

# APPROACHING ZERO TAXES

*Investment Tax Tools to Help  
Maximize After-Tax Wealth*

**Third Edition**





A sepia-toned portrait of Albert Einstein, showing him from the chest up. He has his characteristic wild hair and mustache, and is wearing a dark suit with a white shirt and a dark tie. His hands are resting on a dark, reflective surface in front of him. In the background, a chalkboard is visible with some faint, illegible markings.

## Executive Summary

Albert Einstein once noted,  
***“The hardest thing in the world to understand is the income tax.”***

**We concur.** Since Congress ratified the sixteenth amendment in 1913 legalizing the income tax, entire industries and professions have been born to eliminate and defer tax. This is reasonable and fair. As Judge Learned Hand so eloquently stated, “Over and over again, courts have said there is nothing sinister in arranging one’s affairs to keep taxes as low as possible. Everyone does, rich or poor; and all do right, for nobody owes any public duty to pay more than the law demands.” While these words resound with common sense, the investment industry largely ignores the idea. Even worse, most conventional wisdom regarding tax-efficient investing is misdirected, antiquated, or simply wrong!



## Goal: Pay No More Than the Law Demands

In their seminal paper on the impact of taxes on investing, Arnott and Jeffrey said, “Taxes matter a lot.”<sup>1</sup> They demonstrated that taxes are one of the single largest and most controllable costs of investing. While ignoring taxes is easier in double-digit return eras such as the 1990s, reducing taxes in today’s lower expected return environment is more important than ever. A 30-year study<sup>2</sup> confirmed this. Amazingly, the study found that the average mutual fund investor lost a whopping 58% of their cumulative return to taxes. While a \$1 investment grew to \$21.89 for a tax-free investor, the taxable investor with identical holdings accumulated only \$9.87.

While the goal of completely eliminating taxes is worth striving for, its pursuit leads many astray. Driven by this goal, too many people make ill-conceived decisions that result in poor returns or, even worse, loss of principal. The optimal goal is to maximize your after-tax rate of return. In other words, “Having the tax tail wag the dog is not a good thing, but neither is ignoring the tail.”<sup>3</sup>

This paper explores an approach to investing known as “tax-efficient investing.” In the past, the investment industry and academia have largely ignored tax implications and instead focused strictly on risk and return. Tax-efficient investing incorporates tax ramifications as the critical third leg to the investment management stool (risk/return/taxes). This is a complex concept. A host of factors are considered when developing a tax-efficient investment strategy, including current tax law, tax types and rates, and the effects of state and local taxes. We suspect it is both the complexity of these factors and inherent conflicts of interest that have led the industry to largely ignore taxes. This paper will demonstrate a suite of investment tax tools that can be used to form a tax-efficient investment approach, with the ultimate goal of increasing after-tax returns.

We can’t overstate the importance of after-tax returns. As legendary investor Sir John Templeton said, “For all long-term investors, there is only one objective—maximum total return after taxes.” We couldn’t agree more!

The scope of this paper is limited to tax tools and strategies applicable to existing portfolios. We do not cover tax strategies for

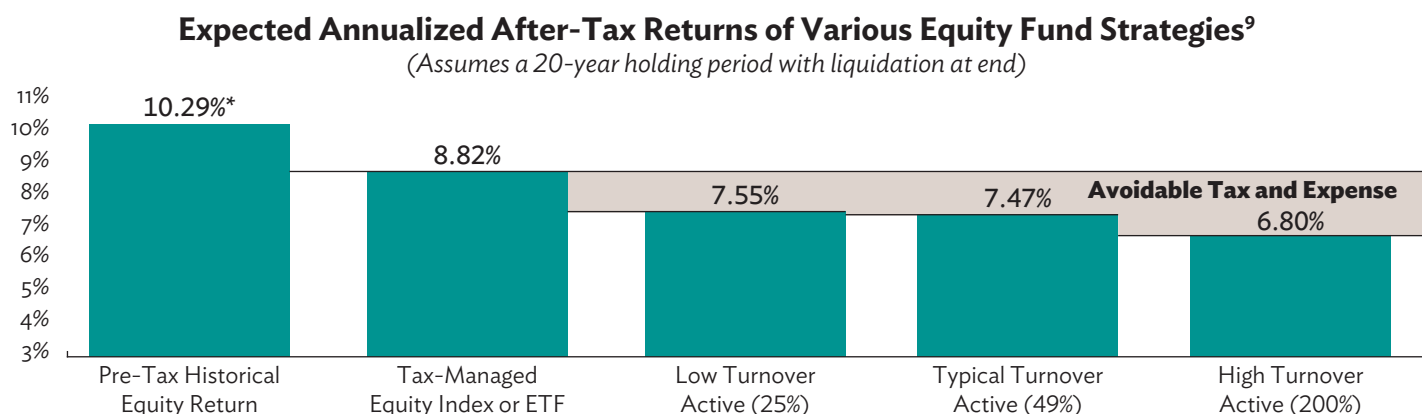
accumulating and saving money, consuming portfolio assets, or avoiding estate taxes.<sup>4</sup> To make the paper more broadly applicable, we also make some simplifying assumptions (see references and methodology).<sup>5</sup> Of critical importance, this paper incorporates the tax law changes legislated in the *Tax Cuts and Jobs Act of 2017*.

## “Active” Investment Management Results in Excessive Tax

In his classic book, *A Random Walk Down Wall Street*,<sup>6</sup> Burton G. Malkiel suggested, “Investors should be wary of any scheme that promises unusually large returns based on past patterns. Relative to a buy-and-hold strategy, the only beneficiaries are likely to be your broker and tax collector.” This statement fairly summarizes the challenges that active managers face in taxable investing. As difficult as it is to outperform the market before taxes, it’s nearly impossible after taxes. Even the SEC recognizes this. They require mutual funds to report after-tax returns. Unfortunately, this disclosure is made in the fund prospectus, which is usually so complex that few investors even attempt to read it.

In their quest to beat the market via speculation and stock picking, active managers face an uphill battle. Unlike passive investors, active investors and traders encounter three burdens as a result of their strategies: higher expenses, higher trading costs, and a higher tax burden. Trading costs include commissions as well as the potentially more significant bid-ask spread and market impact.<sup>7</sup> While the challenges of high costs are well documented, few people in the money management business understand that the tax cost of trading is just as important. In fact, we believe it may be the single most important expense. The problem is that routine securities trading by the active manager makes it almost impossible for investors to defer taxes. It triggers the recognition of expensive short-term capital gains. Unfortunately, for active managers, this problem cannot be eliminated. Active managers are in the business of selling alpha—a measure of above market performance—which is then reduced by taxes. Brokers are compensated by commissions on the trades that generate the taxes, so there is little incentive on the “sell side” of Wall Street to highlight tax considerations.<sup>8</sup>

Figure 1



**Figure 1** illustrates the tax and expense drag imposed by active management. Jeffrey and Arnott noted, “Passive indexing is a very difficult strategy to beat on an after-tax basis, and therefore, active taxable strategies should always be benchmarked against the after-tax performance of an indexed alternative.”<sup>9</sup> Accordingly, our analysis<sup>9</sup> compares after-tax expected returns for actively managed investment strategies—ranging from low turnover to high turnover—to a buy-and-hold, tax-efficient index strategy. Based on estimated (gross) equity returns of 10.29% per year for actively managed and index funds alike, and on current dividend yields, tax rates and expenses, the index investor is expected to lose 1.47% per year (10.29% – 8.82%) to mostly “unavoidable” tax and expense. In contrast, actively managed strategies are expected to lose up to 3.49% (10.29% – 6.80%) of their return to tax and expense. Even low turnover active strategies add considerable “avoidable costs.”

To be fair, the above analysis assumes that active managers earn market returns before expense. In the aggregate, this must be true.<sup>10</sup> Of course, some managers actually beat the market. The problem is, after tax and expenses, even skilled managers must beat the market

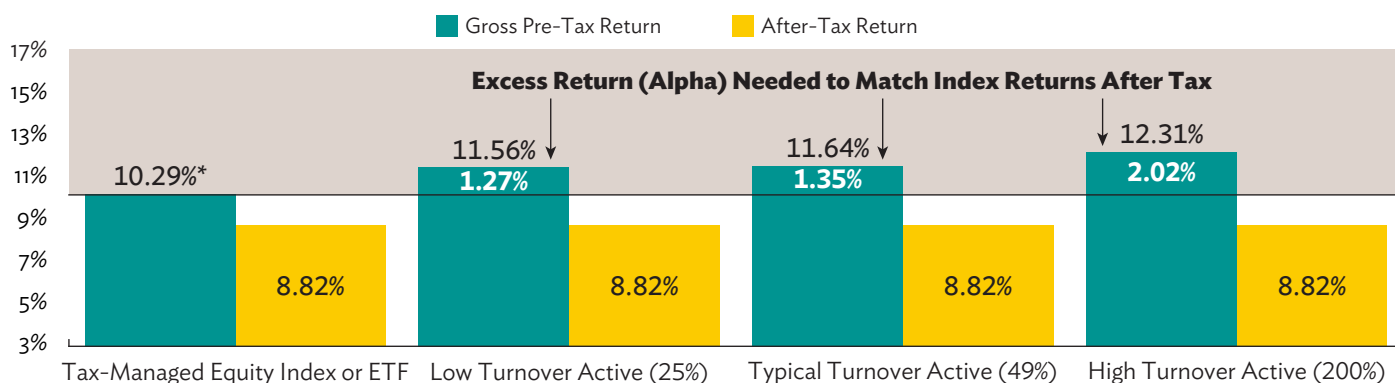
by wide margins to add value. **Figure 2** illustrates this challenge. Average and high turnover managers must beat the market by 1.35% and 2.02%, respectively, on an annual basis just to match the after-tax return of a tax-efficient index fund.<sup>11</sup>

The implications are obvious. One study<sup>1</sup> showed that while 21% of active managers beat the market, fewer than 7% did so after taxes. Active management hardly seems worth the risk!

