# A Guide to Tax-Managed Investing

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**Contents**



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## Executive Summary

With U.S. stock and bond market returns likely to be muted over the next decade, many investors and financial advisors are apt to be on the hunt to improve take-home returns and, in turn, the viability of their financial plans. Our research asserts that tax management is a valuable lever. That includes carefully considering asset location, using tax-advantaged vehicles like health savings accounts, and leveraging smart tax-loss harvesting techniques.

This white paper outlines the benefits of intentional tax management, providing frameworks and guidelines to investors and advisors when constructing portfolios and selecting investments. It starts broadly by diving into asset location—identifying the proper account for each investment—starting with high-level asset-class optimization and highlighting the most tax-advantaged vehicle of them all, HSAs. It then offers a more comprehensive blueprint for subasset classes, categories, and investment vehicles. We then outline the varying factors that bring about tax-loss harvesting and best practices for implementation.

## Key Takeaways

- Let Your Stock Rise (in Taxable Accounts)—Under the right circumstances, our modeling showed that individuals optimizing for tax mitigation should let equity assets grow in taxable accounts while using tax-sheltered assets for holistic rebalancing.
- Sensibly Allocate Between Accounts, Not Just Within—Over the 35-year-forecasted model that we prepared, taxes, and the missing compounding associated with their drag, accounted for a roughly 20% shortfall when comparing taxable and tax-sheltered accounts following the same allocations.
- Health Savings Accounts Rule Them All—The tax benefits of health savings accounts—tax-deductible contributions, tax-free growth, and tax-free withdrawals for qualified medical expenses—are unparalleled.
- Return and Control Are Key—Thinking along two dimensions—return profile and managing the realization of income and capital gains—can help investors and advisors select the right account for individual positions. Higher return and greater control over income payments and capital gains realization are the optimal conditions for taxable accounts. Meanwhile, lower-returning assets that provide less control over income and capital gains distributions tend to be better situated inside of non-Roth tax-sheltered accounts.
- Anyone Can Do It: Tax-Loss Harvesting—Investors with varying degrees of portfolio complexity—from those with broad, passive indexes to others with an assortment of individual securities—can reap the benefits of tax-loss harvesting.

## Introduction

Smart tax practices should be considered by all investors, regardless of portfolio sophistication and complexity. Tax management could become even more important in the coming years, with experts increasingly forecasting a low investment return environment.[1] If returns are indeed lower, investors have good reason to police all the costs that they pay, including tax costs.

Better data and new tools, strategies, and investment vehicles have broadened investor and advisor toolkits for limiting tax drag. The proliferation of tax-managed strategies and model portfolios provides more options and easier implementation, while the fledgling direct indexing vehicle shows great promise from the standpoint of limiting capital gains. Finally, greater understanding of the return profiles of certain investments, and the tax code's treatment of them, should help investors shape their portfolios.

Take Exhibit 1, below, which breaks down the 2022 ordinary income and long-term capital gains/qualified dividend tax brackets and highlights the differences between the two. For taxable accounts, a few simple strategies to prioritize long-term capital gains at the expense of investments that produce ordinary income can increase aftertax returns—the outcome actually experienced by investors.

**Exhibit 1** 2022 Ordinary Income and Long-Term Capital Gains Tax Rates (Married Filing Jointly)

| Income (MFJ Filers) ($) | Ordinary Tax Rate (%) | Long-Term Capital Gains Tax Rate (%) | Difference (%) |
|---|---|---|---|
| 0 - 20,550 | 10 | 0 | 10 |
| 20,550 - 83,350 | 12 | | 12 |
| 83,350 - 83,550 | | 15 | -3 |
| 83,550 - 178,150 | 22 | | 7 |
| 178,150 - 340,100 | 24 | | 9 |
| 340,100 - 431,900 | 32 | | 17 |
| 431,900 - 517,200 | 35 | | 20 |
| 517,200 - 647,850 | | 20 | 15 |
| 647,850 + | 37 | | 17 |

Source: Internal Revenue Service.

1 Benz, C. 2022. "Experts Forecast Stock and Bond Returns: 2022 Edition." Morningstar. Jan. 14, 2022. https://www.morningstar.com/articles/1074631/experts-forecast-stock-and-bond-returns-2022-edition

# Part I: Tax-Efficient Investing Through Account and Asset-Class Location

## For Your Consideration: Asset Location

Investors and advisors tend to focus on asset allocation, and rightfully so: Broad portfolio construction is the largest determinant of returns.[2,3] Yet lost in the shuffle of risk profile and risk tolerance is asset location: identifying the proper account type for each investment. As with asset allocation, optimal asset location relies on both quantitative and qualitative elements. Moreover, asset-location considerations must be placed in the context of the investor's asset-allocation preferences given one's timeline for using the funds.

From a pure tax-management standpoint, the "right" asset-location answers seem simple. Bonds spin off regular income payments that are taxed at ordinary tax rates, while the dividend payments from equities and equity funds are taxed at the same lower rates that apply to long-term capital gains, provided the dividends are qualified. From that perspective, fixed-income securities make the most sense in tax-sheltered accounts, where their regular distributions can be reinvested and compounded without taxation until withdrawal time, while equities are better suited for taxable accounts.

Yet, from a practical standpoint, it is logical to want to hold more safe, stable, and liquid assets (namely, bonds and cash) in accounts that investors can readily tap without strictures or penalties—generally, these are taxable accounts. Meanwhile, investors in accumulation mode naturally use retirement plans such as 401(k)s and IRAs to house long-term savings, namely stocks.

Asset-location decisions are rife with these sorts of contradictory considerations. These variables make it a challenging area to navigate.

### Reconciling Contradictions: Scenario Analysis

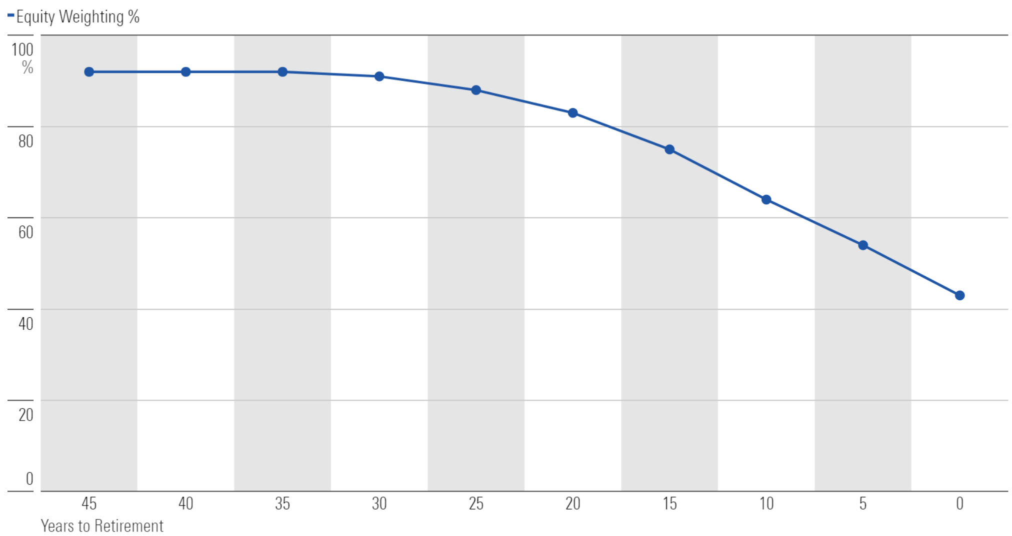
To help demonstrate the potential advantages and challenges of asset location, we modeled an investor 35 years from retirement with $100,000 split evenly between a taxable brokerage account and a tax-sheltered 401(k) account. (See Appendix for investment return and tax assumptions.)

We used the average target-date fund's glide path for this hypothetical investor's allocation and modeled to retirement, as outlined in Exhibit 2. Doing so allowed us to account for asset-allocation shifts

2 Mission Wealth. 2020. "Why Is Asset Allocation Important?" https://missionwealth.com/why-is-asset-allocation-important/
3 Mirae Asset Knowledge Academy. 2015. https://cafemutual.com/news/tutorials/214-prudent-investing-iii-why-asset-allocation-is-so-important

as the investor's time horizon and risk profile changed. It also accounts for regular portfolio rebalancing to strategic targets. The portfolio gradually de-risks over time, with the equity stake starting at 92% with 35 years to retirement then gliding down to 43% at retirement. We assumed an annual rebalancing cadence the first of each year.

**Exhibit 2** Modeled Equity Glide Path




Source: Morningstar Direct.

### The Differing Scenarios

We used three scenarios to determine the appropriate asset location given the assumptions, with Exhibit 3 outlining the starting points. Note that all three scenarios target a total starting allocation of 92% in equities and 8% in bonds. The difference is *where* the investor holds the stocks and bonds.

