



Exploring The Benefits Of Asset Location

Executive Summary

- The concept of asset allocation and diversifying investments amongst multiple asset classes is a staple of investment theory. Yet in today's world, with many different types of investment accounts, each with their own tax treatment, the question emerges: given a diversified asset allocation portfolio, in which accounts should those various investments be held to maximize long-term wealth creation?

- In a world of pure buy-and-hold and no turnover or dividends, asset location strategies are relatively straightforward to implement: equities eligible for preferential capital gains treatment are allocated to taxable brokerage accounts, while bonds that generate ongoing ordinary income that's annually taxable are best to be placed in retirement accounts. Putting equities into retirement accounts is unfavorable, as it converts favorable long-term capital gains rates on growth into ordinary income treatment.

- However, as it turns out, having even just a little bit of equity turnover and a modest level of ongoing dividends already erodes much of the value of the tax deferral normally associated with buy-and-hold strategies. A mere 2.5% ongoing dividend can eliminate as much as 1/3rd of the benefits of tax-deferral, and just having equities turn over once per decade erases another 1/3rd of the benefits of tax-deferral over the span of 30 years.

- Given the drag that even just a modest level of ongoing dividends and turnover can have over longer periods of time, holding equities inside of retirement accounts actually *can* be preferable, even with less

favorable tax treatment, because of the potential for long-term compounding without any tax drag. As a result, asset location decisions for equities can be highly sensitive to exactly how tax-efficient the investment holding will really be, and how much dividend income and annual turnover is anticipated.

- Although tax efficiency is a crucial factor in determining proper asset location, it is not the only factor. The expected return of available investments is also critically important, for the simple reason that if the expected return is very low, tax efficiency actually doesn't matter very much in the first place. The difference between tax-efficient and tax-inefficient growth just isn't significant when there isn't much growth rate to compound in the first place.

- Given the factors of tax-efficiency *and* expected return, asset classes or available investments can be ranked in a form of "asset location priority list" where the highest return efficient investments are on one end, the highest return *inefficient* investments are at the other end, and the low-return investments where asset location just doesn't matter go in the middle.

- Once an asset location priority list has been established, asset location strategies can be implemented with an "outside-in" approach, where the highest return efficient investments tilt towards the taxable brokerage account, the highest return inefficient investments lean towards the retirement account, and the accounts are filled respectively with such assets under eventually one account or the other is filled entirely (and at that point, all remaining investments go in the 'other' account). By working outside-in, the investor is assured that the highest priority investments, which have the greatest wealth impact with a proper asset location decision, will in fact be placed in the right account.

- Ultimately, the financial benefits of asset location will depend on the exact mix of available account types, and the actual available investments (and their associated prospective returns, tax-efficiency, and the tax rates to which they will be subject). In general, though, research has estimated that the benefits of good asset location are roughly around 0.15% - 0.25% of "free" return, available by simply making fully optimized asset location decisions!

About the Author

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Introduction

The concept of asset allocation and diversifying investments amongst multiple asset classes and risks is a staple of today's financial planning and investment world, though its roots date back thousands of years. It was even written the Talmud "Let every man divide his money into three parts, and invest a third in land, a third in business, and a third let him keep by him in reserve."

Yet in today's environment, asset allocation decisions have an additional layer of complexity: taxation, and the availability of different types of accounts for different goals and purposes, and with different types of tax treatment. Which raises the question: if you're going to have a well-diversified portfolio with capital allocated to various investments, in which accounts will those assets be held? In other words, with both IRAs and brokerage accounts, what asset *location* will you assign for the stocks and the bonds (and any other asset classes)?

In this month's newsletter, we explore the concept of asset location and its prospective benefits when executed well, along with examining the available research on how to make the best decisions regarding asset location when taking into account the tax treatment of the available accounts, the tax treatment of the chosen investments, and the expected risks and returns of those investments.

Defining Asset Location

The typical investor may have three different types of investment accounts available: a taxable (or brokerage) accounts, tax-deferred accounts (e.g., an IRA, 401(k), or a deferred annuity), and tax-exempt accounts (e.g., a Roth IRA, or a 529 college savings plan). Each account is unique in the types of tax treatment afforded to it:

- **Taxable Accounts.** The tax treatment for taxable brokerage accounts is characterized by the tax treatment of the underlying investments.

- **Tax-Deferred Accounts.** While tax-deferred accounts like IRAs are by definition tax-deferred as long as funds are held inside the accounts but are taxable as ordinary income when withdrawn, and that ordinary income treatment applies

regardless of the type of investments that are held inside.

- **Tax-Exempt Accounts.** Accounts that are tax-exempt technically grow initially tax-deferred and ultimately – as the name implies – allow withdrawals of the growth to be tax-free at the end (regardless of the type/character of investments that are held inside the accounts) as long as associated requirements are met.