## Conventional Tax-Avoidance Products Sabotage Unwary Investors

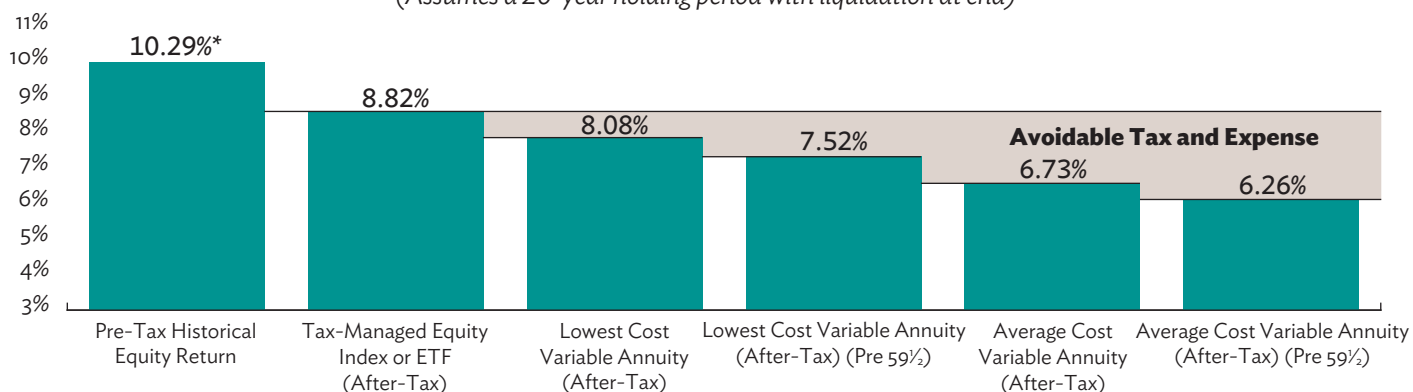
It’s been said that the only two certainties in life are death and taxes. While challenging the former may be an exercise in futility, the latter can at least be addressed by employing meaningful strategies to try to limit one’s tax burden. However, it is important to practice caution when attempting to identify such strategies and not fall prey to tax-avoidance vehicles that are merely gimmicks. It is typically man’s contempt for paying taxes that clouds his judgment when evaluating

**Figure 2**  
**Pre-Tax Active Management Returns Required to Beat a Buy-and-Hold Index Fund Strategy<sup>11</sup>**  
(Assumes a 20-year holding period with liquidation at end)



\*10.29% Pre-tax historical equity return based on S&P 500 Index from 1926-2020

**Figure 3**  
**The High Costs & Negative Tax Implications of Variable Annuities Consume Investors’ Wealth**  
(Assumes a 20-year holding period with liquidation at end)



\*10.29% Pre-tax historical equity return based on S&P 500 from 1926-2020

such vehicles. Often, the pursuit of tax avoidance leads to adopting high risk schemes or marginal products that do not align with investor intentions. Likewise, the art of designing tax-avoidance products relies on opportunistically pressing a prospective investor's tax "hot buttons" to justify inordinate fees without notice. History offers many examples. While the investor may pay less tax, it often comes at the cost of lower returns.

For example, popular variable annuity contracts issued by insurance companies are often flawed from a tax perspective, yet they are sold on the premise of being tax favorable. Money is invested in mutual fund-like sub-accounts which are owned inside of annuity wrappers. Salespeople aggressively promote the fact that annuity contracts defer tax on interest, dividends, and capital gains. As always, the devil is in the details.

Variable annuities can come with a number of serious flaws. First, they can be expensive. In addition to the typical trading costs incurred by most stock mutual funds, annuities are often accompanied by very high internal fees. Likewise, annuity commissions and surrender fees are often quite large. Second, in the long term, annuities are "tax-nasty." Though they feel good along the way, annuities effectively convert long-term capital gains<sup>12</sup> into ordinary income.

**Figure 3** illustrates the 20-year impact of taxes and costs on variable annuities.<sup>13</sup> Each example assumes estimated (gross) equity returns of 10.29% per year and current dividend yields, tax rates, and expenses. Note that the index fund owned outside of a variable annuity performs better than the same fund that's owned inside the more costly variable annuity wrapper. Despite the tax deferment offered by the annuity, the nature of the tax paid at liquidation erodes the positive effects of deferring taxes.<sup>14</sup>

The bottom line: investors should avoid investment products whose advantage or investment merit is contingent on an effective lobby (i.e. by the insurance companies). Investors usually fare best by following sound investment strategies that are not easily sabotaged by politicians or salespeople.

## Legitimate Tax Reduction Harnesses Three Key Strategies

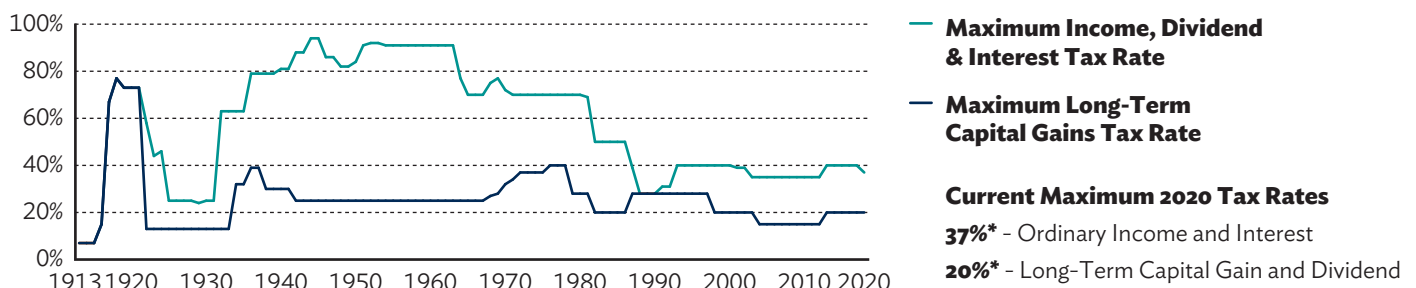
Many or even most conventional "tax-avoidance" products and strategies are not conducive to one's financial health. With that being the case, what is the best way to position oneself in the ever-changing landscape of tax law? As we saw in 2017, the extent to which the tax code is overhauled varies greatly from year to year. The laws that govern how deep Uncle Sam expects our pockets to be are at the mercy of fickle politicians who are influenced by constantly evolving public opinion. The typical reaction is to pass new tax laws that reflect those ideas currently in vogue. Newspaper columnist Art Buchwald wittingly wrote, "Tax reform is when you take taxes off things that have been taxed in the past and put taxes on things that haven't been taxed before." With this convoluted tax system, it's no wonder developing a structured approach to maximizing after-tax returns may seem like rocket science.

To appreciate the ever-changing tax law, simply glance at history. Prior to 1913, the Federal income tax was unconstitutional. When politicians revised that, the floodgates burst open! **Figure 4** illustrates the "tax rate roller coaster" that was experienced up through the late '80s; the more recent changes to tax rates have been range bound. Initially, the highest tax rate was only 7%, but by 1944, high-income earners were paying 94% at the top marginal rate. Years later, while making his case for tax reform, then-President Ronald Reagan explained how, during his Hollywood days, he refused to make more than one movie per year. If he worked any harder, he kept only 10% of the spoils.

The good news is that tax rates have returned to rational levels. The *Tax Cuts and Jobs Act of 2017* reduced the top tax bracket from 39.6% to 37%. This applies to earned income as well as interest income. Capital gains and qualified dividends now face a top rate of 20%. However, the Net Investment Income Tax (additional 3.8% tax) is still in effect for net investment income (interest, dividends, and net capital gains after deductions related to this income). One can only wonder where rates will go next.

**Figure 4**

### Politicians Are Fickle: Tax Rates and Rules Change Continually



Data Source: Taxfoundation.org; taxpolicycenter.org; ctj.org. \*As of 2013, a 3.8% Net Investment Income Tax (NIIT) is an additional tax for higher income investors (over \$250,000 adjusted gross income for married filing jointly and \$200,000 for single filers). Tax is paid based on the amount of Net Investment Income received above the specified threshold. Net Investment Income includes net capital gains, interest, dividends, royalties, rents, net gains from the sale of property not held for use in a trade or business, and certain passive or trading income.

The secret to tax-efficient investing is having a dynamic and systematic process to structure your portfolio for maximum tax efficiency. It must recognize that today's tax situation will probably be different tomorrow. You must constantly adjust your tactics to new realities using an optimal suite of tax tools to take advantage of current and future tax benefits.

In developing these tax tools, investors need to understand that there are three primary investment strategies to reduce or eliminate tax. They include 1) permanent elimination of taxes, 2) deferral of taxes into future years, and 3) deliberately timing the recognition of income in low rate years. As **Figure 5** illustrates, all tax reduction strategies leverage these three methods. For example, the primary strategy used by tax-managed index funds and exchange traded funds (ETFs) is deferring tax. This also allows investors to convert short-term capital gains into long-term capital gains which are taxed at lower rates. In addition, tax deferral creates the opportunity to time the recognition of income into lower tax rate years. In the event that an investor dies prior to the recognition of any unrealized gains, there is a distinct possibility of permanently eliminating capital gains tax (see the step-up in basis discussion on page 14.). The tax reduction strategies are discussed throughout the remainder of this paper.

An effective, tax-efficient investment process requires continual monitoring of one's portfolio strategy to maximize after-tax returns. The suite of investment tax tools must continually evolve, and those individuals utilizing these tools for your benefit should act as fiduciaries by constantly monitoring the landscape for changes. While it is challenging to predict which politician will win the next tax battle, you are best served by using current tax rules—knowing that you may have to re-engineer and update your process in the near future.

## Obtaining a Tax Optimal Portfolio Design

If active management is tax-nasty and traditional tax avoidance products are ineffective, how do you minimize taxes? The answer is simple: incorporate tax-efficient investment strategies. Tax-efficient investing focuses on portfolio structure as well as low turnover while maintaining broad diversification and adhering to a long-term strategy.

Previously we compared active management to index funds. As discussed, index funds provide the optimal way of maximizing after-tax return. Jonathan Clements, the popular *Wall Street Journal* columnist, wrote, "If index funds look great before taxes, their performance is almost unbeatable after taxes, thanks to their low turnover and thus slow realization of capital gains."

Index funds are just one of many avenues to obtain tax efficiency. Selecting a fund that maintains a rules-based approach can steady the flurry of activity that can inadvertently decrease your after-tax return. Choosing the optimal investments to hold within the proper tax-managed accounts comes full circle in obtaining tax efficiency within your portfolio. Whether selecting an index fund, rules based approach, or structured investment, it is important to be aware of the overall strategy behind the investment.

There are three main characteristics that can affect the level of tax efficiency for stock funds:

- 1. Turnover** - Lower turnover funds have a greater chance of being more tax efficient. Typically, marketwide core and large cap index funds will have lower turnover than more narrowly focused segments of the market, such as small or micro cap index funds. For example, in 2020 the Vanguard Total Stock Market Index Fund Admiral had turnover of 8%, while the average U.S. small cap index fund had turnover of 46%.

Figure 5

Legitimate Investment Tax Tools Leverage 3 Key Tax Reduction Strategies

Tax Strategy	Tax-Managed Index or ETF	Core and Structured Satellite <sup>SM</sup>	IRA, Annuity, and 401(k)	529 Plan	Health Savings Account (HSA)	Roth IRA	Tax Engineering	Tax Loss Harvesting	Tax-Free Municipal Bond	Step-Up in Basis	FIFO Accounting	Charitable Strategies
<b>1</b> Permanently Eliminate Tax	✓	✓	—	✓✓	✓✓	✓✓	✓✓	✓	✓✓	✓✓	—	✓✓
<b>2</b> Defer Taxes	✓✓	✓✓	✓✓	—	✓	—	✓✓	✓✓	—	—	✓✓	✓
<b>3</b> Time Tax in Low Income Years	✓	✓	✓✓	—	—	—	✓	✓	—	—	—	✓

✓✓ Primary Strategy

✓ Secondary Strategy

— Not Applicable



**2. Dividends** - Value stocks typically pay higher dividends than growth stocks, resulting in lower tax-efficiency for value index funds, as dividends can be taxed at current income rates (37% marginal plus 3.8% NIIT maximum) if not qualified dividends or at the long-term capital gain rate if qualified (20% plus 3.8% NIIT maximum). Instead of paying dividends, most of the growth stock return comes in the form of appreciation in value (price appreciation), which is tax-deferred until the shares are sold.