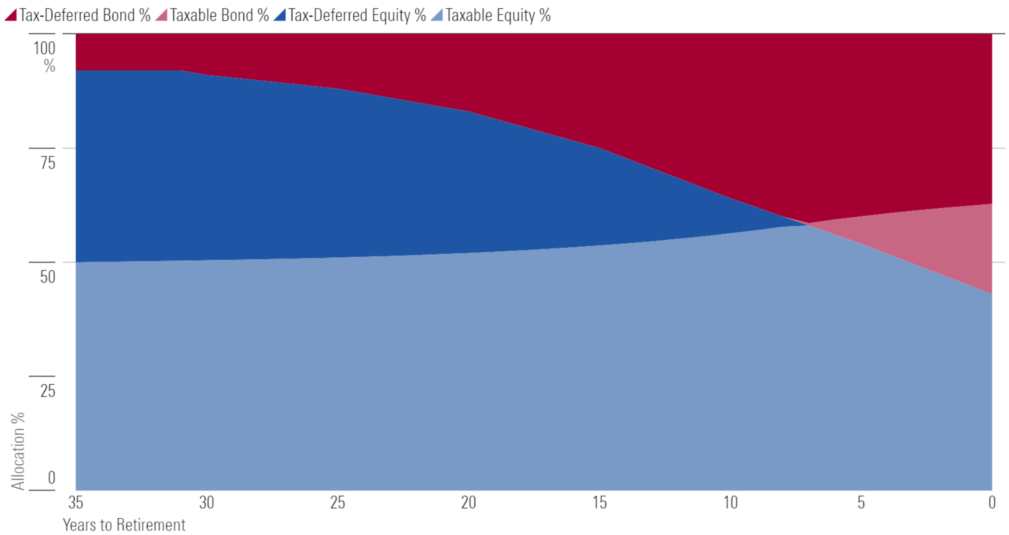
**Exhibit 3** Starting Points

| | Taxable | | Tax-Deferred | | Total | |
|---|---|---|---|---|---|---|
| Scenario | Equity ($) | Bonds ($) | Equity ($) | Bonds ($) | Equity ($) | Bonds ($) |
| 1. Taxable Growth Prioritized | 50,000 | 0 | 42,000 | 8,000 | 92,000 | 8,000 |
| 2. Tax-Deferred Growth Prioritized | 42,000 | 8,000 | 50,000 | 0 | 92,000 | 8,000 |
| 3. Balanced | 46,000 | 4,000 | 46,000 | 4,000 | 92,000 | 8,000 |

Source: Author's Calculations.

Scenario 1 prioritizes growth in the taxable account and holds stocks there for as long as possible, using tax-deferred assets to rebalance into the appropriate asset allocation over time. It starts with the $50,000 taxable account entirely invested in equities, while the tax-deferred account makes up for the lacking fixed-income exposure. From there, the tax-deferred account annually rebalances out of equities into fixed income, thereby reducing the whole portfolio's equity exposure over time until its equities are entirely depleted with seven years remaining. The taxable account then picks up the slack, selling down equities to buy bonds and meet the holistic allocation targets. Exhibit 4 outlines this shifting dynamic over time.

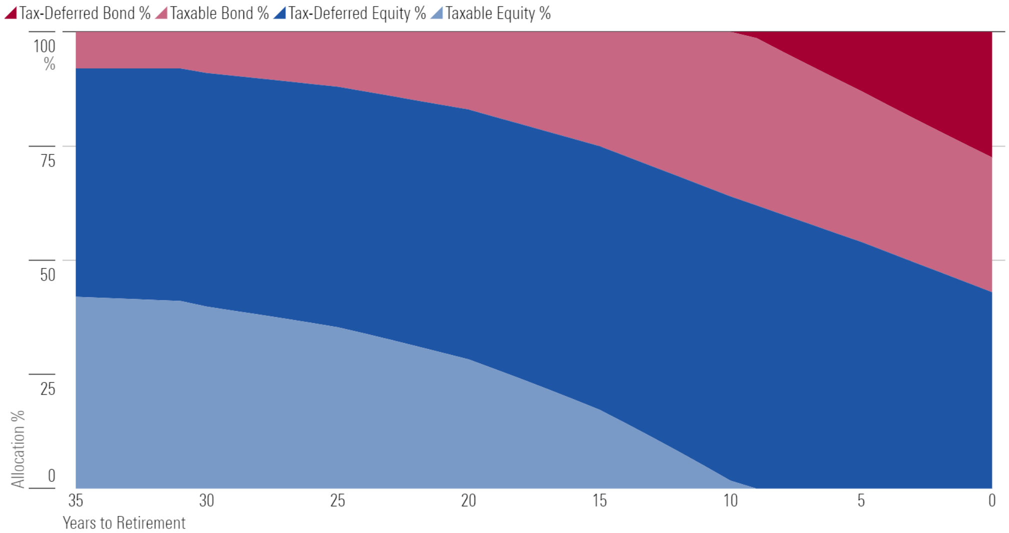
**Exhibit 4** Scenario #1: Taxable Growth Prioritized




Source: Author's Calculations.

Scenario 2 prioritizes growth in the tax-sheltered account. The taxable assets rebalance annually into fixed-income holdings to bring the portfolio in line with its broader asset-allocation targets, while the tax-sheltered assets hold equities and eschew fixed income for as long as possible. Here, the $50,000 in the tax-sheltered account is invested entirely in equities, while the taxable account holds the relatively small but growing fixed-income allocation until it is made up entirely of bonds. Doing so allows equities to compound in the tax-sheltered account without the drag of taxes on growing dividend payments over time. But the trade-off is that this asset-location choice leads to high tax bills in the taxable account: The rebalancing generates annual capital gains in the taxable account on top of larger taxable interest payments because the bond portfolio is focused there. Exhibit 5 outlines this scenario over time.

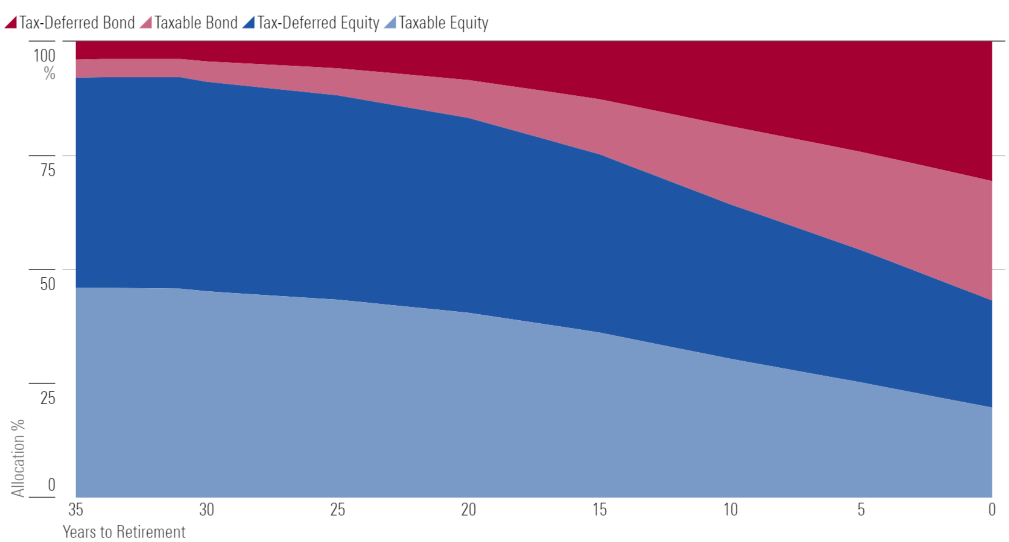
**Exhibit 5** Scenario #2: Tax-Deferred Growth Prioritized




Source: Author's Calculations.

The final scenario treats the two accounts as separate entities with identical asset allocations that rebalance to the same annual targets. The taxable and tax-sheltered accounts start with a $42,000/$8,000 equity/bond split and glide down to the same asset-allocation targets over time. This helps promote balance between the two accounts, leaving similar allocations and account balances, but it is not optimized for tax drag. It produces regular capital gains by rebalancing in the taxable account while also limiting the growth of tax-sheltered assets by becoming more conservative over time. Exhibit 6 displays this balanced approach.

**Exhibit 6** Scenario #3: Balanced




Source: Author's Calculations.

### Differing Outcomes

Scenario 1, which favored equity assets in the taxable account for as long as possible, was the clear winner. It provided the highest ending balance on the initial $100,000 starting point and looks even better on an aftertax basis. Exhibit 7 details the account balances divided by taxable and tax-deferred at the retirement date.

**Exhibit 7** Ending Balances at Retirement

| Scenario | Taxable (USD) | Tax-Deferred (USD) | Total (USD) | Aftertax (USD) |
|---|---|---|---|---|
| 1. Taxable Growth Prioritized | 663,712 | 386,683 | 1,050,395 | 917,520 |
| 2. Tax-Deferred Growth Prioritized | 300,172 | 737,902 | 1,038,075 | 870,005 |
| 3. Balanced | 474,413 | 567,013 | 1,041,425 | 892,233 |

Source: Author's Calculations.

To arrive at the aftertax figures, we assumed the investor sold everything in the taxable account, generating capital gains at 15%, and withdrew all assets from the tax-sheltered account, requiring regular income taxes at the assumed 22% rate. This simplified aftertax calculation could not occur in the real world. Scenario 2, for instance, would be heavily penalized under these assumptions for a couple of reasons. First, withdrawing $737,902 immediately out of a tax-deferred account puts an investor in the current highest possible tax bracket. This is doubly penalizing because it then bumps up the capital gains tax rate on the $300,000 taxable account to 20% from 15%. Yet it is unlikely that investors would withdraw their invested assets out of the market and retirement accounts all at once. As such, the 22% income and 15% capital gains tax rates reflect the more likely reality that investors face.

Scenario 1 ends up with most assets stockpiled in the taxable account, with the opposite being true in the second scenario. This makes sense given the differing focuses of the two. The asset mix is also notable, with scenarios 1 and 2 leaving fairly unbalanced allocations between the two accounts even as the broader allocation is in line.

The analysis also sheds light on the effect of tax drag, with Scenario 3 offering interesting insights. Because it treats the two accounts as separate entities rebalancing to the same targets, it isolates the drag taxes can have. In this case, taxes, and the missing compounding associated with the bite, gobbled up nearly $95,000—roughly 20%—of the taxable account's return. Taxes accounted for $43,560 of that missing $95,000, with the remaining gap coming from the missing compounding of those dollars.

