highest price. For example, if a mutual fund bought 100 shares of Company XYZ for \$40 and another 100 shares for \$60, it will sell the \$60 shares before it sells the \$40 shares, thereby reducing the size of any long-term capital gain.

HIFO accounting is designed to keep the total amount of capital gains recognized by a fund to a minimum, can be implemented by most fund accountants, and does not change a manager's investment strategy or process.

How Does An Investor Find a Fund That Meets All of These Criteria?

The four criteria for successful after-tax investing can conflict with each other.

An obvious problem for most investors is that some of these criteria for selecting a good after-tax fund appear to be in conflict with each other. For example, how do you know if a money manager is capable and his investment process is proven if he is managing a relatively new fund that does not yet have a long-term track record? Also, most of the funds shown in our earlier exhibits that had excellent after-tax returns now have very large embedded gains and are unlikely to be as tax efficient in the future as they have been in the past.

Clone Funds

One potential solution is to consider investing in "clone" funds. Clone funds are new mutual funds that were recently launched, but whose investments are identical to an existing mutual fund with a proven investment process and excellent track record. Because they are new, these clone funds do not have large embedded gains and their investments are identical to the older, more established fund. In addition, there is often a large amount of historical data available on the original fund, including turnover and tax distributions, that would give the investor an indication of the potential tax efficiency of the clone fund.

There is, however, one major problem with most clone funds. Most management companies that create clone funds only do so for their most successful funds – funds that are already very large. Consequently, they often already have too much money to effectively manage and the great investment returns generated by the original fund are not likely to be repeated by the clone fund.

New Funds Managed By Successful Private Account Managers

Some experienced and proven private account managers have new mutual funds

A better alternative would be to consider investing in new funds with managers who have proven investment track records from managing private accounts for very large pension plans and high net worth individuals. Although their funds are new, these managers' investment strategies are not and have been developed over many years, often decades. And while many of these managers already invest a substantial amount of money, their total assets under management are small enough that they still possess enough investment capacity to effectively manage a new mutual fund.

However, for individual investors, it is often difficult to effectively evaluate this type of money manager. Because of NASD rules, the manager is very limited in the private account information that he may provide to potential fund investors and most of these small money management firms do not have brand names that are well known to the investing public.

Financial Advisors Can Help Identify and Evaluate Private Account Managers

But, this type of analysis is fairly easy and common for sophisticated financial advisors. Financial advisors track the best money managers in the country whether they manage money in private accounts or mutual funds, and have access to databases that allow them to evaluate a manager's investment process and tax efficiency. As a group, financial advisors already oversee more than \$500B in assets and are able to incorporate tax issues into their clients' investment strategies. A financial advisor can help the individual investor find those funds that offer the best prospects of generating both good pre-tax and good after-tax returns.

A problem for some investors is that financial advisors provide their services for a fee and many individuals are reluctant to pay fees for advice. However, as shown in this paper, taxes have an enormous impact on investors' returns. Combined with the fact that there are thousands of investment choices currently available, and that it is very difficult for the average investor to build a sophisticated investment plan, many consumers find using a financial advisor to be money well spent.

Conclusion

In summary, investing taxable money is complicated and simple rules such as "pick low turnover funds" or "invest only in index funds" are inadequate guidelines. Getting great after-tax returns requires a far deeper analysis including a manager's pre-tax returns, the tax efficiency of his investment style, and how the fund accounts for its investments. Additionally, the current tax code makes it easier for many newer mutual funds to deliver their best after-tax returns to their earliest shareholders.

The key to an investor's ability to retain a higher percentage of his pre-tax returns is finding a way to defer paying taxes on the fund's capital gains. By being an early investor in a mutual fund that performs well and grows substantially, an individual has an opportunity to shift a portion of his gains in the fund on to those investors that buy shares in the fund at a later date. Although the investor will ultimately have to pay taxes on all of his capital gains, by delaying the payment date, an investor can significantly increase his after-tax returns.

Finally, it is critical to keep in mind that after-tax returns are only a subset of pre-tax investing. Great pre-tax returns are a pre-condition for great after-tax returns. So, while investors can add to their after-tax returns by employing the techniques that we propose, these strategies are only additive and do not replace the importance of first finding great money managers with whom to invest.