**3. Fund structure / management** - Whether looking at an index mutual fund or ETF, the structural differences can affect tax efficiency. First, there are differences in the structure of a mutual fund versus an ETF. Second, not all ETFs are structured the same. These are discussed in more detail in the next section.

**Figure 6** depicts the “Core and Structured Satellite<sup>SM</sup>” approach to investing. This is a proprietary term that is used to describe our diversified asset class investing. Tax wise, the ideal core fund is a marketwide fund which tracks an index such as the CRSP U.S. Total Stock Market Index. A market-cap weighted index fund based on this index is comprised of core holdings that invest in most publicly traded stocks.<sup>16</sup> We believe this “core” holding offers three inherent advantages: 1) broad diversification, 2) near perfect alignment with the market with minimal rebalancing, and 3) a long-term buy-and-hold strategy that helps avoid realizing most gains—even on small and value stocks.

Some people assume that investing in such a broad market index is sufficient. However, we believe the “Structured Satellite” investments (small, value, international, etc.) provide a high degree of diversification from the large growth bias that is present in the core. Around the tax-efficient core, these “Structured Satellite” funds provide exposure to under-represented asset classes such as small cap stocks, large and small value stocks, and developed international and emerging markets stocks. In a fully diversified portfolio, there are, of course, other asset classes that comprise the rest of the portfolio such as global bonds and alternatives.

## There are Several Ways to Tax-Efficient Funds

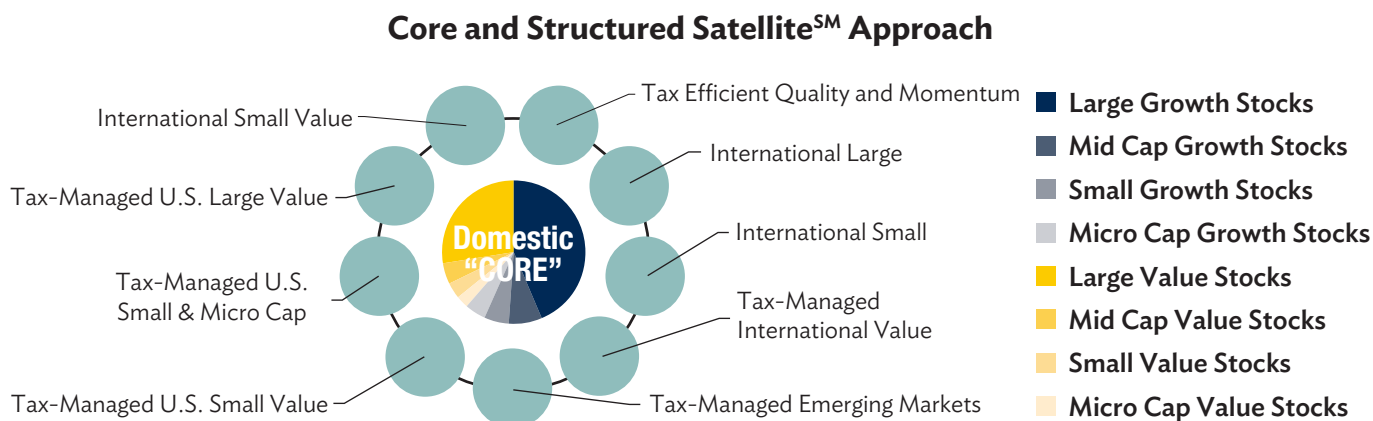
Many investors mistakenly assume that owning mutual funds results in higher taxes. This is a myth. While it is true that most actively managed funds, and even some index funds, frequently trigger unnecessary tax, most index and exchange traded funds (ETFs) are tax efficient. In particular, tax-managed index funds avoid many of the common tax traps associated with traditional active funds while taking advantage of the established tax law to accomplish optimal tax efficiency.

While structured investments avoid stock picking and speculation, they differ from a fund selection that would invest in exact alignment with an underlying benchmark. In contrast, structured funds only attempt to approximate a benchmark—occasionally breaking the rules. Though this means the fund will not perfectly track an index, this approach has potential to increase after-tax returns. Furthermore, we believe it can do so with high certainty and minimal cost. Unlike active stock picking where the odds of failure are high, we believe active tax management can potentially offer higher odds for increasing returns. Ironically, for taxable investors, ignoring tax management may be just as irresponsible as active stock picking.

**Figure 7** illustrates six techniques that tax-managed index funds use to maximize tax efficiency. Without tax management, micro cap indexes tend to be relatively tax-nasty. Since they represent only about 2% of the entire value of the stock market, each year many successful micro cap stocks “graduate” to become small or mid cap stocks. Without tax management, these stocks are sold and investors must realize capital gains.

The first strategy provides flexibility to the fund’s target capitalization range to include both micro and small cap stocks. This allows the fund to avoid taxable sales as micro cap stocks graduate into the small cap range. Imagine, however, that the stocks keep growing. Employing a hold range to allow some graduation into mid cap stocks further defers recognition of capital gains. If stocks later graduate from the “hold” range, the tax-managed fund then sells

**Figure 6**



*Note: All vehicles outside of Domestic Core are considered Structured Satellites<sup>TM</sup>*

such stocks, but only after they have been held for 12 months, thus qualifying for long-term capital gains rates (as high as 20% plus 3.8% NIIT) instead of short-term rates (as high as 37% plus 3.8% NIIT).<sup>17</sup> At the same time this gain is realized, the fund may harvest available losses (see pages 10–11) while carefully avoiding the 30-day wash sale rule. The realized losses have the ability to offset prior or future realized capital gains. Tax-managed funds also employ savvy techniques like FIFO (Highest In, First Out) accounting (see pages 10–11) and imposing surrender fees on short-term traders.

While the technical nature of ETFs is well beyond the scope of this paper, these funds, which trade like stocks, are inherently tax efficient. A creation and redemption process allows the ETF fund company to wash out low basis stock to the market maker (through in-kind securities transfers) without causing detriment to fund owners. This helps avoid realizing gains. **Figure 8** illustrates this complex process. Unlike traditional open-ended mutual fund shares issued and redeemed directly by sponsoring fund companies, ETFs are bought and sold by investors on public exchanges, just like stocks. When investors buy and sell shares on an exchange, they are ultimately buying them from market makers, also called Authorized Participants, who maintain inventories of shares for liquidity purposes. When the market maker’s inventory runs low

(more buyers than sellers exist), the market maker purchases the underlying securities for the ETF in the open market, presents a basket of such securities to the ETF fund company, and in return receives newly created ETF shares for replenishing their inventory. Likewise, market makers with too much inventory (more sellers than buyers) present their surplus ETF shares to the fund company. The fund company redeems such shares by unbundling the underlying securities owned by the ETF and returning the basket of securities to the market maker. Most often, the fund systematically identifies, unbundles, and passes back to the market maker the lowest cost basis securities. This cleanses the remaining ETF portfolio of potential unrealized capital gains. As a result, ETFs are inherently more tax efficient than traditional funds because the mutual funds do not have a similar “back door” to flush out potentially tax-nasty low basis stock.

Tax-management techniques defer taxes to the future. Deferring tax is like getting an interest-free loan from the government to be repaid at your option—generally when you are in a lower tax bracket. Though tax-management techniques may slightly increase costs and portfolio turnover and introduce tracking error, the benefit an investor realizes by increasing after-tax return significantly outweighs the increase in costs.

Figure 7

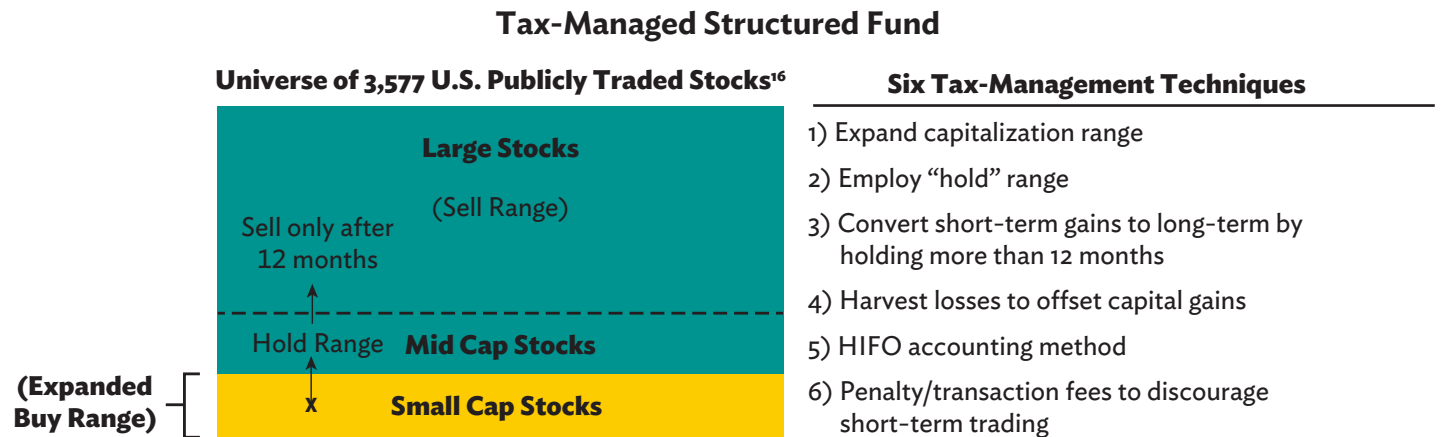
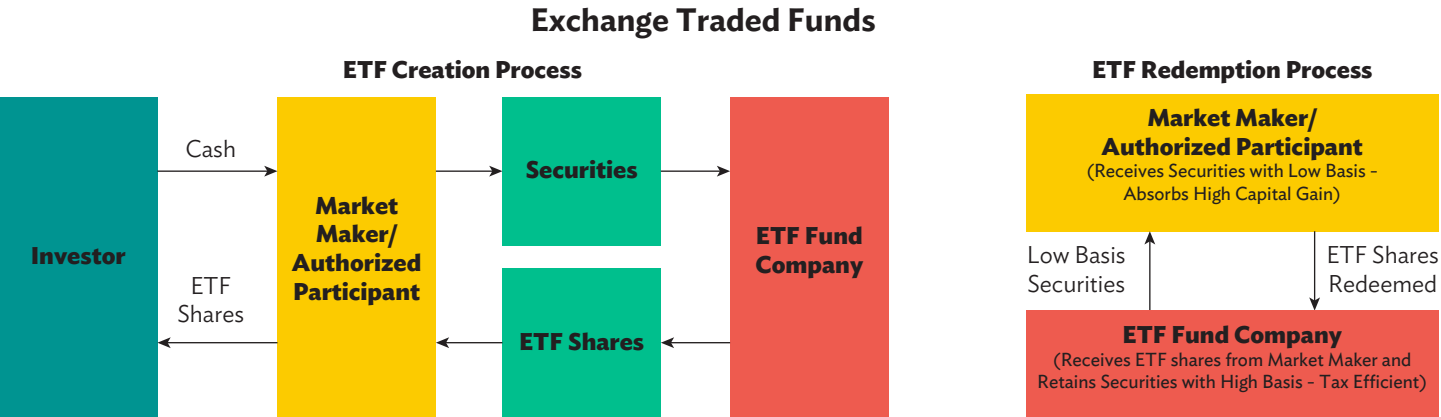


Figure 8





## Proper Tax “Bucket” Structure is of Paramount Importance

In the quest for maximum tax efficiency, asset location is nearly as important as the actual investments you make. To understand, imagine that you hold your portfolio in three different tax buckets (which are discussed below). The buckets catch and hold your growth. Still, some gains evaporate due to taxes depending upon which bucket your money is in. This tax bucket analogy simplifies the myriad of tax rates, regulations, rules, and types of income.