Our research shows that some investors might be doing it wrong when it comes to asset-location decisions. It challenges the notion that investors in accumulation mode should house long-term equity savings in retirement accounts. While that might be the most intuitive, elegant option, investors would benefit from more nuance when spreading investments across different accounts.

### Additional Considerations

There are other reasons to favor Scenario 1, though there are benefits to all three. Taxable accounts tend to have a considerable estate planning advantage over their tax-sheltered counterparts: cost basis step-up at death. The heirs of taxable accounts receive a step-up in cost basis upon the death of the account owner without any tax consequences, which eliminates the tax burden associated with the unrealized gain. Inherited traditional IRAs, meanwhile, are inflexible by design. They leave heirs with assets that are not only taxed at ordinary income rates but that also force the inheritors to take distributions in the near future in most cases. Taxable accounts also have more flexibility than their tax-sheltered counterparts—namely, having no contribution, income, or withdrawal limits.

On the flip side, there are creditor protections that come along with the IRA wrapper for those with potential legal liability. There are also advantages to Scenario 3's more balanced approach, especially in retirement. The end point leaves the saver with stable allocations and relatively similar account balances between the two accounts, providing greater flexibility when sourcing cash for living expenses. This allows retirees who are in drawdown mode to optimize withdrawals and/or realized gains depending on their particular tax situation in a given year.

### Not Quite the Real World

While the preceding illustrations are a starting point for making asset-location decisions, they do not exactly mirror real world conditions. First, investment dollars are rarely split perfectly between retirement and taxable dollars, and most investors tend to have existing investments in place (that is, not sitting exclusively in cash) before they factor in asset-placement considerations. Indeed, optimizing the portfolio for tax purposes without considering existing investments might produce immediate, unintended tax consequences that offset the future gains. The illustration also does not account for changing tax rates over time. While we ran the same analysis using the maximum possible tax rates throughout (37% federal, 20% capital gains/qualified dividend) and reached the same conclusions, it is exceedingly rare for an investor's tax rates to stay static over time because of changing income levels and the ever-shifting tax code. Asset-class returns also vary significantly based on time period.

The analysis also does not factor in cash flows. It assumes a $100,000 starting point and no other inflows or outflows over the analysis period. Investors regularly adding to their portfolios would not require as much rebalancing, as fresh inflows should be used to bring the portfolio in line with targets. Finally, given the complex and individual nature of taxes, it does not account for every tax that investors face. Some notable omissions include the 3.8% Medicare surtax on investment income over $200,000 and state income and investment taxes, though some states do not have income taxes while others do not tax retirement income.

### Action Items

There are no one-size-fits-all solutions. Investors should revisit their asset location every few years to make sure portfolio positioning aligns with the tax code, yield and return environment, and personal preferences. Yet this analysis should help investors and advisors think through the trade-offs when building and optimizing portfolios.

It also provides some basic guidance for investors going forward. First, maximizing the utility of tax-deferred accounts is paramount. Lifting restraints on compounding, as Scenario 3 underscored, will always produce better outcomes. Investors still accumulating assets and savings should also tilt their taxable accounts into stocks, while using tax-deferred assets to meet holistic asset-allocation targets. Yet this shift does not need to happen overnight, especially for those with investments in place. Tactically remaking an asset-location plan over time will potentially damp the tax drag associated with rebalancing, while also potentially offering the benefits of tax-loss harvesting (more on that in Part III).

### The Holy Grail of Asset Location: Health Savings Accounts

When it comes to account and asset location, health savings accounts receive the most favorable tax treatment (see Appendix) of any tax-sheltered vehicle. When used for healthcare spending, they are triple tax-advantaged: Contributions are tax-deductible; investment growth, interest, and dividends are tax-exempt; and withdrawals used to pay for qualified medical expenses are tax-free.

Yet plenty of workers who are eligible to contribute to HSAs do not take full advantage of them. Even though HSAs offer the best tax treatment of any savings vehicle, just 6% of HSA holders choose to invest their funds, even as higher account balances are correlated with a higher probability of investing.[4] Granted, HSAs allow savers to draw assets to cover larger healthcare payments and medical emergencies. Still, the less savers treat HSAs as "use it or lose it" vehicles, like flexible spending accounts, the better they will end up.

The tax benefits of HSAs outweigh those offered through 401(k)s and traditional IRAs, Roth IRAs, 529 education-savings plans, and taxable accounts. Exhibit 8 illustrates the tax implications for each vehicle by modeling the growth of $10,000. It assumes a marginal tax rate of 15% at the time of contribution and withdrawal, a 200% cumulative gain over the investment horizon, and that the withdrawal is for qualified medical purposes.

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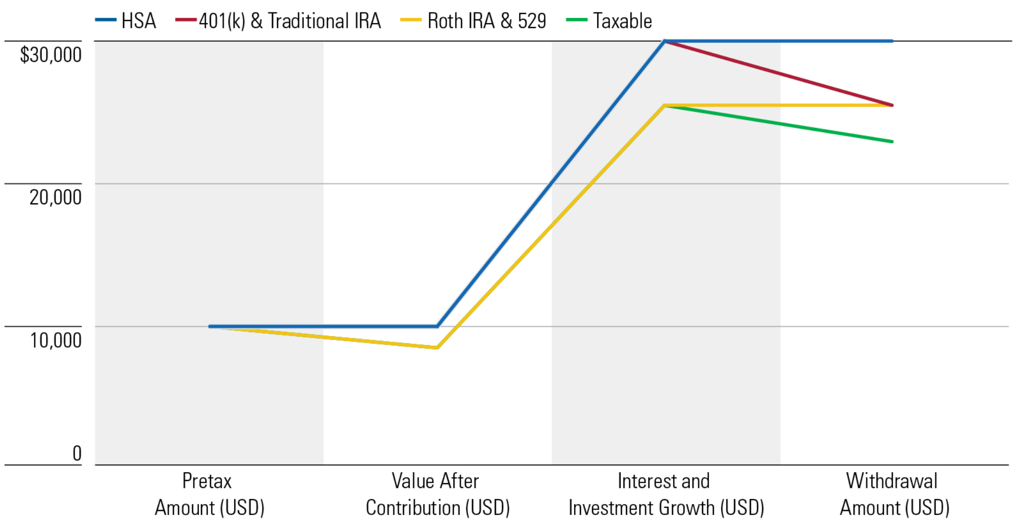
4 Spiegel, J. 2020. "Are HSA Investors Born or Made?" Employee Benefit Research Institute. April 2, 2020. https://www.ebri.org/docs/default-source/ebri-issue-brief/ebri_ib_504_hsainvest-2apr20.pdf?sfvrsn=e24d3d2f_4

**Exhibit 8** Triple Tax Benefit




| **Tax Implications** | Contribution | Investment Growth | Withdrawal |
|---|---|---|---|
| HSA | Tax-deductible | Tax-free | Tax-free |
| 401(k) and Traditional IRA | Tax-deductible | Tax-free | Taxed |
| Roth IRA and 529 | Aftertax | Tax-free | Tax-free |
| Taxable | Aftertax | * | Taxed |

Source: Author's Calculations.
* Regular distributions (dividends and interest) are taxed, unrealized capital gains grow tax-free.

The Roth IRA/529 and traditional 401(k)/IRA end up in the same place because of the 15% tax drag, which occurs at contribution for the former and at withdrawal for the latter. Yet the HSA balance remains untouched by Uncle Sam throughout. Further, there is no penalty for oversaving in an HSA; nonmedical withdrawals from an HSA are taxed at ordinary income rates, provided the account owner has reached age 65, which matches the tax treatment of traditional 401(k)/IRA withdrawals.

Bucketing healthcare savings into an HSA allows savers to use their retirement dollars for retirement spending, not healthcare. Fidelity projects that the lifetime cost of healthcare and medical expenses for the average 65-year-old couple is $315,000, not including long-term care.[5] Using an HSA to fund that expense optimizes savings under the tax code and offers the benefit of divvying assets between retirement and healthcare, though the latter can also be used for retirement if the individual has a surplus.

HSAs do, however, have some limitations. First, they are only available to those with qualifying high-deductible health plans, otherwise known as HDHPs. While Morningstar has monitored considerable

5 http://fidelityinvestments2020news.q4web.com/press-releases/news-details/2022/Fidelity-Releases-2022-Retiree-Health-Care-Cost-Estimate-65-Year-Old-Couple-Retiring-Today-Will-Need-an-Average-of-315000-for-Medical-Expenses/default.aspx

growth in the uptake of HDHPs—31% of workers selected a HDHP in 2020, up from 6% in 2006[6]—plenty of savers are not eligible for HSAs because of their health insurance plan. While HSAs are great tax-efficient options for an individual's own lifetime, they are not as great as inherited assets—distributions become taxable if the account is inherited by anyone other than the owner's spouse. The IRS also keeps a tight lid on contributions. As of 2022, individuals are allowed to contribute up to $3,650 into HSAs,[7] with those aged at least 55 allowed to add an additional $1,000. That compares with $20,500 and $6,500, respectively, into 401(k)s and other employer-sponsored plans like it. Finally, HSAs have different early withdrawal policies than other comparable vehicles. The IRS assesses a 20% tax penalty on HSA holders who make nonqualified withdrawals before age 65, in addition to regular income tax owed. For 401(k)s, though, the respective criteria are age 59 and a half and 10%.

Still, the positives of HSAs far exceed the negatives, and savers who think about healthcare costs in retirement coming from retirement savings are missing out on the pecuniary and nonpecuniary benefits of HSAs.