Appendix A

Methodology for Calculating After-Tax Returns

Assumptions

1. Distributions are taxed at the highest current marginal tax rate
 - Long-Term Capital Gains Distributions Tax Rate = 20.0%
 - Short-Term Capital Gains & Income Distributions Tax Rate = 39.6%
 - For purposes of this study, medium-term distributions were included as long-term distributions
2. Reinvestment of all distributions
3. Date of initial investment: 12/31/93 (or at inception of fund if < 5 year history)
4. Liquidation of position in the fund: 12/31/97

Data Inputs

1. Quarterly distributions & reinvestment NAVs
 - Sources: Respective fund company & Bloomberg
2. Pre-tax returns
 - Source: Morningstar Principia
3. Inception & ending NAV
 - Sources: Morningstar Principia, respective prospectus, or fund company

Calculation of After-Tax returns

The model tracks the activity of a hypothetical account for a taxable investor. The investor purchases 100 shares in a fund on 12/31/92. For a period of five years, the model tracks the amount of shares that the investor accumulates in his account by automatically reinvesting all distributions. The distributions are reinvested after the deduction of taxes. At the end of the five-year period (Quarter 4, 1997), the investor sells the full position in the fund. Distributions for Quarter 4, 1997 are not reinvested. The after-tax return is calculated by comparing the ending value of the investor's position with the original value of his investment.

Summary of All Funds in Study

Fund Name	1997 AJUM ¹ (\$mm)	1997 Turnover ¹	Embedded Gain Exposure ¹	Embedded Gain Exposure (\$mm)	5 Year Pre-Tax Return ¹	Est. 5 Year After-Tax Return ²	TEQ
Fidelity Dividend Growth ³	\$6,996.40	141%	19%	\$1,329.32	191%	140%	92%
Torray	\$1,563.60	12%	25%	\$390.90	190%	145%	95%
Oakmark ⁴	\$8,923.00	24%	29%	\$2,587.67	179%	132%	92%
Dodge & Cox Stock	\$4,729.90	19%	28%	\$1,324.37	161%	120%	93%
Vanguard Windsor II	\$29,870.00	30%	33%	\$9,857.10	156%	108%	87%
Vanguard Index 500	\$60,840.00	5%	46%	\$27,986.40	150%	113%	94%
Janus Twenty	\$9,294.00	123%	10%	\$929.40	149%	101%	84%
T. Rowe Price Equity Index	\$2,510.70	1%	35%	\$878.75	147%	109%	93%
Clipper	\$959.60	31%	28%	\$268.69	145%	104%	89%
Dreyfus S&P 500 Index	\$1,938.20	2%	29%	\$562.08	145%	108%	93%
Schwab 1000 Inv	\$3,665.70	2%	37%	\$1,356.31	140%	107%	96%
Janus Growth & Income	\$2,869.70	127%	13%	\$373.06	135%	100%	93%
Brandywine	\$6,538.10	192%	8%	\$523.05	133%	83%	78%
Dreyfus Appreciation ⁴	\$2,978.20	5%	30%	\$893.46	131%	101%	96%
MSDW American Value B	\$4,983.40	275%	25%	\$1,245.85	129%	80%	78%
Columbia Growth	\$1,573.20	96%	30%	\$471.96	128%	90%	88%
Vanguard Small Cap Index	\$2,910.00	29%	29%	\$843.90	124%	86%	86%
Strong Total Return Fund	\$891.00	405%	11%	\$98.01	117%	62%	66%
Janus	\$22,717.90	132%	2%	\$454.36	108%	69%	79%
Armstrong Associates	\$14.80	7%	51%	\$48.78	80%	62%	97%
USAA Growth & Tax Strategy	\$232.30	194%	21%	\$48.78	75%	57%	94%
Anchor Capital Accumulation	\$14.60	4%	43%	\$6.28	49%	37%	94%

¹Source: Morningstar Principia & RogersCasey Investworks.

²Calculated utilizing proprietary model; Please see model methodology in Appendix A for further details.

³Pre-tax and after-tax calculations from inception date (1/30/93) through 12/31/97.

⁴Latest available turnover for 1996.

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