

TAX PLANNING

Harvesting *those* Losses

*Exchange traded funds
pose unique opportunities
for tax management.
An expert tells all*

BY GARY GASTINEAU

AT THE BEGINNING OF 2003, MANY observers argued that the vaunted tax efficiency of exchange traded funds was likely to be unimportant for the foreseeable future. Large conventional mutual funds, particularly those that had taken in significant new assets during the late 1990s, had net realized and unrealized losses in their portfolios, reducing the probability of large capital gains distributions. To put the magnitude of taxable capital gains distributions in perspective, the Investment Company Institute calculated that U.S. mutual funds distributed only \$5 billion in taxable capital gains to households in 2002, down from a record \$96 billion in 2000. The sharp market recovery in 2003 erased many funds' accumulated losses, making fund tax efficiency significant again, especially for taxpayers who doubt the longevity of the current 15% capital gains tax rate.

In any sector fund tax-loss harvesting program, a tax-efficient fund is highly desirable. Tax efficiency is important in tax-loss harvesting since some of the fund positions in a tax-oriented investment program should perform well and become long-term holdings with embedded capital gains and diversification over the sector. Our interest, however, is not

just with the tax efficiency of sector funds, but rather with all the characteristics of a sector fund that may allow an investor to generate tax-deferred returns more successfully and efficiently. For example, high volatility, low expenses, and good performance are highly desirable in a sector ETF used for tax-loss harvesting.

In principle, tax-loss harvesting relies on the fact that while most stocks go up and down together, individual securities and sectors have significant movements that are independent of the direction of the overall market. An investor who owns a diversified equity fund will have average pre-tax performance similar to the average performance of the portfolio of sector funds in the tax-loss harvesting program. However, the holder of a single broad market fund will not have a dependable source of tax losses. In fact, the investor in broad market funds will generally find that he has either more realizable tax losses than he needs to harvest, or no tax losses at all. If some stocks or market sectors are down when the overall market is up, the investor with diversified separate investments will have opportunities for tax-loss harvesting.

Prior to the introduction of sector

ETFs, most tax-loss harvesting programs used separate portfolios of individual stocks. While separate stock portfolios may be able to generate more tax-loss opportunities than a diversified portfolio of sector funds, a separate stock portfolio will also incur higher tax management, trading, and administrative costs compared with a program using sector funds. Sector ETFs provide an efficient alternative to individual stock tax-loss strategies.

Using sector funds for tax-loss harvesting and portfolio management takes advantage of the fact that sector funds, in contrast to a diversified portfolio of several hundred individual securities, offer both a more broadly diversified portfolio in the aggregate and much lower management and trading costs. To be specific on the latter point, the cost to trade sector ETFs should be much smaller than the transaction costs associated with harvesting tax losses from a group of individual securities.

An admittedly extreme ETF-versus-individual-stock-trading cost comparison might come from the Nasdaq 100. The cost of trading the individual securities in the Nasdaq 100 can be as much as several percentage points for a round trip (buy and sell) trade. In contrast, it usual-

ly costs only a few cents a share to trade the QQQs, the Nasdaq 100 ETF.

Apart from commissions, which are negotiable (and small in any event), the bid-ask spread on the Nasdaq 100 for retail investors is rarely more than a penny or two a share. Even Microsoft and Intel among the Nasdaq 100 component securities usually have wider bid-ask spreads than the QQQs. Most sector ETFs will be less costly for investors to trade than baskets of the ETF's component stocks, but the savings will be less than the relative savings from trading the Nasdaq 100.

Using individual securities in a tax-loss harvesting investment program is also more labor intensive than using sector funds. To the extent that an investor employs an investment advisor to handle the tax-loss harvesting portfolio, the advisor's charge to use individual stocks is often several percent of assets per year. In contrast, the expense ratios on the sector funds range from 28 basis points on the Sector SPDRs and VIPERs to 60 basis points on iShares.