6 https://files.kff.org/attachment/Report-Employer-Health-Benefits-2020-Annual-Survey.pdf

7 https://www.irs.gov/pub/irs-drop/rp-21-25.pdf

# Part II: Tax Optimization Through Sub-Asset-Class Location

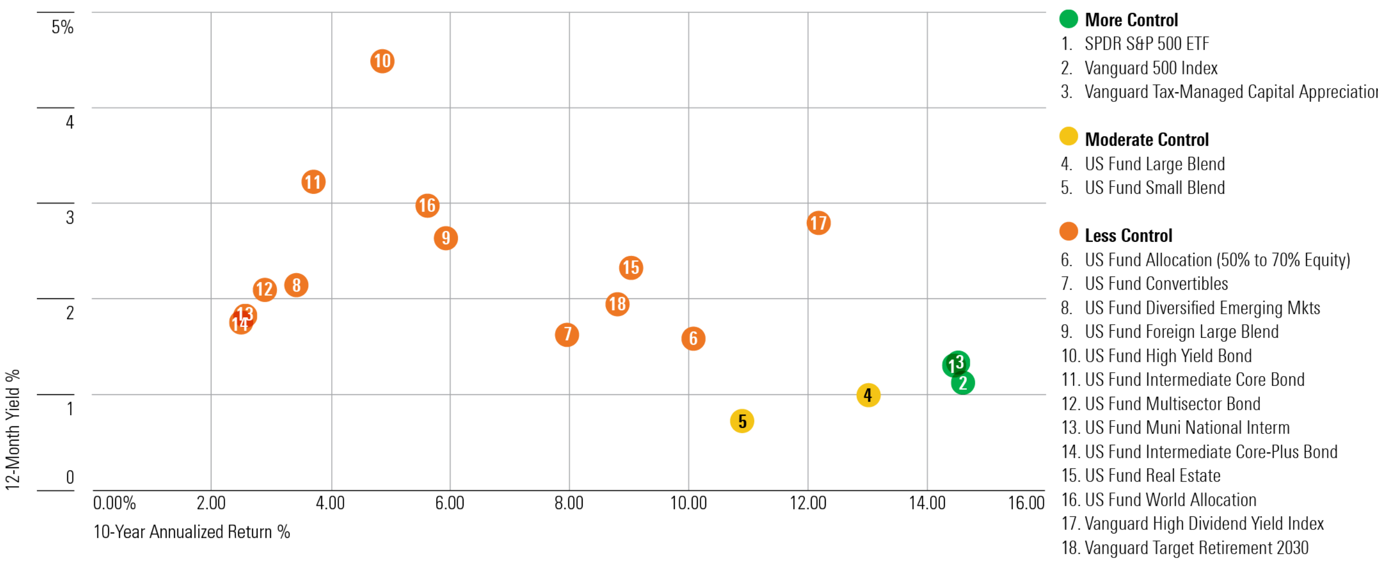
**Selecting the Right Account for More-Distinct Positions**

Many investors and advisors prefer to extend beyond broad asset allocations when constructing portfolios and into more specialized positions. That brings an additional level of complexity to tax management in that some subasset classes and vehicles are better served in tax-sheltered accounts, whereas tax-efficient investments like municipal bonds make little sense in a retirement plan.

Thinking of investments along two dimensions—total return profile and control of income and gains realization—serves as a useful heuristic for deciding which subasset classes go into which account types. Investments designed to make regular distributions that compose a large share of their total returns, such as high-yield bonds and real estate investment trusts, are a poor fit for taxable accounts on both scores. Not only is income a big share of their total returns, but their distributions also force investors to cede control over their income realization. This is especially troublesome when that income is taxed at ordinary rates. Investors also give up control of gains realization with actively managed equity strategies. While such funds typically generate most of their total returns through capital appreciation rather than income, they often make capital gains distributions. Other investment types, meanwhile, look better from the standpoint of their total return profiles and the extent to which investors are in control of income/gain realization. For instance, broad-based equity exchange-traded funds rarely produce capital gains distributions, while the yield offered is usually a relatively small percentage of total return. In all, modeling what percentage of an investment's total return comes in the form of automatic, or uncontrollable, income payments and capital gains realizations can help investors determine the right account fit.

Exhibit 9 displays a select group of popular asset classes and investment vehicles, using Morningstar Category averages and specific investments, respectively, as proxies. The trailing 12-month yield is plotted on the y-axis, while the trailing 10-year annualized return through February 2022 is displayed on the x-axis. Each data point is color-coded by control level: Green suggests greater control, orange implies less control, while yellow fits in the middle.

**Exhibit 9** The Return-Control Framework for Subasset Classes




Source: Morningstar Direct. Data as of Feb. 28, 2022.

This return-control framework can help guide decisions, but investors also need to weigh the tax treatment of regular distributions. We factored in those considerations to develop guidelines for taxable and tax-sheltered accounts below. When reviewing tax treatment, we focused on the taxation of regular distributions—interest payments, ordinary dividends, and capital gains distributions—and kept the analysis at the federal level because states and municipalities have different tax codes. Of course, capital gains rates apply to all the securities and asset classes discussed and are dependent on the length of the holding period. For instance, an investor selling appreciated municipal bonds after purchasing six months prior would be subject to ordinary taxes (that is, short-term capital gains rates) on the gain.

### Taxable Accounts

Exhibit 10 displays asset classes and vehicles best suited for taxable accounts, with additional detail below.

**Exhibit 10** Investments Better Suited for Taxable Accounts

| Investment | Proxy | Return (%) | 12-Month Yield (%) | Control | Tax Treatment |
|---|---|---|---|---|---|
| Municipal Bonds and Bond Funds | US Fund Muni National Interm | 2.54 | 1.83 | Less | Generally exempt |
| Broad Market Equity ETFs | SPDR S&P 500 ETF | 14.48 | 1.31 | More | Long-term capital gain rates |
| Broad Market Equity Index Mutual Funds | Vanguard 500 Index | 14.55 | 1.34 | More | Long-term capital gain rates |
| Tax-Managed Equity Funds | Vanguard Tax-Managed Capital Appreciation | 14.63 | 1.13 | More | Long-term capital gain rates |

Source: Morningstar Direct. Data as of Feb. 28, 2022.

*Municipal Bonds and Municipal-Bond Funds*: The interest from municipal bonds or municipal-bond funds is not subject to federal income tax. Investors can also avoid state tax by buying bonds from their home state or bond funds dedicated to that state. Individual bond buyers may also be able to avoid local taxes by buying bonds issued by their own municipalities.

*Equity Exchange-Traded Funds*: For investors who like the convenience and built-in diversification of a mutual fund, equity exchange-traded funds can be very tax-efficient. Most ETFs track indexes, meaning that capital gains distributions also tend to be few and far between as they trade sparsely. Moreover, ETFs sell on an exchange, meaning most trading takes place between shareholders. Individuals cannot redeem their shares for cash directly from the fund company. Because the fund manager does not have to pay off departing shareholders, they will not be forced to sell shares to raise cash and potentially realize capital gains. Further, the large institutional shareholders that are permitted to redeem ETF shares directly from the fund company do not receive cash for exchanging their shares, either. Instead, when they sell, they are given a basket of the stocks held in the ETF's portfolio. This allows the ETF to continually hand off its lowest-cost-basis shares to redeeming institutions. Taken together, those features enable equity ETFs to be much more tax-efficient than traditional mutual funds.[8]

*Equity Index Mutual Funds*: Traditional equity index mutual funds do not have all the same structural benefits that make ETFs tax-efficient: While most traditional equity index funds track low-turnover indexes just like ETFs do, they still must meet shareholder redemptions, which can trigger stock sales and tax bills. Some index funds have made sizable distributions when they have had big outflows or their underlying indexes have changed. For example, a recent Morningstar analysis[9] found that S&P 500-tracking mutual funds made much larger and more frequent capital gains distributions than ETFs tracking the same index.

But conventional index mutual funds, like their ETF counterparts, trade sparsely, which keeps a lid on potential capital gains distributions. Thus, many index funds have managed to be nearly as tax-efficient as their ETF counterparts, and Vanguard's index funds have managed to be particularly tax-efficient because the firm's ETFs are share classes of its funds.

*Tax-Managed Funds*: While tax-managed strategies have gotten overshadowed as ETFs have grown in popularity, there are several fine options in this subgroup. Tax-managed funds aim to keep income and capital gains distributions to a bare minimum by actively offsetting any capital gains with losses and shunning investments that generate ordinary income, which is taxed at the highest rate. Vanguard runs a solid suite of tax-managed funds, including Vanguard Tax-Managed Capital Appreciation VTCLX, whose cheapest share classes earn Morningstar Analyst Ratings™ of **Gold** .

While not listed in Exhibit 10, there are other investments and securities worth considering in taxable accounts. Individual stocks fit well particularly for those that trade infrequently. The main benefit of individual stocks over actively managed equity mutual funds, at least from a tax perspective, comes

8 Johnson, B., & Bryan, A. 2019. "Measuring ETFs' Tax Efficiency Versus Mutual Funds" Morningstar. Aug. 7, 2019. https://www.morningstar.com/articles/940313/measuring-etfs-tax-efficiency-versus-mutual-funds

9 Sotiroff, D. 2022. "The Real Tax Magic of ETFs." Morningstar. Jan. 25, 2022. https://www.morningstar.com/articles/1075344/the-real-tax-magic-of-etfs

down to control. With mutual funds, investors are on the hook for taxes on capital gains payouts regardless of whether they have sold any shares or have any profits in hand to cover the taxes. Individual stocks, on the other hand, do not require capital gains tax until the stocks are sold and the gain is realized. Holding individual stocks also makes it easier to take advantage of tax-loss selling than with a mutual fund, which we discuss in more detail in Part III.