The three most common tax buckets include:

1. Tax-deferred accounts (i.e. Traditional IRA, 401(k), 403(b), Annuity, Pension Assets, etc.)
2. Taxable accounts (i.e. Individual, Joint, Trust, Foundation, etc.)
3. Tax-exempt accounts (i.e. Roth IRA, Roth 401(k))

By happenstance, some people have all their assets in one bucket, although most investors have them spread over two or more buckets. The tax-exempt bucket is often the smallest while taxable and tax-deferred buckets are typically larger. Understanding how, when, and at what rates your investments are taxed is essential in deciding which investment you should hold in which bucket. The implications of investing in various tax buckets are illustrated in **Figure 9**.

Conventional wisdom is often wrong with respect to tax bucket management (asset location). Historically, many investors have errantly held long-term investments (stocks) in tax-deferred accounts. Unfortunately, this eliminates the opportunity to benefit from preferential long-term capital gains and dividend tax rates. In addition, holding stocks in tax-deferred accounts prevents the investor from engaging in loss harvesting (see pages 10-11). As **Figure 9** illustrates, it makes more sense to hold most stocks in taxable accounts. Certain tax-nasty stock asset classes are better off in tax-exempt accounts while corporate and government bonds are ideally placed in tax-deferred accounts.

Investors love the tax-exempt and tax-deferred buckets. The tax-exempt investor has already paid taxes on the assets being invested, so all future growth is tax-free which is beneficial for individuals who believe they will be in a higher tax bracket in retirement than they are now. Tax-deferred investors defer all taxes to the future. However, this deferral comes at a cost. When the money is withdrawn, the entire amount—including capital gains—is taxed at ordinary income rates up to 37%. Lower capital gain rates do not apply. Tax-deferred investors likewise miss an opportunity to receive a step-up in basis (see page 14). At death, the investor's estate or heirs always get taxed on the accumulated gains inside of tax-deferred accounts.

Taxable accounts are more complex. Qualified dividends are now taxed (in the year received) at rates up to 20% (plus 3.8% NIIT). Non-qualified dividends and interest currently get taxed at rates up to 37% (plus 3.8% NIIT). By design, capital gains—both short-

term (held less than 12 months) and long-term (held 12 months or more)—are taxed in the future, when shares are sold. Short-term gains are taxed up to 37% (plus 3.8% NIIT) while long-term capital gains can be deferred and are ultimately taxed at rates no higher than 20% (plus 3.8% NIIT). As discussed on page 14, the step-up in basis that occurs at death may result in the permanent elimination of capital gains.

One big advantage of deferring tax (tax-deferred and taxable buckets) is that rates often decline in retirement. Top bracket taxpayers may see their tax rate decline to 24% or less during retirement years.

Most investors ignore tax consequences or don't properly divide their investments among their accounts. Though effective tax bucket management is complex, the benefit of getting it right is significant. Effective asset location does not increase your gross return but reduces how much tax you pay on April 15th.

## Tax Engineering May Be the Most Effective Way to Reduce Tax

Tax engineering is an effective method of coordinating the location of your assets to eliminate and/or defer unnecessary taxes. It focuses on getting the right investments, within your asset allocation strategy, positioned in the right tax buckets (see **Figure 9**). This does not change your actual gross return; it just systematically reduces your tax bill and can potentially help increase your after tax return.

Tax engineering is neither simple nor intuitive. It requires making investment decisions on a portfolio-wide basis and is a two-step process. First, investors must determine their overall asset allocation based on risk tolerance and return requirements. The allocation decision determines the optimal combination of asset classes including large stocks, small stocks, bonds, etc. Step two then focuses on proper asset location—determining which investments belong in which tax buckets.

The benefit of tax engineering is illustrated by the example in **Figure 10**. We illustrate three different hypothetical scenarios in which we compare a tax-engineered portfolio to two others in which tax assumptions were either incorrect or ignored (which we refer to as “tax-backwards investing”). Each example assumes an investment of 60% stocks and 40% bonds, a common retirement allocation. We assume three-quarters of the stocks are invested in a core market portfolio with the remaining one-quarter in small cap stocks. The investor also has three buckets—40% in tax-deferred accounts, 45% in taxable accounts, and 15% in tax-exempt accounts. In all three examples, the gross expected return before costs and taxes is 8.5%.<sup>18</sup>

In the first scenario, the tax-engineered index portfolio optimally positions the marketwide fund in the taxable buckets, small stocks (a “Structured Satellite” fund) in the tax-exempt bucket and bonds in the tax-deferred bucket. This tax-efficient investor loses 0.9%<sup>19</sup>

annually to taxes. The second scenario shows an investor with the same exact holdings, but located in the wrong buckets. This simple “location error” causes the investor to pay an additional 0.4%<sup>20</sup> in taxes (6.9% net return after taxes instead of 7.3%). The third investor is most typical. Instead of investing in index funds with Core and Structured Satellite<sup>SM</sup> investments, he owns tax-nasty, actively managed funds in a “tax-backwards” manner (using the wrong buckets). Even before tax, the high costs of active management cause a significant reduction in return for this investor (7.3% net return after costs vs. 8.2% for the Core and Structured Satellite<sup>SM</sup> investor).<sup>21</sup> After taxes and costs, the tax-backwards, actively managed portfolio sees its gross return of 8.5% shrink to a mere 5.9%.




The example above shows the importance of employing a tax-efficient investment strategy. The investor who chose the tax-managed index strategy with proper asset location had an after-

tax return of 7.3%, while the investor who chose actively managed funds and ignored asset location had an after-tax return of 5.9%. The second investor’s returns are nearly 20% lower, entirely due to decisions that are controlled by the hypothetical investor. If anything, this example understates the true benefits of optimal tax engineering. In the first scenario, losses in the taxable bucket could be harvested to offset gains. In contrast, the “tax-backwards” investor may lose much of the ability to harvest and recognize losses since you cannot deduct losses in tax-deferred accounts.

Tax engineering provides significant opportunities for investors. Though effective asset location is often ignored by many financial advisors, it can empower investors to proactively organize their portfolios and earn more than those who ignore taxes.

**Figure 9**

## Investor Tax Buckets are Taxed at Multiple Tax Rates, Currently and in the Future

 <div><b>Tax-Deferred Accounts</b> (Traditional IRA, 401(k), 403b, Pension Assets, Annuity, etc.)</div>	Type of Gain	Maximum Current Tax Rate	Maximum Future Tax Rate	Retirement Rate (if below max)
	Interest and NQ Dividend	N/A	37%	10 - 35%
	Short-Term Capital Gain	N/A	37%	10 - 35%
	Qualified Dividend	N/A	37%	10 - 35%
	Long-Term Capital Gain	N/A	37%	10 - 35%
	IRD (Income Tax at Death)	N/A	37%	10 - 35%
 <div><b>Taxable Accounts</b> (Individual, Joint, Trust, Foundation, etc.)</div>	Type of Gain	Maximum Current Tax Rate	Maximum Future Tax Rate	Retirement Rate (if below max)
	Interest and NQ Dividend	37% (plus 3.8% NIIT)	N/A	N/A
	Short-Term Capital Gain	N/A	37% (plus 3.8% NIIT)	10 - 35% (plus 3.8% NIIT)
	Qualified Dividend	20%	N/A	N/A
	Long-Term Capital Gain	N/A	20% (plus 3.8% NIIT)	0 - 15% (plus 3.8% NIIT)
	IRD (Income Tax at Death)	N/A	0%	0%
 <div><b>Tax-Exempt Accounts</b> (Roth IRA, Roth 401(k))</div>	Type of Gain	Maximum Current Tax Rate	Maximum Future Tax Rate	Retirement Rate (if below max)
	Interest and NQ Dividend	0%	0%	0%
	Short-Term Capital Gain	0%	0%	0%
	Qualified Dividend	0%	0%	0%
	Long-Term Capital Gain	0%	0%	0%
	IRD (Income Tax at Death)	0%	0%	0%
Type of Investment	Tax-Deferred	Taxable	Tax-Exempt	
Tax-Nasty Stocks (High Dividend, High Realized Gain)	Better	Bad	Best	
Tax-Efficient Stocks (Low Dividend, Low Realized Gain)	Bad	Best	Better	
Taxable Bonds (Government, Agency, Corporate)	Best	Bad	Fair	
Tax-Free Bonds (Municipal)	Very Bad	Varies*	Very Bad	
Cash (Money Market, T-Bills, Savings, CDs)	Better	Better	Bad	