If an advisor is needed to handle the tax program, the total fees are still likely to be significantly less when using sector ETFs than the fees for a separate stock portfolio. Furthermore, the sector funds provide a higher degree of diversification, both individually and in the aggregate. A portfolio of sector funds will have a greater degree of diversification under virtually all circumstances than any separately managed portfolio of individual stocks is likely to attain, unless it consists of, say, 500 stocks, an untenable number for most separate account managers, let alone a do-it-yourself investor. Most investors will find tax management and tax-loss harvesting with sector funds to be simpler, less risky, and lower in cost.

Choosing the Right Family

The tables that appear on pages 58 and 60 following may be of help in selecting an appropriate family of sector funds and in getting comfortable with the sector fund approach. Table 1 (page 58) lists some attributes of the available sector funds that reflect their effectiveness for tax-loss harvesting. For the most

If some stocks or sectors are **down** when the market is **up**, investors with diversified separate investments will have opportunities for **tax-loss harvesting**

part, the funds covering the sectors are roughly interchangeable in coverage. The choice will turn largely on cost and performance, with volatility a consideration that is harder to quantify.

The fund families are the Sector SPDRs, the iShares Sector Funds and the VIPERS Sector Funds now offered by Vanguard. In terms of sector definitions, both the Sector SPDRs and the VIPERS use the Global Industry Classification Standard (GICS) jointly developed by Standard & Poor's (which provides the indexes for the Sector SPDRs) and Morgan Stanley Capital International (MSCI). MSCI provides the indexes for the Vanguard VIPERS. The iShares Sector Funds use the Dow Jones Global Classification System (DJGCS), but they will soon switch to a new Industry Classification Benchmark (ICB) developed jointly by Dow Jones Indexes and the FTSE Group. The principal differences are in the two consumer indexes. In GICS, the nominal emphasis is on consumer discretionary spending versus staple spending. The Dow Jones Global Classification System emphasized the split between cyclical and non-cyclical consumer stocks. In

the ICB system, the emphasis is on goods versus services. The resulting split in the consumer stocks will apparently continue to be slightly different.

Most financial industry research and analysis is based on the S&P 500 sector classifications. So, if research availability is important to an investor, the Sector SPDRs or the VIPERS (with a similar classification system) might be preferable. For aggregate portfolio risk management and tax-loss harvesting, the classification differences are not likely to be important.

The coverage differences among the

fund families may be significant for a few investors. There are 9 Sector SPDR funds, compared with 10 iShares sector funds and 7 VIPERS sector funds. The difference between the Sector SPDRs and the iShares list occurs because the Sector SPDRs are based on the S&P 500 and there are not usually enough telecommunications stocks in the S&P 500 to populate a regulated investment company (RIC) diversification-compliant telecommunications fund. RIC diversification compliance is necessary if a fund is to distribute dividend income without taxation at the fund level. Any U.S. telecommunications sector fund (as well as funds in several other sectors) cannot be both RIC compliant and capitalization weighted. Telecommunications and technology, which are usually highly correlated, have been combined into a single fund in the Sector SPDRs. Vanguard has indicated that it plans to introduce energy, industrial, and telecommunications VIPERS, apparently when they work out how to handle the RIC compliance issue.

The number of companies included in the various sector indexes and in sector funds based on the components of the various broad market indexes varies significantly over the three sector ETF families. Because the largest companies are so dominant in all the indexes, adding additional companies does not reduce the target weighting of the largest companies in an index very much. While the iShares Sector Funds contain a total of about 1,600 securities from the Dow Jones indexes and a complete family of 10 VIPERS sector funds would have about 2,500 securities from the MSCI indexes, the S&P 500 stocks account for at least 80% of the capitalization weight of these broader sector indexes. The smaller number of companies in the Sector SPDRs makes their indexes and funds slightly more volatile than their more diversified competitors. As Table 2 (page 60) illustrates, the volatility (standard deviation) for the



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Sector SPDRs indexes generally has been higher than the volatility of the indexes underlying the iShares sector funds.

The principal reason for higher volatility in the Sector SPDRs indexes is the difference in aggregate diversification in coverage: 500 companies, against 1,600 or 2,500. Even though the large companies are weighted heavily in all the indexes, the fact of greater diversification, even within a sector, will reduce volatility. In terms of its effect on tax-loss harvesting, greater volatility in a sector fund is desirable because more volatile funds will usually show more diverse relative performance. Most of the volatility differences will disappear in the aggregate multi-sector portfolio because some of the greater sector volatility will cancel out in any of the broad market indexes that will be roughly matched by the basket of sector funds. We would expect the volatility of the VIPER sector funds to be similar to the volatility of the iShares sector funds.