As a result of these different types of accounts with their own tax treatment – especially given that tax-deferred and tax-exempt accounts override the taxation rules that would otherwise apply to an investment – the question arises: when holding a diversified portfolio of investments, with various asset classes that in turn each have their own expected risks and returns and tax treatment, in which accounts should each of those investments be held? Which combination of investments and types of investment accounts can maximize the long-term accumulation of wealth?

In general, the fairly obviously conclusion would seem to be that the highest return investments should go in the most tax-preferenced accounts first – such that tax-exempt (or at least tax-deferred) growth can be maximized with the "growthiest" of assets. However, the situation is further complicated by the fact that in the case of tax-deferred accounts – such as the very-common IRA and 401(k) – there is a trade-off of tax-deferral on growth for the fact that future withdrawals of that growth will be taxed as ordinary income. By contrast, investments held in brokerage accounts may avoid ordinary income tax rates and be eligible for the (current) preferential long-term capital gains and qualified dividends tax treatment.

As a result of this dichotomy – that common tax-deferred accounts must trade off tax-deferral on growth for ordinary income treatment that may not have otherwise applied – the process for evaluating a good asset location decision becomes much more complex.

Basic Asset Location Strategy

To understand the basic concepts of asset location, we'll start with a relatively straightforward scenario...

Client has \$1,000,000 of investment assets, divided evenly amongst a \$500,000 in a taxable account, and \$500,000 in an IRA. The client wishes to implement a 50/50 stock/bond asset allocation, which means there

will be \$500,000 in stocks and \$500,000 in bonds. As a starting point, we will assume that bonds have a long-term average return of 5% and are taxed at a 25% ordinary income tax rate, while the stocks have a long-term average return of 10% and are eligible for the 15% long-term capital gains tax rate. For the time being, we'll assume there is no turnover (of the stocks), and the investments are simply bought and held (no rebalancing) for a 30-year time horizon.

Simplistically, there are three ways that this 50/50 asset allocation could be implemented. The first option is to hold 100% of the bonds in the taxable account and all of the stocks in the IRA. The second alternative is the reverse, to hold 100% of the stocks in the taxable account and the bonds in the IRA. The third scenario is to simply treat every account as the same, which means every account is invested to a 50/50 allocation. Thus, the taxable account would hold \$250,000 in stocks and \$250,000 in bonds, and similarly the IRA would hold \$250,000 in stocks and \$250,000 in bonds.

If we project these three scenarios forward at the aforementioned growth rates for the 30-year time horizon, the outcomes are calculated as follows (and summarized in Figure 1 below):

Scenario 1 (Bonds Taxable, Stocks IRA): The bonds grow at an after-tax rate of 3.75% (gross 5% less 25% taxes), for a total future after-tax value of $\$500,000 \times 1.0375^{30} = \$1,508,736$. The stocks grow at a gross return of 10% for 30 years

inside the IRA to $\$500,000 \times 1.10^{30} = \$8,724,701$, but then are fully taxable when withdrawn from the IRA (still assuming a 25% tax rate), resulting in a final after-tax value for the stocks of \$6,543,526. **Total after-tax wealth is \$8,052,262.**

Scenario 2 (Stocks Taxable, Bonds IRA): Now the bonds grow at a 5% gross return (but are then fully taxable at the time of withdrawal), for a future after-tax value of $(\$500,000 \times 1.05^{30}) \times (1 - 0.25) = \$1,620,728$. The stocks grow at a gross return of 10% for 30 years to $\$500,000 \times 1.10^{30} = \$8,724,701$, but all the gains above cost basis are taxable at 15% when liquidated, resulting in a tax liability of $(\$8,724,701 - \$500,000) \times 15\% = \$1,233,705$, and a final after-tax value for the stocks of $\$8,724,701 - \$1,233,705 = \$7,490,996$. **Total after-tax wealth is \$9,111,724.**

Scenario 3 (Each Account 50/50): The bonds in the taxable account grow at an after-tax rate of 3.75%, for a total future after-tax value of $\$250,000 \times 1.0375^{30} = \$754,368$. The stocks in the taxable account grow to $\$250,000 \times 1.10^{30} = \$4,362,351$, but after netting 15% in taxes against the growth above the \$250,000 cost basis, is worth \$3,745,498. In the meantime, the \$250,000 of bonds in the IRA grow at $\$250,000 \times 1.05^{30} = \$1,080,486$ and the \$250,000 of stocks again grows to \$4,362,351, for a total combined-stock-and-bond IRA value of $\$5,442,836$, and an after-tax value of $\$810,365 + \$3,271,763 = \$4,082,127$. **Thus, total after-tax wealth at the end is $\$754,368 + \$3,745,498 + \$4,082,127 = \$8,581,994$.**

Figure 1. Results of Initial Asset Location Scenarios.