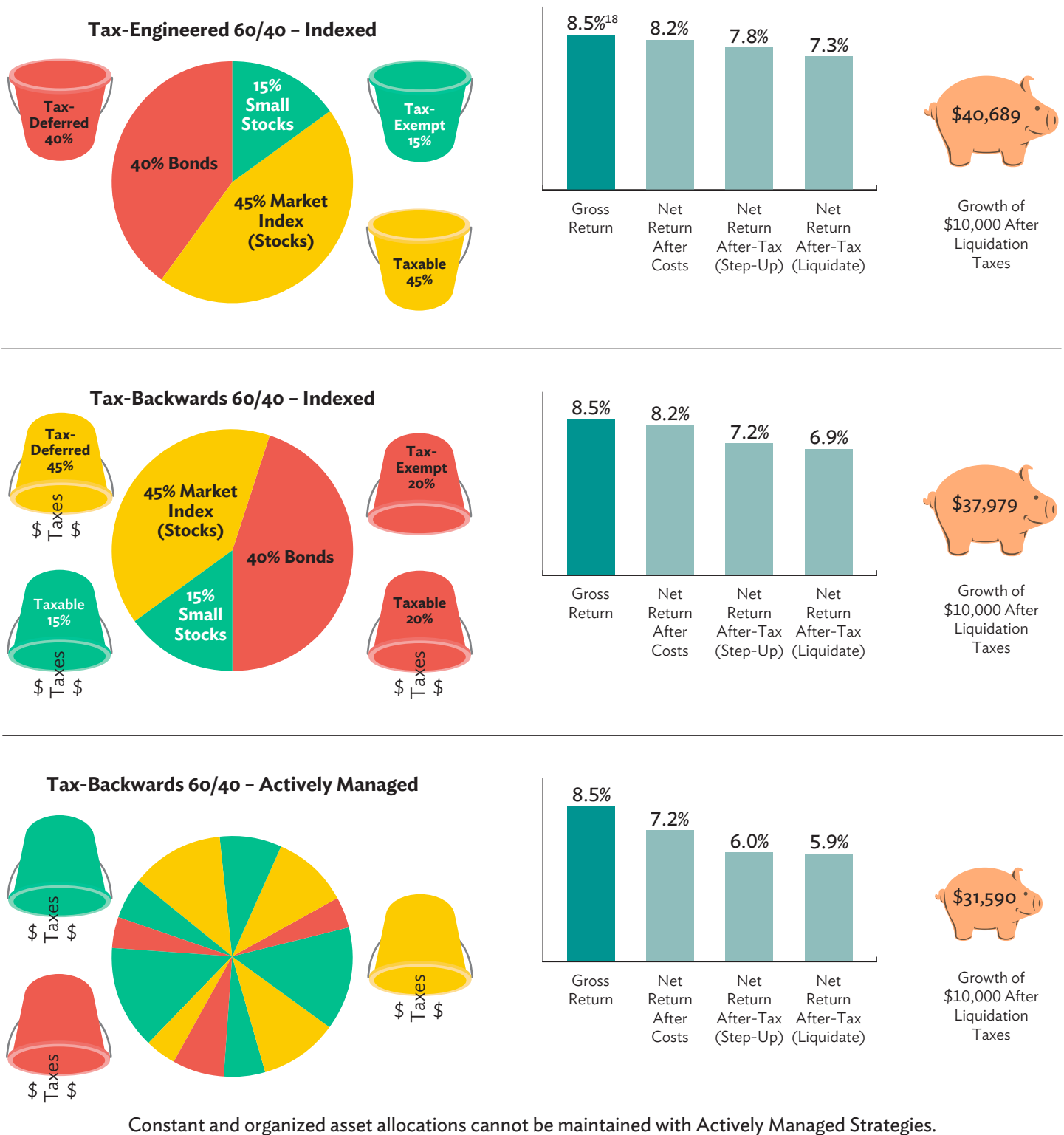
For illustrative purposes only. Note: Ideal asset locations are in bold. Top marginal tax rate is 37%; and top long-term capital gains rate is 20%. The 3.8% Net Investment Income Tax (NIIT) is applicable for taxpayers with adjusted gross incomes over \$250,000 for married filing jointly taxpayers or \$200,000 for single taxpayers.

\*Many variables need to be considered when the efficiency of holding municipal bonds in an investor’s taxable accounts. Municipal bonds often make the most sense for high tax bracket investors, with a significant allocation to bonds who own mostly taxable investments. Investors in high tax states also benefit from holding municipal bonds in taxable accounts. Investors subject to the alternative minimum tax should also carefully consider the impact municipal bonds may have on their situation.

Figure 10

Tax Engineering and Low Costs Increase Returns Over Time

(Hypothetical 60/40 stock/bond portfolio, liquidation after 20 yr. holding period, no rebalancing)  
(40% tax-deferred, 45% taxable, 15% tax-exempt assets)



Data Source: See Endnotes 18-21 for calculation details.



## Tax Loss Harvesting and FIFO Accounting Can Reduce Taxes

Behaviorally, no one ever wants to realize losses. While we would prefer to never lose money, as in contests and sporting events, you can't win all the time. Growth oriented investors occasionally suffer the agony of defeat. Fortunately, the investment world does offer taxable investors a consolation prize. Tax loss harvesting allows us to recapture some of the loss from Uncle Sam.

Loss harvesting is not complex. Investors have the ability to control the timing and recognition of gains and losses. Successful investments can be held indefinitely—allowing long-term deferral of gains. In contrast, it is often prudent to sell losing investments in order to minimize taxable income. Naturally, this can only be done in taxable accounts (not in tax-deferred or tax-exempt accounts such as IRAs and Roth IRAs).

Ideally, losses are harvested in a disciplined and systematic manner that continually captures tax benefits and preserves them for current and future use. Unused losses can be carried forward indefinitely to offset future gains.<sup>22</sup> As many investors can be loss-averse, tax loss harvesting can be difficult in that it requires investors to turn paper losses into actual losses.

A typical loss harvesting transaction might involve selling an investment with a \$25,000 capital loss and concurrently buying back a similar, but not identical investment. To avoid IRS “wash sale rules,” you cannot repurchase the identical security for 31 days. The portfolio's asset allocation does not change but a valuable tax benefit can be realized. **Figure 11** illustrates that this essentially risk-free transaction results in a \$7,165 tax reduction over three years when the harvested losses are also applied to \$3,000 of earned income each year. Without loss harvesting, gains and income result in a \$7,165 tax bill. In contrast, the investor who harvests \$25,000 in losses pays no taxes on these same assets. This \$7,165 difference effectively recaptures 29% of the original \$25,000 loss incurred.

While this transaction lowers tax basis (possibly creating future gains), it also maximizes tax savings by offsetting short-term capital gains and ordinary income of up to \$3,000 per year.

When it is time to sell, many investors err in their selection of an accounting method for tax purposes. After selling a partial position, the IRS offers multiple methods to determine your tax basis in the shares sold. Most investors accumulate shares over time and at varying prices. Thus, the wrong accounting method may cause the investor to realize gains on highly appreciated shares (tax lots) while holding shares with smaller gains or possibly even losses.

To illustrate this concept, **Figure 12** demonstrates three ways an investor might sell \$30,000 worth of securities from three lots totaling a market value of \$70,000. The total position was accumulated in three transactions—15 months, 10 months, and one month ago. All three purchases or lots have appreciated in value. The first purchase or position should qualify for long-term

gain while the latter two lots would produce short-term gains. At the far right, we provide the tax calculation for FIFO (first-in, first-out), average cost (most common method), and HIFO (highest-in, first-out) accounting methods.

As is nearly always the case, HIFO accounting results in much lower tax costs. Importantly, there are no additional costs or risks in utilizing HIFO—it is merely an accounting election. HIFO elections are instrumental in maximizing loss harvesting opportunities and in minimizing tax liability.

## Municipal Bonds Generally Offer Higher After-Tax Yields

When the constitution was amended in 1913 to legalize income taxes, the prohibition against the federal government's taxing of state and local governments remained intact. This provides high income investors with a valuable tax minimization opportunity. While Treasury, government agency, corporate, and foreign bonds are all taxed at ordinary rates of up to 37%, bond interest paid by most state and local governments (municipalities) is exempt from federal taxation.

There are a variety of tax-free municipal bonds. General obligation bonds are backed by an issuer's general taxing authority, while revenue bonds are backed by revenues generated from specific projects. Insured municipal bonds have insurance companies that contractually assure their repayment, while pre-refunded bonds are collateralized by U.S. Treasury bonds.

The tax-free nature of municipal bonds is appealing, but like everything in life it comes with a price. Because of their tax-free status, issuers of municipal bonds have a leg up on issuers of taxable bonds. Thus, the pre-tax yield they offer is generally lower than that of a similar bond issued by corporations or the U.S. Treasury. While the reduction in yield has varied over time, on average, high quality municipal bonds historically paid 85% of the corresponding yield offered by U.S. Treasuries.<sup>23</sup> Low tax bracket investors should generally avoid municipal bonds—irrespective of the tax-free advantage. Even after applying the tax benefit, low bracket investors are usually better off buying taxable bonds. In contrast, the yield reduction is generally well worth it for high bracket investors (i.e. typically 32% tax bracket or higher).

To compare apples to apples, the yield on tax-free muni-bonds must be converted into a taxable-equivalent yield. **Figure 13** illustrates the break-even rate for taxable versus municipal bonds based on the bond yield and marginal tax bracket. For an investor in the 37% tax bracket, a tax-free municipal bond yielding 3.0% is the yield equivalent of a 4.76% taxable bond. In contrast, a lower bracket (10%) investor only needs to find a taxable bond yielding 3.33% to be better off in taxable bonds. You can reference **Figure 14** to determine your marginal tax bracket.

Figure 11

### The Arithmetic of Tax Loss Harvesting<sup>22</sup> (Three-year tax savings from harvesting a \$25,000 loss.)

Activity	Without Loss Harvesting		With Loss Harvesting	
	Gain (Loss)	Taxes Paid	Gain (Loss)	Tax Cost
<b>Year One</b>				
Realized Short-Term Gain	\$5,000	\$1,595	\$5,000	\$1,595
Realized Long-Term Gain	\$5,000	\$1,190	\$5,000	\$1,190
Earned Income	\$3,000	\$957	\$3,000	\$957
Harvest \$25,000 Long-Term Loss	-	-	(\$13,000)	(\$3,742)
<b>Loss Carry Forward</b>				<b>\$12,000</b>
<b>Year Two</b>				
Realized Long-Term Gain	\$3,000	\$714	\$3,000	\$714
Earned Income	\$3,000	\$957	\$3,000	\$957
Carry Forward \$12,000 Long-Term Loss	-	-	(\$6,000)	(\$1,671)
<b>Loss Carry Forward</b>				<b>\$6,000</b>
<b>Year Three</b>				
Realized Short-Term Gain	\$1,000	\$319	\$1,000	\$319
Realized Long-Term Gain	\$2,000	\$476	\$2,000	\$476
Earned Income	\$3,000	\$957	\$3,000	\$957
Carry Forward \$6,000 Long-Term Loss	-	-	(\$6,000)	(\$1,752)
<b>Total Tax Cost</b>		<b>\$7,164</b>		<b>\$0</b>
<b>Cumulative 3-Year Benefit</b>				<b>\$7,165</b>
<b>Loss Recapture: \$7,165/\$25,000 = 29%</b>				

Note: Per the aforementioned hypothetical investor (see Endnote 5), ordinary income and short-term capital gain tax rate is 31.9% with long-term capital gain rate of 23.8%. Tax code allows for up to \$3,000 of earned income to be offset annually with capital losses.

Figure 12

### Comparing FIFO to Alternative Tax Accounting Methods

Multiple Lots Accumulated				Highest-in, First-out (HIFO)			
Holding Period	Current Value	Cost Basis	Unrealized Gain	Shares Sold	Current Value	Realized Gain	Taxes Paid
15 months	\$25,000	\$15,000	\$10,000	1 month	\$20,000	\$400	\$128
10 months	\$25,000	\$20,000	\$5,000	10 months	\$10,000	\$2,000	\$638
1 month	\$20,000	\$19,600	\$400		<b>\$30,000</b>	<b>\$2,400</b>	<b>\$766</b>
	<b>\$70,000</b>	<b>\$54,600</b>	<b>\$15,400</b>				
Average Cost Basis				Shares Sold	Current Value	Realized Gain	Taxes Paid
				15 months	\$10,714	\$4,286	\$1,020
				10 months	\$10,714	\$2,143	\$683
				1 month	\$8,572	\$171	\$55
					<b>\$30,000</b>	<b>\$6,600</b>	<b>\$1,758</b>
First-In, First-Out (FIFO)				Shares Sold	Current Value	Realized Gain	Taxes Paid
				15 months	\$25,000	\$10,000	\$2,380
				10 months	\$5,000	\$1,000	\$319
					<b>\$30,000</b>	<b>\$11,000</b>	<b>\$2,699</b>

Note: Per the aforementioned hypothetical investor (see Endnote 5), ordinary income and short-term capital gain tax rate is 31.9% with long-term capital gain rate of 23.8%.