Investors will, however, owe taxes on dividend distributions. Some believe that all dividend payers are better siloed inside tax-sheltered accounts because investors cede control over this portion of their tax bill. Yet others have argued that actively avoiding dividends, while providing some tax benefit, can produce unintended negative consequences for investors.[10] Indeed, eschewing all income-paying investments in taxable accounts is more difficult in practice than in theory, and dividend avoidance can also cause a taxable portfolio to be relatively undiversified. As such, most individual stocks can fit comfortably in taxable accounts, with the highest-yielding cohorts being the notable exception.

Series I and EE Savings Bonds, which can be purchased directly from the U.S. Treasury via TreasuryDirect.gov, are not as attractive from a tax standpoint as municipal bonds, but their interest payments are not subject to state and local taxes. Moreover, to the extent that an EE bond owner redeems the bonds for qualified education expenses and their income falls below certain thresholds, the interest can bypass federal tax entirely.

### Tax-Deferred Accounts

Some asset classes, however, are clearly better suited for tax-deferred assets. Exhibit 11 uses the same framework but includes those asset classes discussed below.

**Exhibit 11** Investments Better Suited for Tax-Deferred Accounts

| Investment | Proxy | Return (%) | 12-Month Yield (%) | Control | Tax Treatment |
|---|---|---|---|---|---|
| Higher-Yielding Bonds and Bond Funds | US Fund Intermediate Core-Plus Bond | 2.87 | 2.10 | Less | Ordinary |
| Higher-Yielding Bonds and Bond Funds | US Fund Multisector Bond | 3.69 | 3.23 | Less | Ordinary |
| Higher-Yielding Bonds and Bond Funds | US Fund High-Yield Bond | 4.85 | 4.49 | Less | Ordinary |
| Multi-Asset Funds | US Fund Allocation (50% to 70% Equity) | 7.96 | 1.63 | Less | Depends |
| Multi-Asset Funds | US Fund World Allocation | 5.61 | 2.98 | Less | Depends |
| Target-Date Funds | Vanguard Target Retirement 2030 | 8.81 | 1.95 | Less | Depends |
| High-Dividend Paying Stocks, Dividend-Focused Funds | Vanguard High Dividend Yield Index | 12.20 | 2.80 | Less | Long-term capital gain rates |
| REITs and REIT Funds | US Fund Real Estate | 9.04 | 2.33 | Less | 80% of income taxed at ordinary; remainder tax-exempt |
| Convertibles and Convertible Funds | US Fund Convertibles | 10.09 | 1.59 | Less | Ordinary |
| Actively Managed Smaller Cap Funds | US Fund Small Blend | 10.91 | 0.73 | Moderate | Depends |
| Actively Managed Larger Cap Funds | US Fund Large Blend | 13.04 | 1.00 | Moderate | Depends |

Source: Morningstar Direct. Data as of Feb. 28, 2022.

*Higher-Yielding Bonds and Bond Funds*: Bonds tend to be less tax-efficient than stocks because interest payments account for most of the return they produce and are taxed at ordinary income rates. As such, the higher the interest payments, the more tax-inefficient the bond or bond strategy. High-yield and

10 Liberman, J., Sosner, N., & Wang, L. 2019. "Should Taxable Investors Shun Dividends?" AQR. June 13, 2019. https://www.aqr.com/Insights/Research/Working-Paper/Should-Taxable-Investors-Shun-Dividends

multisector category bond funds tend to generate large amounts of current income and are best avoided in taxable accounts.

*Multi-Asset Funds*: Multi-asset funds like target-date and balanced funds also tend to be poor fits in taxable accounts and are much better off housed in a tax-sheltered account like an IRA or 401(k). Their asset allocations either stay the same, as is the case with static-allocation strategies like some of the balanced funds that fill out the allocation—50% to 70% equity Morningstar Category, or they have flexible or shifting allocations, like world allocation and target-date funds. With static-allocation vehicles, the differing asset-class return profiles require consistent rebalancing back to targets, which increases the possibility of capital gains distributions. Target-date funds and flexible funds, by contrast, are regularly rebalancing to shifting allocation targets.

Some multi-asset funds have been quite tax-efficient, in part because categories like target-date funds have enjoyed robust asset inflows. That has given these funds the opportunity to rebalance by directing the new assets to whichever asset class needed topping up. Yet that need to sell for rebalancing purposes always raises the prospect of taxable distributions, and Vanguard's recent blunders on its target-date series highlighted the pitfalls of ceding control in taxable accounts: The series' 2021 capital gains distribution handed taxable investors a big tax bill, which in turn prompted debate on whether target-date strategies should be held in taxable accounts[11] and drew scrutiny from regulators[12].

Investors who prefer the ease of use of balanced holdings despite the potential tax consequences have some options, though. Silver-rated Vanguard Tax-Managed Balanced VTMFX, for example, is low-cost and has managed to be exceedingly tax-efficient.

*High-Dividend-Paying Equities, Dividend-Focused Funds*: While dividend payers enjoy relatively favorable tax treatment, such stocks and funds are arguably a better fit for tax-sheltered rather than taxable accounts. The key reason is control. Dividend income, like bond income, is not discretionary. Whereas stock investors can delay the receipt of capital gains simply by hanging on to the stock, investors in higher-yielding stocks and funds get a payout whether they like it or not. That makes large dividend payers, regardless of tax treatment, less attractive than nondividend payers from a tax standpoint.

*REITs and REIT funds*: Real estate investment trusts are a poor fit for taxable accounts for similar reasons as dividend- and other income-paying investments; REITs must pay out a minimum of 90% of their taxable income in dividends each year. Moreover, their dividends typically count as nonqualified, meaning that they are taxed at higher ordinary income tax rates versus the lower tax rates that apply to qualified dividends.

11 Kephart, J. 2022. Lessons From Vanguard Target-Date's Capital Gains Surprise. Morningstar. Jan. 28, 2022. https://www.morningstar.com/articles/1076616/lessons-from-vanguard-target-dates-capital-gains-surprise

12 Ansari, T. 2022. Massachusetts Investigates Potential Target-Date Funds Tax Issue. *The Wall Street Journal*. Jan. 25, 2022. https://www.wsj.com/articles/massachusetts-investigates-potential-target-date-funds-tax-issue-11643145644

*Convertibles and Convertible Funds*: Gains on convertible bonds are generally taxed at ordinary income tax rates, making them ill-suited to investors' taxable accounts.

*Actively Managed Equity Funds*: Some actively managed equity strategies have been able to keep a lid on taxable distributions by virtue of their process or an emphasis on tax management. Less frequent trading helps, as do shareholder inflows. Those that focus on smaller-cap firms also appear relatively attractive as smaller, less-established public companies tend to eschew dividends, producing lower overall yields. And more broadly, the equity market's robust return profile over the past 10 years is somewhat of an anomaly. Market volatility, while difficult to stomach, provides more opportunities for tax-loss harvesting.

But the usual performance disclaimer—past performance does not guarantee future results—also applies to tax efficiency, making actively managed equity strategies more apt for tax-deferred accounts. Performance ebbs and flows over long stretches, and the characteristics that made a strategy tax-efficient can reverse quickly. For instance, shareholder inflows can revert to outflows, which are out of the individual investor's control, making portfolio managers forced sellers and producing more capital gains outside of their usual investment process. Further, some active funds have been miserable from a tax standpoint, routinely forcing investors to swallow large capital gains distributions regardless of shareholder flows. While the regular dividend payments of active equity funds receive favorable tax treatment, investors' capital gains profile is at the mercy of the portfolio managers and strategies they hold. This can lead to large, unexpected long-term capital gains distributions or, worse still, short-term capital gains distributions taxed at ordinary rates.

Still, it is important to recognize the reality that many investors already hold active equity strategies in taxable accounts. These investors cannot feasibly make wholesale portfolio changes without facing serious tax consequences. Because actively managed strategies require more oversight than their passive peers, we prepared an Active Manager Tax Watchlist in Exhibit 12 that lists the items that investors should monitor when holding actively managed strategies in taxable accounts.

**Exhibit 12** Active Manager Tax Watchlist

| Item | What to Watch For |
|---|---|
| Manager Changes | New portfolio managers tend to bring new investment approaches, which produce portfolio changes and increase the likelihood of capital gains realizations and distributions |
| Asset Flows | Strategies with outflows force managers to redeem positions to generate cash, increasing the likelihood of capital gains realizations and distributions |
| Portfolio Turnover | More trading activity increases the likelihood of capital gains realizations and distributions |
| Market Environment | Periods of high volatility can increase trading activity, while strong market environments increase the possibility of large embedded gains |
| Morningstar Potential Capital Gains Exposure | PCGE estimates the amount of gains that have not been distributed. As such, strategies with larger PCGEs can have large embedded gains |
| Capital Gains History | Strategies that have historically made larger capital gains distributions merit caution, especially those that have made more than one in a calendar year |
| Sales of Prominent, Successful Positions | Managers selling securities after years of strong performance are likely to produce outsize capital gains that can be difficult to offset |

Investors and advisors should keep a close eye on cash flows as shareholder withdrawals merit caution for the reasons discussed. Further, manager changes often portend wholesale portfolio changes and significantly increase the possibility of taxable distributions. The combination of any of these items is especially troubling. For instance, manager changes on a strategy with a high Morningstar Potential Capital Gains Exposure score significantly raises the specter of capital gains distributions.