Because several of the Dow Jones sector indexes are not RIC-diversification compliant, the index data in Table 2 overstates the likely volatility of the iShares sector funds, some of which will have smaller positions in some of their larger-capitalization stocks and, hence, more diversification and lower volatility than their indexes. The Sector SPDR indexes already reflect the smaller positions in some large capitalization stocks necessary to achieve RIC-diversification compliance.

Whose Expenses Are Lowest?

More important than the volatility differences among the funds are their expense ratios. The expense ratios on both the Sector SPDRS and the VIPERS are 28 basis points, versus 60 basis points on the iShares Sector funds. A higher expense ratio makes a fund more likely to perform poorly and give rise to a tax-loss harvesting opportunity, but that is not the reason to focus on the expense ratio. The reason for highlighting the expense ratio is that some of the funds in the program should perform well. A tax-loss harvesting investor will eventually have substantial embedded capital gains in some of the funds he buys. The ongoing expenses incurred in maintaining a long-term position in a fund—once embedded capital gains

Table 1: Factors Affecting Tax-Loss Harvesting

	Sector SPDRS	iShares Sector Funds	VIPERS Sectors
Sector Definitions	GICS	ICB	GICS
Companies Covered	500	1,600	About 2,500
Volatility	Highest	Middle	Lowest
Expense Ratio (basis points)	28	60	28
2002 Median Tracking Error (basis points)*	-19	-46	N/A
2003 Median Tracking Error (basis points)*	-49	-80	N/A
Fund Share Transaction Costs	Lowest	Middle	Highest
Fund Tax Efficiency	High	High	Unknown

**Includes net effect of expense ratio; excludes iShares Telecom Sector fund in both years
Source: ETF Consultants*

make selling the fund shares less attractive—should be as low as possible. A lower expense ratio is clearly desirable.

Transaction Costs Do Count

Transaction costs in buying and selling the fund shares also matter. The investor will be paying transaction costs to buy the funds initially, to sell funds to harvest losses, and to replace the sector exposure, perhaps after the 30-day wash sale period has passed. There are typically three components of transaction cost: commissions, the bid-ask spread, and market impact. Commissions are typically the smallest component and are usually a flat fee per trade. The spread and market impact costs are larger and reflect the liquidity of ETF shares, and more importantly, the underlying fund portfolio. While I am unaware of any published sector fund transaction cost comparisons, the lowest ETF transaction costs are generally associated with the largest average stock capitalization and most liquid portfolios. The fact that the average stock is larger and more liquid in the Sector SPDRS means that realizing losses and reestablishing positions should be less costly with the Sector SPDRs than with the other funds. The iShares sector funds will be more costly to trade than the Sector SPDRs, with the VIPERS sectors probably slightly more costly to trade than the iShares sector funds. The portfolio component characteristics (larger cap, more liquid stocks) are much more important than total assets or ETF share trading volume in determining trading costs.

Tax Efficiency Factors

With respect to fund tax efficiency, the Sector SPDRs and iShares creation and redemption processes make me comfortable that neither fund is likely to distribute taxable capital gains in the foreseeable future. Although a number of the iShares funds distributed capital gains in their first year, the iShares portfolio managers seem to have learned ETF tax management and a recurrence of these early capital gains distributions is not likely.

The tax efficiency of the VIPERS is less certain. VIPERS are an exchange-traded share class that is part of a larger fund. The size of the conventional share class for the just-launched sector VIPERS is hard to predict. Vanguard has taken a number of steps to encourage investors to use the VIPERS share class in these new sector funds, rather than the conventional share class, and has included a requirement that an initial purchase of the conventional share class must be at least \$250,000. The combination of conventional and ETF shares in the same fund—with some shareholders able to redeem fund shares for cash—is likely to be less tax efficient than a pure ETF redemption mechanism. Historically, Vanguard has been a more tax-savvy index fund manager than the managers of the other sector ETFs. But the VIPERS structure is not as inherently tax efficient as the structure of the Sector SPDRs or the iShares sector funds.