For investors in high tax states, municipal bonds issued in your home state often make great sense because most states do not tax municipal bond interest paid on their own bonds. California, New York, Massachusetts, and Iowa are good examples.

Though municipal bonds offer advantages, they are easily misused. While municipal bonds are often appropriate for high tax bracket investors, low tax bracket investors often use them inappropriately when taxable bonds would make more sense. Investors also forget that unlike Treasury bonds, municipal bond issuers occasionally default. Tax-free municipal bonds rarely make sense in tax-deferred or tax-exempt accounts, even for high bracket taxpayers, as the tax benefits are lost when placed in these types of accounts (IRA or Roth IRA). Rather, high bracket investors should attempt to hold taxable bonds inside their tax-deferred accounts (such as an IRA or 401(k)) when possible. Finally, since the Alternative Minimum Tax (AMT) can affect municipal bond investors, professional tax advice may be warranted for those subject to this tax.

While municipal bonds offer opportunity, they require analysis prior to implementation. Furthermore, they involve continual monitoring of tax brackets, yield curves, and personal tax circumstances.

## Specialty Tax-Advantaged Accounts Can Be a Potential Strategy

The first account type that may be applicable to some are 529 plans, one of the most popular investment vehicles for helping families save for college. 529 plans are tax-advantaged savings plans, typically sponsored by an individual state and available to help fund a beneficiary’s future qualified higher education expenses – tuition, mandatory fees, and room and board. Currently, all 50 states and the District of Columbia offer some type of plan. 529s fall into two separate categories: Prepaid Tuition Plans and College Savings Plans. For this paper, we will concentrate on College Savings Plans which are investment accounts that a benefactor can open to save for an individual beneficiary’s future higher education costs.

Benefits of these plans include:

- Many states offer tax incentives for contributions made by residents to that state’s plan
- Qualified withdrawals are not subject to federal income tax
- In most cases, qualified withdrawals are not subject to state income tax

The *Tax Cuts and Jobs Act of 2017* expanded the definition of “qualified higher education expense” to include “expenses for tuition in connection with enrollment or attendance at an elementary or secondary public, private, or religious school.” So, families who prefer to have their children in private schools can use 529 monies to assist with these costs. If the funds are used for elementary or secondary education, however, they are subject to a \$10,000 limit per beneficiary per year. (Note: Whether or not you will be able to take advantage of this opportunity will also be dependent on whether your state of residence and the home state of your plan follow the Federal allowance for K-12 private schools. For example, as of January 2018, the State of Illinois made it known that they do not intend to honor this expanded distribution scheme.)

529 plans were one of the most popular mechanisms to save for college prior to the *Tax Cut and Jobs Act of 2017* and are now only further solidified by the modifications the act made. The potential for contribution deductibility, tax-free growth, and state and Federal tax-free withdrawals can make them a winning strategy. However, not all plans are created equal. Examine the plan’s underlying investments and expenses against any state tax benefits with your financial advisor and tax preparer to help you determine which plan makes the most sense for your family.

A strategy that may make sense for those with accessibility to them are Health Savings Accounts (HSAs). These are savings and investment vehicles that allow individuals and families with high-deductible health plans (HDHP) to set aside funds for health care expenses on a pre-tax basis. An HSA is tax advantaged in three ways:

Figure 13

Taxable Equivalent Yield of Municipal Bonds

Municipal Bond Yield	Marginal Tax Bracket						
	10%	12%	22%	24%	32%	35%	37%
1.0%	1.11%	1.14%	1.28%	1.32%	1.47%	1.54%	1.59%
2.0%	2.22%	2.27%	2.56%	2.63%	2.94%	3.08%	3.17%
3.0%	3.33%	3.41%	3.85%	3.95%	4.41%	4.62%	4.76%
4.0%	4.44%	4.55%	5.13%	5.26%	5.88%	6.15%	6.35%
5.0%	5.56%	5.68%	6.41%	6.58%	7.35%	7.69%	7.94%

Taxable Equivalent Yield = Yield/(1-Marginal Tax Rate). For simplicity purposes, the table uses the marginal tax bracket rates, not including the 3.8% NIIT.  
Data Source [Taxfoundation.org](http://Taxfoundation.org); [taxpolicycenter.org](http://taxpolicycenter.org) ctj.org



1) contributions are excluded from taxable income, 2) distributions are excluded from taxable income if they are used for qualified medical expenses, and 3) growth and earnings on invested HSA funds are tax free. Contributions can be made by an employee and/or their employer, subject to IRS-imposed dollar amount limits (indexed for inflation). Once a person reaches age 65 and enrolls in Medicare, contributions are no longer allowed. Funds can be accessed after age 65 for any purpose without the penalty, but ordinary income tax would be due on withdrawals used for non-medical purposes. In general, when HSAs are a good fit for the health and financial situation at hand, they can be another source of tax savings. According to healthcare projection software company HealthView Services, a healthy 65-year-old couple retiring in 2020 with a future adjusted gross annual income of less than \$170,000 after adding in any tax-exempt income will have projected lifetime healthcare premiums adding up to \$321,994 in today's dollars. This includes premium payments for Medicare Parts B and D, supplemental insurance premiums (national average), and dental insurance, but does not include deductibles, co-pays, and other costs such as hearing and vision. With healthcare costs estimated to be a substantial portion of retirement budgets, funding these costs with tax-free dollars can help preserve other retirement assets.

If used for appropriate circumstances and according to the rules, 529s and HSAs can be favorable contributors to the strategy of achieving optimal tax efficiency.

## Long-Term Planning Strategies Eliminate or Reduce Tax on Appreciated Investments

Lastly, long-term planning opportunities are also available to benefit investors, their families, and charities. Investors can utilize a number of gifting and charitable strategies to reduce or eliminate deferred gains that accumulate over time. Only Uncle Sam loses out!

Most people don't know that unrealized capital gains are completely forgiven at death.<sup>24</sup> While long-term capital gains during life are taxed at rates of up to 20% (plus 3.8% NIIT), even the wealthiest Americans escape tax on unrealized capital gains at death. If Jeff Bezos, CEO of Amazon, sold his Amazon stock tomorrow, he would pay capital gains tax on the sale. However, if Mr. Bezos were to die and his family was to sell the stock after his death, the taxable gain would vanish. They would save the capital gains tax—permanently! This permanent elimination of capital gains tax at death is referred to as the step-up in basis and is available to almost every investor.<sup>24</sup> Benjamin Franklin once observed, "In this world nothing is certain but death and taxes." For once, here's a case where death at least eliminates one layer of tax!

**Figure 15** illustrates potential tax savings from the step-up in basis. On page 2, we noted that equity investors have historically earned 10.3%. Assuming that trend continues, after expenses and taxes, a tax-managed index fund should earn 8.8%. This assumes liquidation and payment of tax on deferred gains after 20 years. However, if the same investor passes away after 20 years, the step-up in basis increases the return to heirs by 1.1% annually, from 8.8% to 9.9%<sup>25</sup>. In contrast, IRAs, variable annuities, and other tax-deferred accounts are not eligible for this step-up in basis.

Gifting strategies, whether to family or charity, can provide an earlier opportunity to achieve the same result as the step-up in basis. High bracket taxpayers can gift highly appreciated stock to family members in lower tax brackets. Upon sale, capital gain rates can decline to nothing!<sup>26</sup> Charitable gifts of appreciated stocks offer even larger tax benefits. The donor gets a charitable deduction for the full value of the stock at rates of up to 37% and permanently eliminates any unrealized capital gains. As such, a 37% tax bracket investor making a \$15,000 gift of appreciated stock (with a basis of \$7,500) would enjoy total tax savings of \$6,569. Thus, the net cost of the gift is only \$8,431.<sup>27</sup>

**Figure 14**

**Tax Tables Pursuant to Tax Cuts and Jobs Act of 2017**

Marginal Federal Tax Rate	Single	Married Filing Jointly	Married Filing Separately	Head of Household
<b>10%</b>	\$0 - \$9,525	\$0 - \$19,050	\$0 - \$9,525	\$0 - \$13,600
<b>12%</b>	\$9,525 - \$38,700	\$19,050 - \$77,400	\$9,525 - \$38,700	\$13,600 - \$51,800
<b>22%</b>	\$38,700 - \$82,500	\$77,400 - \$165,000	\$38,700 - \$82,500	\$51,800 - \$82,500
<b>24%</b>	\$82,500 - \$157,500	\$165,000 - \$315,000	\$82,500 - \$157,500	\$82,500 - \$157,500
<b>32%</b>	\$157,500 - \$200,000	\$315,000 - \$400,000	\$157,500 - \$200,000	\$157,500 - \$200,000
<b>35%</b>	\$200,000 - \$500,000	\$400,000 - \$600,000	\$200,000 - \$300,000	\$200,000 - \$500,000
<b>37%</b>	\$500,000+	\$600,000+	\$300,000+	\$500,000+

Data Source: IRC §1(j)(2)(A)-(D); [www.congress.gov/bill/115th-congress/house-bill/1](http://www.congress.gov/bill/115th-congress/house-bill/1). Table illustrates marginal tax rates which are typically used to describe one's tax bracket—the bracket that one's last dollar of income falls into, and therefore the highest tax rate one pays. The table can be used to calculate effective tax rates, meaning income is taxed at a blended (average) rate. For simplicity purposes, the table does not include the 3.8% NIIT.

There are many tax-efficient charitable gifting strategies available (e.g. CRUTs, CLATs and CRATs). Their benefits vary with your tax rate, charitable intent, and estate planning needs. Another example is the Donor Advised Fund (DAF). These are particularly effective for high bracket taxpayers who are expecting a drop in their tax rates over the next few years. **Figure 16** compares outright gifts of cash to using a DAF to leverage identical gifts. We assume an investor donates \$5,000 to their designated charity for three consecutive years. In year one, they are in the 37% tax bracket. In years two and three, they expect to be in the 22% tax bracket. **Figure 16** shows the three-year, after-tax cost of a \$15,000 cash gift as being \$11,715. In contrast, using a DAF to make identical gifts has an after-tax cost of \$8,431—a \$3,284 tax savings!