### It Depends

Some subasset classes fall into the gray area. The decision on where to house these investments is either dependent on practical considerations or investment-specific. Exhibit 13 lists the asset classes that fit in this bucket, with additional detail below.

**Exhibit 13** It Depends

| Investment | Proxy | Return (%) | 12-Month Yield (%) | Control | Tax Treatment |
|---|---|---|---|---|---|
| Core Bonds and Bond Funds | US Fund Intermediate Core Bond | 2.47 | 1.76 | Less | Ordinary |
| Developed-Markets Equity Funds | US Fund Foreign Large Blend | 5.92 | 2.64 | Less | Depends |
| Emerging-Markets Equity Funds | US Fund Diversified Emerging Mkts | 3.40 | 2.15 | Less | Depends |

Source: Morningstar Direct. Data as of Feb. 28, 2022.

*Core Bonds and Bond Funds*: This selection is dependent more so on an investor's tax bracket and preferences than pure tax efficiency. While core bonds are not nearly as tax-efficient as municipal-bond funds or equity index ETFs, they often have a more attractive aftertax profile than their tax-exempt peers for those in lower tax brackets. Because bonds provide stability as a relatively more conservative asset class, they merit consideration in taxable accounts to meet broader asset-allocation needs. Core bonds are also suitable for investors who prefer holding more-stable, liquid assets in accounts that they can redeem without restrictions.

*Developed- and Emerging-Markets Equity Funds*: The reason to hold these investment types in tax-sheltered accounts boils down to control and yield. While returns of international and emerging-markets equity funds over the past decade have paled in comparison to domestic equity funds, there have certainly been long stretches where the opposite has been true. While investors cannot predict return profiles, income is a bigger share of total return for broad-based non-U.S. equity funds than their U.S. counterparts, and there is little that investors can do to mitigate the payout.

Yet the tax treatment of foreign dividend payments argues for the placement of non-U.S. equity strategies in taxable accounts. Foreign governments can withhold taxes on the dividend payments of domestic companies, which U.S.-based investors can get back via the foreign tax credit. But those that hold non-U.S. equities in tax-deferred accounts will not be reimbursed because of the structure of the foreign tax credit. In short, foreign dividend payments are subject to taxation from both the U.S. and foreign governments, and payments made to the latter can be used to offset those owed to the former. Tax-deferred accounts, however, are not subject to U.S. taxes until distribution, leaving the taxes withheld on foreign equities unrecoverable. For these reasons, the decision on where to hold non-U.S. equity strategies depends on an investor's tax bracket, preferences, and overall asset allocation.

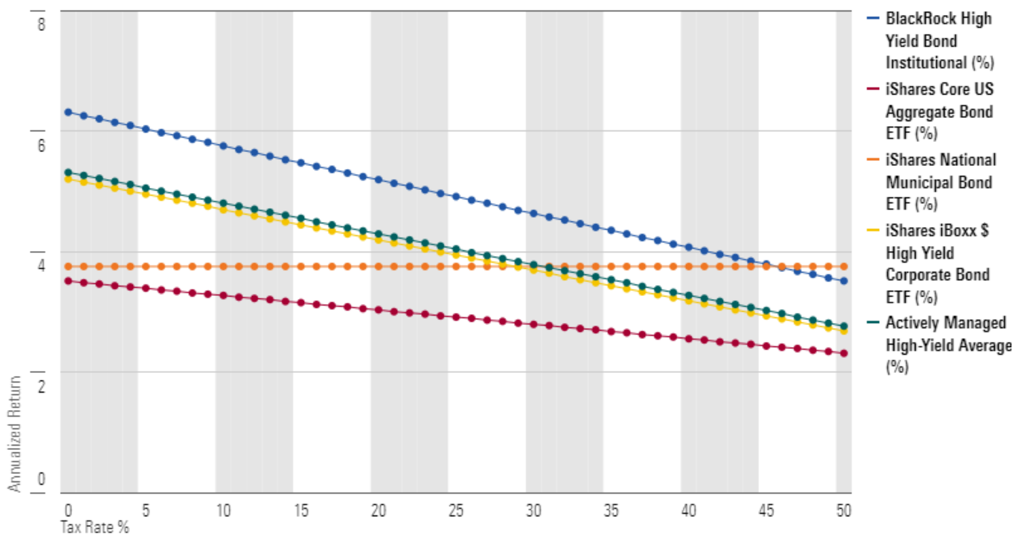
**Tax Bracket Matters**

Individuals' own tax profiles play a significant role in the attractiveness of individual asset classes and positions. Investors able to personalize this return-control framework by layering in their own tax situations are poised to make sound asset locations going forward. Still, even the most tax-inefficient strategies can deliver pockets of outperformance on an aftertax basis under the right conditions.

There are certain combinations of individual tax brackets and strategies where high-yield bond funds have generated higher aftertax returns. For instance, Gold-rated BlackRock High Yield Bond BHYIX has been a solid holding, regardless of account, in the trailing five years through year-end 2021. Its 6.3% annualized gain over that stretch comfortably outpaced category peers, its high-yield benchmark, and broader bond indexes. It also outperformed on an aftertax basis. Morningstar's Annual Income and Annual Capital Return data points help decompose the return profile of specific strategies, which we used to determine the drag of taxes on regular bond interest payments.

Exhibit 14 displays the drag of taxes on the absolute returns of four BlackRock bond strategies—BlackRock High Yield Bond, iShares National Muni Bond ETF MUB, iShares Core US Aggregate Bond ETF AGG, iShares iBoxx $ High Yield Corporate Bond ETF HYG—and the actively managed high-yield bond category average.

**Exhibit 14** Exceptions to the Framework



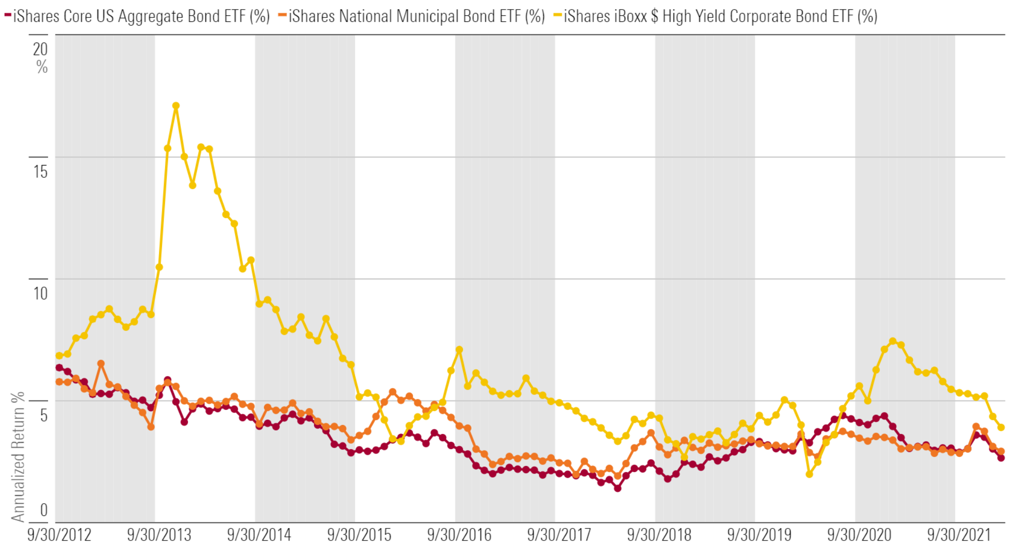

Source: Morningstar Direct. Data as of Dec. 31, 2021.

Because BlackRock High Yield Bond's excess return was much greater than the municipal-bond index's, an investor's tax bracket would have had to have been at least 45% for the latter to be the better holding in a taxable account. The iShares National Muni Bond, which exclusively holds municipal bonds and therefore bypasses federal income taxes, is not impacted by tax changes in the way the four comparisons are. Further, even at a hypothetical 50% tax rate, it still made more sense to hold the BlackRock strategy than the broad-based iShares Core US Aggregate Bond ETF thanks to the latter's relatively meager total return over the five-year stretch.

This, however, does not mean that high-yield bonds make sense for investors' taxable accounts. BlackRock High Yield Bond has long been one of the category's best offerings, and its performance bested most category peers in the window reviewed. For instance, the aftertax returns of the actively managed high-yield average and iShares iBoxx $ High Yield Corporate Bond ETF became worse than iShares National Muni Bond's at the 29% and 31% tax rates, respectively. Further, it effectively managed turnover in that stretch—despite seeing modest outflows—and did not pay out a capital gain, which in turn did not penalize investors for giving up control.

This analysis is also period-specific. In stronger markets, like the five-year period reviewed from 2017 to 2021, high-yield bonds tend to produce attractive absolute returns, which can be high enough to generate better aftertax results, too. While that occurred here, it has not always been the case. Exhibit 15 reviews the five-year rolling returns of the three index ETFs reviewed above from October 2007 to February 2022.

**Exhibit 15** Understanding the Return Environment




Source: Morningstar Direct. Data as of Feb. 28, 2022.

There were stretches where the high-yield bond index reigned supreme, though it logically offers a more volatile return profile given its more aggressive yields. The periods in which the high-yield bond ETF underperformed both competitors, though, would have also produced dramatically worse aftertax returns given the higher income payment. Finally, holding an actively managed strategy, including ones as highly regarded as BlackRock High Yield Bond, comes with risks. From a return perspective, poor security selection or portfolio positioning could produce periods of underperformance. On the tax side, more brisk trading inevitably raises the possibility of capital gains distributions, as do investor outflows, both of which are outside the locus of control for individual investors.