Watch for Tracking Error

A consideration of the 2002 and 2003 tracking errors for the Sector SPDRs and the iShares sector funds highlights the

importance of this measurement. The large absolute tracking errors for the iShares Energy Sector fund and the iShares Telecom Sector Fund for both years arose primarily because the indexes for these funds are not compliant with the diversification requirements for a regulated investment company under the U.S. Internal Revenue Code. As a consequence, these funds will rarely track the index closely. Tracking error difference essentially reflects the net effect for both 2002 and 2003 of the higher expense ratio of the iShares sector funds. To pick one example, the tracking error difference for the two healthcare funds was 50 basis points, or 0.5%, over the two years. Given roughly equivalent indexes, higher expenses are a cost penalty that an investor can avoid by choosing the Healthcare Sector SPDR or the Healthcare VIPERS.

Small Company Effect

In 2002, smaller companies, which are more heavily represented in the iShares (and even more heavily represented in the VIPERS), underperformed larger capitalization stocks. In 2003, the smaller capitalization stocks outperformed. Any difference in expense ratios will always favor the low-cost fund's performance, but the relative performance of these funds in a particular year is as likely to turn on the relative performance of small-cap versus large-cap stocks.

It's important to consider the volatilities and correlations of stocks based on the Global Industry Classification Standard. The average single stock standard deviation is highest in information technology, telecommunications services, and health care. When you have a 25- or 50-stock basket based on the population of these indexes, the standard deviation (volatility) drops materially. All of the sectors are positively correlated with the S&P 500, some more closely than others. On average, the stocks in a sector will have broad market correlations similar to their sector correlations. The high standard deviation of a 25- or 50-stock basket suggests that the information technology, telecommunications, and health care sectors are most likely to contribute volatility to a tax-loss harvesting program. When correlation with the broad market is measured, health care, utilities, and consumer staples are the

**Table 2: Comparative Sector Volatility
Dow Jones Sectors Versus Sector SPDR Indexes**

Standard Deviation Percentage 6/24/02-6/30/03		
	Dow Jones Index	Sector SPDRs Index
Materials	29.33%	30.07%
Consumer Cyclical/Discretionary	29.40	30.63
Consumer Non-cyclical/Staples	18.84	19.88
Energy	27.46	27.80
Financial	28.74	31.28
Healthcare	25.49	26.42
Industrial	27.66	27.64
Technology and Telecommunications	37.59	38.31
Utilities	29.63	32.73
Median	28.74	30.63

Source: Harry Senecker, "Comparing Apples: Sector Indexes Are Not All the Same" (Dow Jones Indexes, 2003)

Table 3: Sector Fund Assets and Trading Volumes

	Sector SPDRS Symbol	Assets as of 12/31/03, in \$ millions	iShare Symbol	Assets as of 12/31/03, in \$ millions
Materials	XLB	740	IYM	323
Healthcare	XLV	455	IYH	490
Industrial	XLI	584	IYJ	178
Utilities	XLU	1,286	IDU	485
Energy	XLE	633	IYE	222
Consumer Discretionary	XLY	280	IYC	183
Financial	XLF	799	IYF	229
Consumer Staples	XLP	304	IYK	162
Technology*	XLK	1,096	IYW	362
Telecommunications			IYZ	138
TOTAL ASSETS		\$6,181		\$2,777

**Sector SPDR Technology Fund includes telecommunications
Source: American Stock Exchange, Wall Street Journal*

most likely contributors to the success of a tax-loss harvesting strategy that relies for its success on divergent performance among the sectors.

Be Wary of Wash Sales

Tax-loss harvesters should be fully aware of a provision in the tax code called the wash sale rule. A wash sale occurs when, within 30 days of the realization of a loss, an investor acquires securities "substantially identical" to the securities that were sold at a loss. In the event of a wash sale, the loss is not immediately recognized, but is added to the basis of the purchased securities and recognized when those securities are sold, presumably without being tainted

with another wash sale.