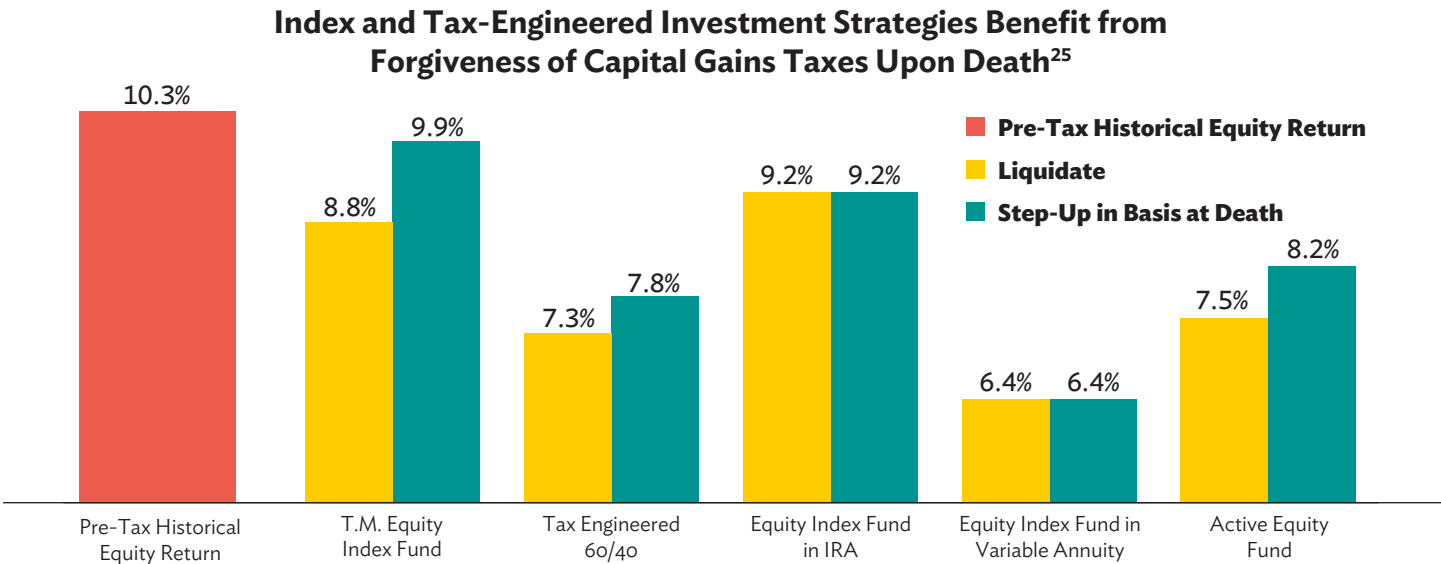
In the example, the investor contributes \$15,000 of appreciated stock in year one to the DAF (when their tax rate is high). This charitable deduction eliminates the \$7,500 in unrealized capital gains on the \$15,000 of appreciated stock. The investor gets an immediate tax deduction for what would have been three years of contributions. However, the DAF still enables the donor to control the timing of the actual disbursements of DAF assets. Thus, they can make the same \$5,000 per year gift from the DAF to their designated charity.

## Tax-Efficient Investing is a Disciplined and Systematic Process—Not a Product or Event

“The power to tax is the power to destroy,” John Marshall once proclaimed. While we can begrudge the politicians for their propensity to tax, we are probably better off conceding, like Ben Franklin, that taxes are one of the certainties of life. We also believe that an investor’s desire to reduce taxes is fairly certain. Thus, tax-efficient investing involves arranging one’s financial affairs in such a way as to avoid paying any more tax than the law requires.

Making investment decisions in light of tax consequences is both an art and a science. While many tax management techniques may seem insignificant when viewed in isolation, collectively they add up to real value. Some decisions are straightforward and clear while others require difficult judgment calls. These decisions require the investor to quantify the tax benefits and be aware of currently available strategies. Our primary objective with this paper is to provide information regarding the practical application, modeling and quantification of several different tax strategies.

Figure 15



Data Source: See Endnote 25 for strategy descriptions. Assumed 20-year holding period comparing returns at death vs. liquidation at end.

**Figure 16**

**Alternative Gifting Strategy: Gift Appreciated Securities to a Donor Advised Fund<sup>27</sup>**

Annual Gifting with Cash					
Year	Marginal Tax Rate	Description	Cash Disbursed	Tax Savings	Net Cost
1	37%	Cash to Charity	\$5,000	\$1,595	\$3,405
2	22%	Cash to Charity	\$5,000	\$846	\$4,155
3	22%	Cash to Charity	\$5,000	\$846	\$4,155
<b>Totals</b>			<b>\$15,000</b>	<b>\$3,286</b>	<b>\$11,715</b>

Alternative Strategy: Gift Appreciated Securities to Donor Advised Fund					
Year	Marginal Tax Rate	Description	Cash Disbursed	Tax Savings	Net Cost
1	37%	Gift \$15,000 in stock to DAF (Cost Basis of \$7,500)	\$0	\$6,569	\$8,431
		Direct \$5,000 from DAF to Charity	\$5,000	\$0	\$0
2	22%	Direct \$5,000 from DAF to Charity	\$5,000	\$0	\$0
3	22%	Direct \$5,000 from DAF to Charity	\$5,000	\$0	\$0
<b>Totals</b>			<b>\$15,000</b>	<b>\$6,569</b>	<b>\$8,431</b>

Tax Advantage of DAF Strategy			<b>\$11,715 - \$8,431 = \$3,284</b>		
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*Note: This exhibit assumes uses hypothetical investor's effective tax rate as they transition to married filing jointly, but with only \$100,000 in taxable income starting in year 2. Per the aforementioned hypothetical investor, effective tax rates are referenced in Endnote 5.*

Tax-efficient investors should remember several key points:

- Be open to education about tax matters
- Active management is inherently tax-nasty
- Many traditional tax-advantaged products are gimmicky and should be considered carefully
- Tax laws are dynamic and continually changing
- Think about and evaluate your portfolio as a whole
- Proper asset location and tax efficiency are synonymous
- Harvest losses by selling your losers, even if it hurts
- Be wary of conventional wisdom and outdated beliefs
- Weigh tax benefits against marginal risk and cost
- Only after-tax returns matter

Taxes should be an important consideration for all investors, maybe the most important. The bad news is that taxable investing can be both counterintuitive and difficult. While tax-smart investing does have its intellectual challenges, it also offers the most basic of tangible rewards—more money in your pocket. It's an effort worth pursuing.

We believe that tax-efficient investing requires a knowledgeable coach. To add value, an advisor needs to use a disciplined, systematic, and integrated process. This process may be the single most valuable contribution offered by a financial advisor.

Though tax-efficient investing might be easy to ignore in the short term, its benefits can be enormous over the long term. Getting it right may be the difference between success and failure in a long-term financial plan.



## References and Methodology

Data Source: Morningstar Direct, unless otherwise noted.

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4. While we have limited the focus of this paper to strategies designed to maximize after-tax wealth for existing portfolios, a future paper may instead focus on financial planning strategies that can be used to efficiently accumulate and liquidate assets.
5. We assumed the individual investor is in the top marginal Federal tax bracket (37%). In addition to income tax, a Net Investment Income Tax (NIIT) of 3.8% is applied to net investment income (capital gains, interest, dividends, royalties, rents, net gains from the sale of property not held for use in a trade or business, and certain passive or trading income) for adjusted gross incomes over \$250,000 for married filing jointly taxpayers or \$200,000 for single taxpayers. For this paper, the tax calculations apply maximum rates for a hypothetical married couple with income of \$1 million (\$500,000 is assumed Net Investment Income). When the Federal tax bracket thresholds (see Figure 14) are blended and NIIT is applied for these circumstances, the effective (blended) tax rate on short-term capital gains and investment income is 31.9%. Other investment income, such as long-term capital gains and qualified dividends, are subject to the maximum capital gains rate of 23.8% (20% maximum long-term capital gains rate plus 3.8% NIIT), which is also used in the paper calculations unless otherwise indicated. Given the multitude of state tax rates, we assumed investors are not taxed at the state level. While this is accurate for states such as Florida and Texas, investors residing in high tax states, in particular, need to consider the impact of the state tax on their overall investment strategy. We also assumed the investor is not subject to the Alternative Minimum Tax (AMT). Investors subject to this tax should consult a qualified tax advisor to determine if the strategies contained herein apply to their specific situation. For example, AMT investors frequently include individuals living in high income tax states, those with very high itemized deductions, investors with large capital gains, and individuals with significant private activity municipal bond income. We also assumed that 2017 legislated law changes, some of which are scheduled to sunset in the future, are extended indefinitely. We make this assumption given that we believe the current state of tax law is the best predictor of future tax rules. Strategies discussed in this paper may be negatively impacted by future legislation or if the law actually sunsets.
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7. Reichenstein, William and William Jennings, 2003. *Integrating Investments and the Tax Code*. John Wiley & Sons, Inc., Hoboken, New Jersey.
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9. To calculate expected after-tax return on tax-managed index and active strategies, we assumed that investors earned gross equity returns of 10.29% reduced by fund expenses, trading costs, and taxes on dividends and capital gains (see Endnote 5 for tax rate details). Starting gross return is based on the historical total return of the S&P 500 from 1/1/1926 to 12/31/2020. While there is the possibility of reduced expected equity returns in the future, it is beyond the scope of this paper to address those accordingly; we simply assumed that equities perform at their historical return levels. The estimated after-tax returns for tax-managed index funds or ETFs are calculated using the following assumptions based on the 12/31/2020 data of a marketwide index proxy accessible to most investors, the Vanguard Total Stock Market Index Fund-Admiral Shares (VTSAX), which reduces the gross return: expenses (0.04%), turnover (8.0%), 30-day SEC dividend yield (1.17%), capital gains distributions (0.22% long-term, 0.07% short-term). For the estimated after-tax returns on actively managed strategies, we used assumptions from the Morningstar Large Core category of actively managed open-end funds and ETFs as of 12/31/2020: expenses (0.93%), turnover (43%), 30-day SEC dividend yield (0.72%), capital gains distributions (2.47% long-term, 0.82% short-term). For both sets of assumptions, the percentage of dividends assumed to be qualified (taxed at 20%, plus 3.8% NIIT) is 100% for simplicity purposes. For both sets of assumptions, we estimate total trading costs are equal to 0.50% per annum per 100% portfolio turnover. This is based on an industry study of commissions, bid-ask spreads, and market impact. While the average equity fund turnover as of 12/31/2020 was 49% per annum, we arbitrarily assumed low turnover funds averaged 25% turnover while high turnover funds averaged 200% turnover. We further assumed that, in each year, investors realized both long- and short-term capital gains based on the category average figures cited above. For all strategies, we assumed the investor liquidates his entire position at the end of 20 years and pays the maximum long-term capital gains tax on any unrealized appreciation.
10. Sharpe, William F., 1991. The Arithmetic of Active Management. *Financial Analysts Journal* (January/February 1991): 7-9.
11. In Figure 2, we calculated the excess return (alpha) required to outperform a tax-managed index fund or ETF (after accounting for taxes). We used the same methodology as described in endnote 9. However, instead of assuming 10.29% gross equity returns for the actively managed strategies, we determined the gross return required for such strategies so as to merely equal the after-tax return of a tax-managed index or ETF. The actively managed strategies need to earn positive pre-tax alpha just to break even with an index strategy after taxes. This is due to the higher expenses and taxes inherently associated with active management.
12. Unlike investors' taxable investments, annuity owners do not benefit from potential step-up in basis opportunities (see page 14). At death, all gains distributed from variable annuities are taxed at the top marginal tax rate, as all capital gains and qualified dividends are essentially converted to ordinary income inside an annuity wrapper.
13. The after-tax returns for variable annuities assumed investors earn gross equity returns of 10.29% (see endnote 9). To determine after-tax returns, gross returns are reduced by expense ratios and mortality and expense (M&E) charges. To simplify, we ignored trading costs. In the case of the lowest cost variable annuity illustrations, we based our calculations on the Vanguard Variable Annuity. The combined expense ratio (Total Market Index) and M&E charge on this annuity is 0.71% per annum. In the case of the average cost variable annuity, we used the average total expenses for equity variable annuities in Morningstar as of 12/31/20 of 1.30%. We further assumed the investor incurs no early surrender fees and all gains are deferred until liquidation at the end of 20 years. A 10% surrender penalty on earnings is applied to pre-59 1/2 distributions.
14. When comparing the net returns (after taxes and cost) of variable annuities versus traditional equity funds, it is helpful to compare the potential net returns for annuities (with their higher costs) to traditional mutual funds. Vanguard offers the lowest cost annuity in the industry. They also offer traditional mutual funds. For example, they offer the total stock market index both outright and inside their variable ratio annuity. The Vanguard index fund inside the annuity has an expense ratio of 0.16% plus an additional 0.29% M&E charge. This additional charge gives the investor the benefit of tax deferral. The challenge for the annuity is that its marginal cost exceeds any tax advantage. For example, at present, a total stock market fund, even in the traditional mutual fund format, is not expected to cause investors to realize annual capital gains. Instead, capital appreciation is most likely deferred until liquidation—just like occurs in the annuity version. Thus, the only advantage to the annuity is deferral of taxes on the dividend yield. Furthermore, such dividends are taxed at a current maximum rate. Current dividend yields are approximately 1.17% (as of 12/31/2020). Accordingly, the dividend tax cost of not deferring taxes on the traditional fund's dividend yield is 0.28% (1.17% x 23.8%). Thus, the annual tax savings is less than the total cost of the annuity (0.45%). Even if the analysis ended there, annuities would be a bad deal. However, upon further review, annuities only get worse. The annuity does not actually eliminate tax—it merely defers it. They also convert tax-advantaged long-term capital gains and qualified dividends to higher-taxed ordinary income. Thus, in total, it is mathematically impossible for investors to come out ahead in annuities. Also, for the average annuity (that is far more expensive than Vanguard's), the hurdle is even larger.