# Part III: Tax Optimization Through Tax-Loss Selling

Investors are taxed on net realized gains under the current tax code and at favorable rates relative to ordinary income tax. Both “net” and “realized” are important to home in on. The latter means investors will not get taxed unless they sell an asset or receive a mutual fund capital gains distribution. For instance, an individual who buys a security for $10,000 then watches that security explode to $30,000 two days later will not get taxed on that $20,000 gain on paper, provided they do not take any action. However, if the investor cashes that gain by selling out of the security, they will have realized a $20,000 gain, which will get taxed at ordinary income rates because, as it was held for less than 365 days, it is defined as “short-term” by the IRS. If the individual had held the position for more than a year and the security remained worth $30,000, that $20,000 gain would be taxed at more favorable long-term capital gains rates.

"Net" refers to the cumulative total of gains (or losses) realized throughout a calendar year. So if an investor has a $10,000 gain in February, then realizes a $12,000 loss seven months later, they will report a $2,000 capital loss on tax form 1040 for the year. Further, investors who realize losses can carry them forward indefinitely into the future. For instance, an individual with a $20,000 realized calendar-year loss and no capital gains to offset, while only able to use $3,000 of that to negate current income, can use the remaining $17,000 loss to offset gains in future tax years.

It is within that context that tax-loss harvesting, and strategies and investment vehicles built around it, has become increasingly popular. Asset managers, turnkey asset-management platforms, and financial technology providers are increasingly touting the “alpha” added by programmatically and aggressively offsetting realized gains with realized losses. For instance, technology platform 55ip, a wholly owned subsidiary of J.P. Morgan, claims to have generated an estimated average of 2.58% in tax savings for clients in 2020.[13] More tailored investment vehicles like separately managed accounts, model portfolios, and direct indexing aim to build on the benefits of tax-loss harvesting.

### The Optimal Conditions

Vanguard recently published a research piece outlining the factors that drive tax-loss harvesting.[14] The authors identified the availability of capital gains, recurring cash flows into taxable accounts, market volatility, and applicable current and future tax rates as key considerations that ultimately work together

13 https://www.55-ip.com/year-in-review-our-value-to-advisors-their-clients/

14 Khang, K., Paradise, T., & Dickson, J.M.. 2020. "Tax-Loss Harvesting: A Portfolio and Wealth Planning Perspective. October 2020. https://corporate.vanguard.com/content/dam/corp/research/pdf/Tax-Loss-Harvesting-A-Portfolio-and-Wealth-Planning-Perspective-US-ISGTLH_102020_online.pdf

to determine an individual's tax-loss harvesting profile. The authors noted that investment granularity plays an important role, too. Put another way, an investor with a 30-stock portfolio will likely have more tax-loss harvesting opportunities than another who holds one mutual fund.

To understand how investment granularity and recurring cash flows work together, consider an individual who regularly invests into a broad-based market index, the SPDR S&P 500 ETF SPY, and an individual stock, Facebook parent Meta Platforms FB. The individual invests $10,000 every three months into the two positions starting March 1, 2017, in what is known as a *dollar-cost averaging plan*. Exhibit 16 outlines the individual lots as of February 2022.

**Exhibit 16** How Volatility and Timing Affect Tax-Loss Harvesting

| | **SPDR S&P 500 ETF (SPY)** | | | **Meta Platforms Inc (FB)** | | |
|---|---|---|---|---|---|---|
| Date of Investment | Cumulative Return (%) | Position Value (USD) | Gain/Loss) (USD) | Cumulative Return (%) | Position Value (USD) | Gain/Loss (USD) |
| 3/1/17 | 101.84 | 20,184 | 10,184 | 55.70 | 15,570 | 5,570 |
| 6/1/17 | 96.83 | 19,683 | 9,683 | 39.33 | 13,933 | 3,933 |
| 9/1/17 | 91.15 | 19,115 | 9,115 | 22.71 | 12,271 | 2,271 |
| 12/1/17 | 77.61 | 17,761 | 7,761 | 19.10 | 11,910 | 1,910 |
| 3/1/18 | 72.55 | 17,255 | 7,255 | 18.34 | 11,834 | 1,834 |
| 6/1/18 | 72.27 | 17,227 | 7,227 | 10.04 | 11,004 | 1,004 |
| 9/1/18 | 59.95 | 15,995 | 5,995 | 20.09 | 12,009 | 2,009 |
| 12/1/18 | 67.35 | 16,735 | 6,735 | 50.08 | 15,008 | 5,008 |
| 3/1/19 | 64.97 | 16,497 | 6,497 | 30.71 | 13,071 | 3,071 |
| 6/1/19 | 66.10 | 16,610 | 6,610 | 18.91 | 11,891 | 1,891 |
| 9/1/19 | 55.51 | 15,551 | 5,551 | 13.66 | 11,366 | 1,366 |
| 12/1/19 | 44.24 | 14,424 | 4,424 | 4.66 | 10,466 | 466 |
| 3/1/20 | 52.64 | 15,264 | 5,264 | 9.64 | 10,964 | 964 |
| 6/1/20 | 47.25 | 14,725 | 4,725 | -6.25 | 9,375 | -625 |
| 9/1/20 | 27.56 | 12,756 | 2,756 | -28.03 | 7,197 | -2,803 |
| 12/1/20 | 22.80 | 12,280 | 2,280 | -23.81 | 7,619 | -2,381 |
| 3/1/21 | 16.29 | 11,629 | 1,629 | -18.08 | 8,192 | -1,808 |
| 6/1/21 | 5.07 | 10,507 | 507 | -35.80 | 6,420 | -3,580 |
| 9/1/21 | -2.65 | 9,735 | -265 | -44.38 | 5,562 | -4,438 |
| 12/1/21 | -3.91 | 9,609 | -391 | -34.96 | 6,504 | -3,496 |

Source: Morningstar Direct. Data as of Feb. 28, 2022.

Both positions appreciated convincingly since the initial purchase, despite several notable market drawdowns over that stretch. SPY lost 19.3% from peak to trough in 2018's fourth quarter and then another 33.7% during the coronavirus market panic from Feb. 20 to March 23, 2020. Meta suffered similar drawdowns in those periods, but its more recent selloff highlights how security-specific risk and cash flow timing work together to improve the conditions for tax-loss harvesting. The firm's disappointing earnings report cratered its stock price by 26.4% on Feb. 3, 2022, then fell further in the ensuing days, sending the most recent lots into loss territory. Yet the earliest lots, which suffered through the same dramatic collapse and two broader market selloffs, still had notable gains.

Selecting individual lots for cost-basis accounting makes tax-loss harvesting easier to implement. A tax-savvy investor looking to either trim the position, raise cash, or both could sell the first seven and last seven lots of the Meta position and still not have realized a gain. Indeed, many brokerage platforms have helped investors automate this selling methodology. Meanwhile, by nature of its broader exposure and better diversification, SPY does not have nearly the same losses to harvest, even as Meta has been a top-10 holding in the index throughout the period.

One practical consideration with tax-loss selling is whether the investor wishes to maintain economic exposure to the market sector they are selling out of. The IRS' wash-sale rule states that if an investment or a "substantially identical" security is sold at a loss and then repurchased within 30 days, the initial loss cannot be claimed for tax purposes.[15] At face value, this forces investors to sit on the sidelines during the lockup period, but investors could instead swap into another stock in the same sector. While doing so courts single-stock risk, it mostly provides similar exposure in a small window.

**Not Just for Those With Individual Positions**

In general, investors using broadly diversified mutual funds rather than stocks will have fewer tax-loss harvesting opportunities. Moreover, the rebalancing that many such investors use to maintain their portfolios' target allocations may trigger tax bills in their taxable accounts, as investors move out of those that have shown relative strength and into weaker asset classes.

But investors in broadly diversified mutual funds and ETFs can take advantage of losing periods for the market to book tax losses. As with the preceding example, they can use the specific share identification method to sell recently purchased lots of funds that are trading below their cost basis. The proliferation of broad-based market indexes also provides several opportunities to maintain similar market exposure without running afoul of the wash-sale rule.

First, investors harvesting losses in an actively managed strategy can redeploy the process into a passive vehicle immediately to adhere to asset-allocation targets. Investors can also swap indexes for one another. Consider the large-cap international space. An investor holding the Vanguard FTSE All-World ex-US ETF VEU could capture losses, then redeploy the capital into the iShares Core MSCI Total International Stock ETF IXUS and not face backlash from the IRS, even as the two ETFs offer markedly similar exposure; the two ETFs shared a common holdings score of 86% according to Morningstar Direct's holdings comparison report as of February 2022. They track different indexes, so even though returns have been mostly in lockstep, the differing index methodologies produce distinct portfolios and do not trip the IRS' "substantially identical" rule. Indeed, many robo-advisors offer this capability as a feature or add-on,[16] as do many TAMPs and technology providers. Exhibit 17 details the annualized return profiles of the two indexes over the past five years.

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15 https://www.irs.gov/publications/p550#en_US_2021_publink100010601

16 Arnott, A., Lucas, A., & Johnson, B. 2022. Morningstar's Robo-Advisor Landscape. https://www.morningstar.com/lp/robo-advisor-landscape

**Exhibit 17** Similar but Different

| Investment | Ticker | Return (%) | Standard Deviation (%) | Morningstar Risk-Adj Return (%) | Primary Prospectus Benchmark |
|---|---|---|---|---|---|
| Vanguard FTSE All-World ex-US ETF | VEU | 7.53 | 15.01 | 3.89 | FTSE All-World Ex US NR USD |
| iShares Core MSCI Total International Stock ETF | IXUS | 7.47 | 15.19 | 3.79 | MSCI ACWI Ex USA IMI NR USD |

Source: Morningstar Direct. Data as of Feb. 28, 2022.