Wash sales may enter the picture for a sector fund tax-loss harvester if the investor realizes a significant loss on the shares of a sector fund and decides to maintain the portfolio's exposure to that sector by buying a similar sector fund. The question is: Does the purchase of a similar sector fund trigger a wash sale?


Many observers argue that buying a fund with a different manager or based on a different index is enough to avoid the effect of the wash sale rule, but there is certainly no unanimity that buying a similar fund is risk free.

The Internal Revenue Service has steadfastly resisted efforts to get it to define "substantially identical." You

should check with a tax advisor to get appropriate comfort before making a similar fund purchase within 30 days before or after realizing a loss on the sale of sector fund shares. An investor might just conclude that if there is some cause for concern, the remaining sector funds in the portfolio will provide enough diversification to justify doing nothing for the 30-day interval.

On the basis of higher sector volatilities, lower fund expenses, lower trading costs, and long-term tax efficiency, the

Sector SPDRs currently are the top choice for sector-fund-based risk management and tax-loss harvesting. But apart from the inherent volatility and cost differences, there is relatively little to distinguish among the available sector fund families and likely entrants. There is ample room for one of these fund providers to distinguish their offerings by more aggressive fund management. It is relatively easy for a benchmark index fund manager to outperform a fund's index before expenses. Ultimately, the

manager that delivers the best net investment performance should dominate the sector ETF market. 

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Sector ETF Tracking Errors, 2002 and 2003

Sector/Fund	Total Tracking Error			Difference
	2002	2003	2-Year Total	
Consumer Discretionary/Cyclical				
Consumer Discretionary Select Sector SPDR	(21)	(44)	(65)	
iShares DJ US Consumer Cyclical Sector	(42)	(77)	(129)	(64)
Consumer Staples				
Consumer Staples Selector Sector SPDR	(16)	(35)	(51)	
iShares DJ US Consumer Non-Cyclical Sector	(58)	(73)	(131)	(80)
Energy				
Energy Select Sector SPDR	(19)	(49)	(68)	
iShares DJ US Energy Sector	(196)	138	(58)	10
Financials				
Financial Select Sector SPDR	(19)	(53)	(72)	
iShares DJ US Financial Sector	(46)	(86)	(132)	(60)
Health Care				
Health Care Select Sector SPDR	(26)	(36)	(62)	
iShares DJ US Healthcare Sector	(39)	(73)	(112)	(50)
Industrials				
Industrial Select Sector SPDR	(22)	(59)	(81)	
iShares DJ US Industrial Sector	(57)	(84)	(141)	(60)
Information Technology - Broad Based				
Technology Select Sector SPDR	(15)	(46)	(61)	
iShares DJ US Technology Sector	(36)	(90)	(126)	(65)
Materials				
Materials Select Sector SPDR	(18)	(71)	(89)	
iShares DJ US Basic Materials Sector	(48)	(85)	(133)	(44)
Utilities				
Utilities Select Sector SPDR Fund	(21)	(51)	(72)	
iShares DJ US Utilities Sector	(43)	(80)	(123)	(51)
Telecommunications				
iShares DJ US Telecom Sector	(358)	552	194	N/A

Source: Morgan Stanley, Barclays Global Investors, State Street Global Advisors, Thomson, Bloomberg

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**Volatilities and Correlations
Global Industry Classification Standard (GICS)/Sector Stocks in S&P 500**

Sector	Average Single Stock Standard Deviation	25 Stock Basket Standard Deviation	50 Stock Basket Standard Deviation	GICS Sector Correlation with S&P 500
Information Technology	91%	51%	50%	0.89
Telecommunication Services	57%	35%	35%	0.68
Health Care	56%	32%	31%	0.57
Consumer Discretionary	46%	25%	24%	0.91
Industrials	39%	18%	17%	0.94
Energy	37%	26%	26%	0.72
Financials	36%	29%	29%	0.84
Utilities	35%	24%	23%	0.46
Consumer Staples	33%	19%	19%	0.5
Materials	27%	15%	15%	0.62

Correlations based on quarterly data for Q1 1995 - Q3 2003