15. “Core and Structured Satellite<sup>SM</sup>” is a proprietary term used by Savant. It is distinctly different from the widely used industry term “core and satellite.” “Core and satellite” traditionally means that the core of a portfolio (typically 50–80%) is held in a market based index. The goal of the core is to provide diversification, low costs, tracking relative to the broad market and tax efficiency. The remainder is invested in a more extreme and actively managed style. Often, satellites include active stock pickers, hedge funds, private equity, vehicles used for market timing (frequently referred to as tactical allocation), and speculative bets. In contrast, while “Core and Structured Satellite<sup>SM</sup>” use a similar core, the Structured Satellite<sup>SM</sup> instead consists of style – and factor-based ETFs, index, structured, and passive funds. No timing, active management, or speculating takes place. Instead, the satellites become strategic buy-and-hold positions that allow the investor to tilt their portfolio toward asset classes under-represented by the broad market. The goal is to enhance return and reduce risk through better structured portfolio design. “Structured Satellite<sup>SM</sup>” can include asset classes such as micro cap stocks, value stocks, international stocks, and emerging market stocks. The premise of this strategy is the belief that markets are efficient, broad global asset allocation is of utmost importance, timing and tactical allocation is risky, expensive and provides little or no benefit, and tax management needs to be central to the investment decision.
16. As of 12/31/2020, the CRSP U.S. Total Market Index includes 3,577 constituents across mega, large, small, and micro capitalizations, representing nearly 100% of the U.S. investable equity market.
17. Capital gains tax, both short- and long-term, can vary depending on which income tax bracket you fall into.
18. The gross portfolio return of 8.5% is a blended and weighted average of historical U.S. market index returns from 1926 to 2020 derived from a portfolio consisting of 45% S&P 500 Index, 40% Ibbotson Intermediate Bond Index and 15% Ibbotson U.S. Small Stock Index.
19. Expenses for implementing the “Tax-engineered 60/40 – Indexed” were assumed to be 0.05% (expense ratio and trading costs) for the core market index. This could be accomplished using the Vanguard Total Stock Market Index Admiral, Vanguard Index 500 Portfolio or any of several ETF index funds. For bonds, we likewise assumed 0.11% combined expense ratio and trading costs. This can be accomplished using Vanguard Total Bond Market Index Admiral. In the case of small stocks, we assumed the investor utilized the Vanguard Small Cap Index Admiral Fund. This fund’s expense ratio and trading costs combined to equal 0.16%. In regard to taxes, we assumed that the taxable account is invested in the core market index which pays a qualified dividend of 1.17%. All capital gains are deferred until liquidation. Appreciation in bonds is deferred in the IRA while small stocks grow tax-free in the Roth IRA. To simplify, we further assumed no rebalancing over the 20-year holding period. In the case of the step-up scenario, we assumed deferred capital gains are eliminated at the end of 20 years due to death. In the case of the liquidation scenario, we assumed all unrealized capital gains are taxed at the end of 20 years.
20. The same expense and fund assumptions were used for the “Tax-backwards 60/40 – Indexed” as discussed in #19 above. In regards to taxes, we assumed the taxable account is equally invested in small stocks (Structured Satellite<sup>SM</sup>) and bonds. In the case of bonds, we assumed their entire return came in the form of dividend income taxed annually as ordinary income. On bonds, we assumed no capital gain or loss. In the case of small stocks, we utilized the 12-month distribution yield of 1.22% as reported in Morningstar as of 12/31/2020. Based on historical experience, we assumed that all capital gains, on average, are distributed on an annual basis. Appreciation in the core market index is deferred in the IRA while bonds in the Roth IRA grow tax-free. We further assumed no rebalancing over the 20-year holding period. In the case of the step-up scenario, we assumed deferred capital gains are eliminated at the end of 20 years due to death. In the case of the liquidation scenario, we assumed all unrealized capital gains are taxed at the end of 20 years.
21. To estimate expenses involved in implementing the “Tax-backwards 60/40 – Actively Managed,” we assumed the median actively managed equity fund had an expense ratio of 0.95% based on 12/31/2020 Morningstar data. Additionally, we estimated total equity trading costs to add an additional 0.25% expense per annum. This is based on the 49% median portfolio turnover incurred by the equity funds tracked by Morningstar as of 12/31/2020. We assumed this 100% turnover equated to 0.50% trading cost per year. This estimated trading cost includes commissions, bid-ask spreads, and market impact. In the case of bonds, we utilized the median bond expense ratio of 0.70%. We assumed trading costs added an additional 0.06% per year. For small cap stocks we used the median actively managed fund expense ratio of 1.12% and estimated trading costs to be an additional 0.11% expense per annum. In regards to taxes, we assumed the taxable account is invested equally in small stocks and bonds. In the case of bonds, we assumed their entire return came in the form of dividend income taxed annually as ordinary income. On bonds, we assumed no capital gain or loss. In the case of stocks, we utilize the average stock fund 12-month distribution yield as reported in Morningstar as of 12/31/2020. We assumed that all capital gains are distributed annually. Also based on historical experience, we assumed that 75% of such gain is taxed as long-term gain while 25% is short-term in nature. Stock appreciation is deferred in the IRA while the bonds in the Roth IRA grow tax-free. We further assumed no rebalancing over the 20-year holding period. In the case of the step-up scenario, we assumed deferred capital gains are eliminated at the end of 20 years due to death. In the case of the liquidation scenario, we assumed all unrealized capital gains are taxed at the end of 20 years.
22. When computing tax, you first offset short-term gains and losses. Both are incurred when an investment is held less than 12 months. Surplus short-term gain is taxed at ordinary tax rates. Likewise, long-term gains and losses (positions held over 12 months) are offset. Remaining long-term gain is taxed up to 20% (plus 3.8% NIIT). However, once short-term gains and losses are offset, surplus long-term losses offset unlimited tax-nasty short-term gain plus an extra \$3,000 (per year) of ordinary income—both typically taxed at ordinary tax rates.
23. Source: Nuveen; Refinitiv MMD for fair value Municipal 10-year Index AAA General Obligation bonds; Bloomberg for 10-year U.S. Treasury yields, 1/1/1984–6/30/2021.
24. Currently, all taxpayers benefit from step-up in basis upon death.
25. The 10.29% pre-tax historical equity return is based on the S&P 500 from 1926 to 2020. The 8.8% (Liquidate) return for the T.M. Index Fund is calculated in the same manner as discussed in endnote 9 above. The 9.9% T.M. Index Fund (Death) return uses the same methodology as discussed in endnote 9 except that unrealized capital gains receive step-up in basis due to death. The 1.1% annual savings is the difference between 9.9% and 8.8% when step-up is realized. In the 60/40 Tax-Engineered (Liquidate), we utilized the same assumptions and methodology discussed in endnote 19. In the 60/40 Tax-Engineered (Death) scenario, we use the same assumptions and methodology in endnote 19 except that unrealized capital gains are stepped up in basis due to death. The 0.5% annual savings is the difference between 7.8% and 7.3% where step-up in basis is realized. In the case of the Index Fund in IRA, the return is 9.2% in either (Liquidate) or (Death) since no step-up is available on an IRA. To simplify the analysis, we assumed no stretch-out IRA option is selected by the beneficiary of the IRA at death but instead distributed and taxed at the top marginal ordinary income tax bracket. This may overstate the tax if, unlike the deceased owner, the beneficiary is actually in a lower tax bracket. In the case of the Index Fund in Variable Annuity, the return is calculated in the same manner as discussed in endnote 14 in the case of (Liquidate) or (Death) since annuities offer no step-up. To simplify the analysis, we assumed the annuity beneficiary, like the deceased owner, is a top marginal tax bracket taxpayer. This overstates the tax if the beneficiary is actually in a lower bracket. The 7.5% Typical Active Equity Fund for liquidation is calculated using the same methodology and assumptions as discussed in endnote 9. The 8.2% assuming step-up in basis upon death assumes opportunities to step-up in basis are minimized as more capital gains are assumed to be realized annually.
26. Assumes family member is in a 12% or lower ordinary income tax bracket.
27. The donor receives two tax benefits from donating appreciated securities. First, they receive an ordinary income tax deduction for the \$15,000 in-kind gift of securities at maximum ordinary tax rates (\$15,000 x 31.9% = \$4,784). Second, by donating appreciated securities, the unrealized capital gain on such securities is forgiven as the securities are sold by the charity (whose capital gain tax rate is 0%). Thus, gifting the \$15,000 securities with a cost basis of \$7,500 eliminates a \$7,500 unrealized capital gain (\$15,000 – \$7,500 = \$7,500). Tax on the foregone \$7,500 unrealized gain would have been \$1,785 since the \$7,500 unrealized capital gain would have otherwise been taxed at a maximum capital gain rate of 23.8%. Thus, the gift results in total tax savings of \$6,569 (\$4,784 + \$1,785). Accordingly, the net cost of the \$15,000 gift is only \$8,431 (\$15,000 – \$6,569).

## About Savant Wealth Management

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As a trusted advisor, Savant offers investment management, financial planning, tax and consulting, retirement plan, and family office services to financially established individuals and institutions.

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