Yet investors and advisors need to remain vigilant, both to harvest individual losses and ensure compliance with IRS rules. Exchanging a mutual fund for an ETF that tracks the same index triggers a wash sale. For instance, an investor trading Vanguard Total International Stock Index VTIAX, a mutual fund, for Vanguard Total International Stock ETF VXUS, an ETF, would run into issues. First, since most Vanguard ETFs were established as separate share classes of the firm's mutual funds, as this one was, the trade amounts to swapping out substantially identical holdings. And since the two vehicles are different wrappers on the same strategy, they track the same index. It is also not quite as easy as swapping out fund families. An investor swapping out the iShares MSCI EAFE ETF EFA for Fidelity International Index FSPSX would run into the same problems, as both strategies seek to mimic the MSCI EAFE benchmark.

*Acknowledgements: Thanks to Christine Benz, Dan Culloton, Russ Kinnel, Alec Lucas, Megan Pacholok, and Janet Yang for helpful comments, discussions, and technical expertise.*

# Appendix

### Return and Tax Assumptions Used in Modeling

For the illustrations in Part I, we made several assumptions for asset-class returns. We assumed an 8% annualized return for equities, which matches the S&P 500's rolling 10-year average over the past 30 years. Dividends account for one fourth of that annualized gain (2%) and are reinvested. Dividends have accounted for roughly 32% of the S&P 500's return since 1926.[17] The dividends are assumed to be qualified, meaning that they are taxed at long-term capital gains rates when held in taxable accounts. When rebalancing, capital gains are taxed at the same rate as well. In the tax-deferred account, dividends and capital gains are not taxed.

We modeled lower returns, higher yields, and harsher tax treatment for bonds. We assumed all interest payments were taxed at ordinary income rates, which matches most cases (with the tax-advantaged treatment of municipal-bond interest being the notable exception). The 4% annualized gain modeled is higher than the Bloomberg U.S. Aggregate Bond Index's recent gains have been but lower than its 5.4% average rolling 10-year return since 1992. We used similar conclusions for yield. While 2.5% is higher than the 10-year Treasury yield's average over the past decade, it is lower than the historical average over the past 30 years. Since the modeled equity gains outstrip those of fixed income, there is no need for rebalancing out of bonds, though the same capital gains assumptions would apply.

### Broad Overview of Account Types

#### Taxable

Contributions: Aftertax.

Investment Growth: Unrealized capital appreciation (investment growth) is not taxable under the current tax code. However, regular interest payments, short-term capital gains distributions, and nonqualified dividends are taxed as ordinary income, regardless of whether they are received in cash or reinvested. Qualified dividends and long-term capital gains distributions are taxed at long-term capital gains rates.

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17 Chirputkar, S., & Soe, A. 2021. "S&P 500 Dividend Aristocrats: The Importance of Stable Dividend Income." https://www.spglobal.com/spdji/en/research/article/a-fundamental-look-at-sp-500-dividend-aristocrats/#:~:text=Since%201926%2C%20dividends%20have%20contributed,factors%20for%20total%20return%20expectations

Withdrawals: Investment sales are subject to capital gains taxation. In cases where the investment has appreciated, realized long-term capital gains are taxed at long-term capital gains rates, while realized short-term capital gains are taxed as ordinary income. If an investment has depreciated, the investor may realize a capital loss, which can be used to offset realized capital gains in the current year. If there are no gains to offset, the investor can use up to $3,000 per year to offset ordinary taxable income on Schedule D of IRS Form 1040. Any amount of losses left over can be carried forward indefinitely in the individual's lifetime—offsetting future realized capital gains or, if there are no gains to offset, $3,000 per year of ordinary income until depleted—under the current tax code.

Restrictions: None. Investors can sell assets, subject to taxation, and withdraw assets at their own discretion.

### Traditional IRAs and 401(k)s and other employer-sponsored plans

Contributions: Pretax.

Investment Growth: Tax-deferred, including realized capital gains.

Withdrawals: Taxed at ordinary income rates at the time of distribution. Required minimum distributions apply beginning at age 72.

Restrictions: The IRS assesses a 10% early withdrawal penalty for those making distributions before age 59 and a half, on top of the ordinary income tax rate, though there are exceptions.[18]

### Roth IRAs and Roth 401(k)s and other employer-sponsored plans

Contributions: Aftertax.

Investment Growth: Tax-free, including realized capital gains.

Withdrawals: Tax-free. Required minimum distributions apply to Roth 401(k)s but not Roth IRAs.

Restrictions: Investors can withdraw their contributions tax-free before 59 and a half, but all earnings and growth receive the additional 10% early withdrawal tax, though the IRS grants certain exceptions.[19]

### Health savings accounts

Contributions: Pretax.

Investment Growth: Tax-free, including realized capital gains.

Withdrawals: Tax-free, provided they are used for qualified medical expenses. All other withdrawals are subject to ordinary income tax rates.

18 https://www.irs.gov/retirement-plans/plan-participant-employee/retirement-topics-tax-on-early-distributions

19 https://www.irs.gov/taxtopics/tc557

Restrictions: Only workers with qualifying high-deductible health plans can open and contribute to HSAs. Nonqualified withdrawals made before the account owner turns 65 are subject to an additional 20% early withdrawal tax.

### 529 education savings plans

Contributions: Aftertax.

Investment Growth: Tax-free, including realized capital gains.

Withdrawals: Tax-free, provided they are used to cover qualified educational expenses like tuition, mandatory fees, books, and so on.[20] Savers can also change the beneficiary of these accounts without tax consequences provided the new beneficiary is part of the old beneficiary's family and funds are used for qualified education expenses.

Restrictions: Withdrawals for nonqualified expenses usually incur a 10% penalty on top of applicable ordinary income tax on earnings.

### Glossary

Aftertax returns (also referred to as *posttax returns*): A calculation that seeks to determine the realized return, net of relevant taxes, on an individual investment.

Long-term capital gains: Triggered when an investment held for more than one year is sold for a gain. The gain (proceeds minus adjusted cost basis) is taxed at long-term capital gains rates.

Ordinary dividends (also known as *nonqualified dividends*): Dividend payments that do not meet the qualified criteria and thus taxed at ordinary rates. Generally, dividend payments from REITs, master limited partnerships, and money market funds are notable examples of ordinary dividends.

Qualified dividends: Dividend payments that qualify for the long-term capital gains tax rate. The IRS outlines three rules that dividends must satisfy to be considered qualified:[21]

1. Dividends must be paid by a U.S. or qualified foreign corporation.
2. Shares paying dividends must be held for at least 61 days of a 121-day window. That period starts 60 days before the stock's ex-dividend date.
3. Dividends must not come from a source exempt from qualified status.

Short-term capital gains: Triggered when an investment held for one year or less is sold for a gain. The gain (proceeds minus adjusted cost basis) is taxed at ordinary rates.

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20 https://www.irs.gov/pub/irs-pdf/p970.pdf P. 51

21 Sotiroff, D. 2021. "How to Get the Highest Yield Out of Your Dividends." Morningstar. Oct. 12, 2021. https://www.morningstar.com/articles/1061279/how-to-get-the-highest-yield-out-of-your-dividends

Tax-deferred (also referred to as *tax-sheltered*): An investment account that defers or shelters taxation until distribution.

**The Challenges of Aftertax Returns**

Asset managers, advisors, and data providers (like Morningstar) make a lot of assumptions when calculating aftertax returns, including about tax rates and whether dividends and capital gains are reinvested. There is no universally applicable scenario; assuming the highest tax bracket and distribution reinvestment may be conservative but also irrelevant to a broad swath of investors subject to lower tax rates and/or living off their dividends and capital gains.

Aftertax return calculations also assume investors sell some of their portfolios to cover their tax bills, which many advisors and investors do not do. But because these assumptions generally simplify real-world practices, investors calculating aftertax returns will not find a clear audit between these returns and their actual account balances. Exhibit 18 shows this dynamic on a $10,000 investment that generates an 8% total return and 2% qualified dividend income payment taxed at 15%.

**Exhibit 18** Calculating Aftertax Returns

| | | | Pretax | | | Aftertax | |
|---|---|---|---|---|---|---|---|
| Initial Investment (USD) | Qualified Dividend (USD) | Capital Appreciation (USD) | Balance (USD) | Return (%) | Tax Drag (USD) | Balance (USD) | Return (%) |
| 10,000 | 200 | 600 | 10,800 | 8 | -30 | 10,770 | 7.7 |

Source: Author's Calculations.

**About Morningstar Manager Research**
Morningstar's global manager research team conducts objective, qualitative analysis of managed investment strategies such as mutual funds and exchange-traded funds. Manager research analysts express their views through the Morningstar Analyst Rating, which takes the form of Gold, Silver, Bronze, Neutral, or Negative. The analysts arrive at a strategy's Analyst Rating by assessing key areas including its management team and supporting resources (People Pillar), its investment approach and rationale (Process Pillar), and the investment organization backing the strategy concerned (Parent Pillar). The analysts juxtapose those assessments with the strategy's cost in arriving at a final Analyst Rating, which expresses their conviction in the strategy's ability to outperform a relevant benchmark index or category peers over a market cycle, adjusted for risk. The Morningstar Analyst Rating methodology is forward-looking in nature and applied consistently across geographies and markets. (The Analyst Rating is an opinion, not a statement of fact, and is not intended to be nor is a guarantee of future performance.)

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