	Scenario 1		Scenario 2	
	Taxable Bonds	IRA Stocks	Taxable Stocks	IRA Bonds
Starting Value	\$500,000	\$500,000	\$500,000	\$500,000
Gross Final Value	\$1,508,736	\$8,724,701	\$8,724,701	\$2,160,971
After-Tax Final	\$1,508,736	\$6,543,526	\$7,490,996	\$1,620,728
	Total	\$8,052,262	Total	\$9,111,724
Scenario 3				
	Taxable		IRA	
	Stocks	Bonds	Stocks	Bonds
Starting Value	\$250,000	\$250,000	\$250,000	\$250,000
Gross Final Value	\$4,362,351	\$754,368	\$4,362,351	\$1,080,486
After-Tax Final	\$3,745,498	\$754,368	\$3,271,763	\$810,365
	Total		\$8,581,994	

As the results show, the least effective solution is scenario 1, holding the bonds in the taxable account (where they're taxed annually) and placing the stocks in the IRA (where the preferential long-term capital gains tax treatment is converted to ordinary income). The most effective strategy is the reverse in scenario 2, where stocks are held in the brokerage account, and the otherwise-annually-taxable bonds enjoy tax-deferred growth inside the IRA, assumed to be taxed only upon liquidation at the end.

The investor in scenario #2 has a “benefit” of \$1,059,462 of additional wealth by making a good asset location decision.

The strategy of scenario 3 –holding the same 50/50 asset location in each account – is superior to the worst case scenario, but inferior to the best scenario; in essence, because at least half the bonds are sheltered in the IRA the situation is improved slightly, but because half the stocks are held in the IRA (and converted from long-term capital gains to ordinary income) scenario #3 fares worse than scenario #2.

Notably, though, the benefit of holding stocks in the taxable account in this example is accentuated by the assumption that returns are generated exclusively in the form of capital appreciation; there are no dividends, and there is no turnover. Thus, the benefits of holding the stocks in the taxable account are boosted by the fact that they are essentially treated in the same manner as an IRA *anyway* – all growth is tax deferred until liquidation – but at a more favorable capital gains tax rate instead of an ordinary income rate. After all, as the comparison of results from scenarios 1 and 2 reveal, there is only a relatively modest difference in the final after-tax value of the bond holdings, and most of the difference is attributable to the difference in the final value of stocks (which have the same gross value after 30 years but a much different net value due to the different tax rates).

However, when these tax efficiency assumptions – where all the growth in the taxable account is driven by 100% tax-deferral growth of capital gains – are changed, a different result begins to emerge.

The Impact Of Tax Efficiency

In practice, most equity investments are not quite so

“efficient” that they generate *zero* dividends and are *never* turned over in the span of multiple decades. Yet the presence of even a modest amount of ongoing taxation and the associated decline in tax efficiency can impact the consequences of asset location decisions.

In the extreme, all growth is taxed annually, such that the portfolio itself simply grows at an effective rate of 8.5%/year (which 10% growth minus a 15% annual “tax drag”), which would result in a final value of \$5,779,126. Thus, in essence, the difference between \$7,490,996 (with “perfect” efficiency of stocks in the taxable account, as shown in scenario 2), and the “worst-case scenario” of \$5,779,129 where the growth is taxed annually, represents the potential maximum tax-deferral value, and amounts to \$1,711,867.

Of course, taxing all growth annually can be quite harsh, but what happens if the portfolio is just slightly-less-than-perfectly efficient – for instance, if the stocks held in the taxable account are comprised of growth that includes 2.5% dividends (taxed at 15% with the net after-tax remainder annually reinvested) and 7.5% of capital appreciation (which still adds up to a 10% total return on equities). In this case, the future value of stocks held in the brokerage account is only \$7,875,138 (with a cost basis up to \$2,128,277 with dividend reinvestments) and an after-tax value of \$7,013,109. This amount is \$477,887 less than the “perfectly” tax efficient solution, and represents approximately 28% of the available \$1,711,867 of tax deferral value.

In other words, *just* introducing a 2.5% dividend eroded more than a quarter of the tax-efficiency value of holding stocks in the taxable account. When added to the \$1,620,728 of after-tax value attributable to the bonds held in the IRA, the final value (illustrated as scenario “1a” in Figure 2 below) would be only \$8,633,837. While this is still higher than the \$8,052,262 of after-tax value from scenario 1 (where stocks are held in the IRA), the dividend alone has reduced much of the gap.

Figure 2. Results of Asset Location Scenarios, Including Scenario 1a with Ongoing Dividends.

	Scenario 1		Scenario 1a		Scenario 2	
	Taxable Bonds	IRA Stocks	Taxable Stocks	IRA Bonds	Taxable Stocks	IRA Bonds
Starting Value	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000
Gross Final Value	\$1,508,736	\$8,724,701	\$7,875,138	\$2,160,971	\$8,724,701	\$2,160,971
After-Tax Final	\$1,508,736	\$6,543,526	\$7,013,109	\$1,620,728	\$7,490,996	\$1,620,728
	Total	\$8,052,262	Total	\$8,633,837	Total	\$9,111,724

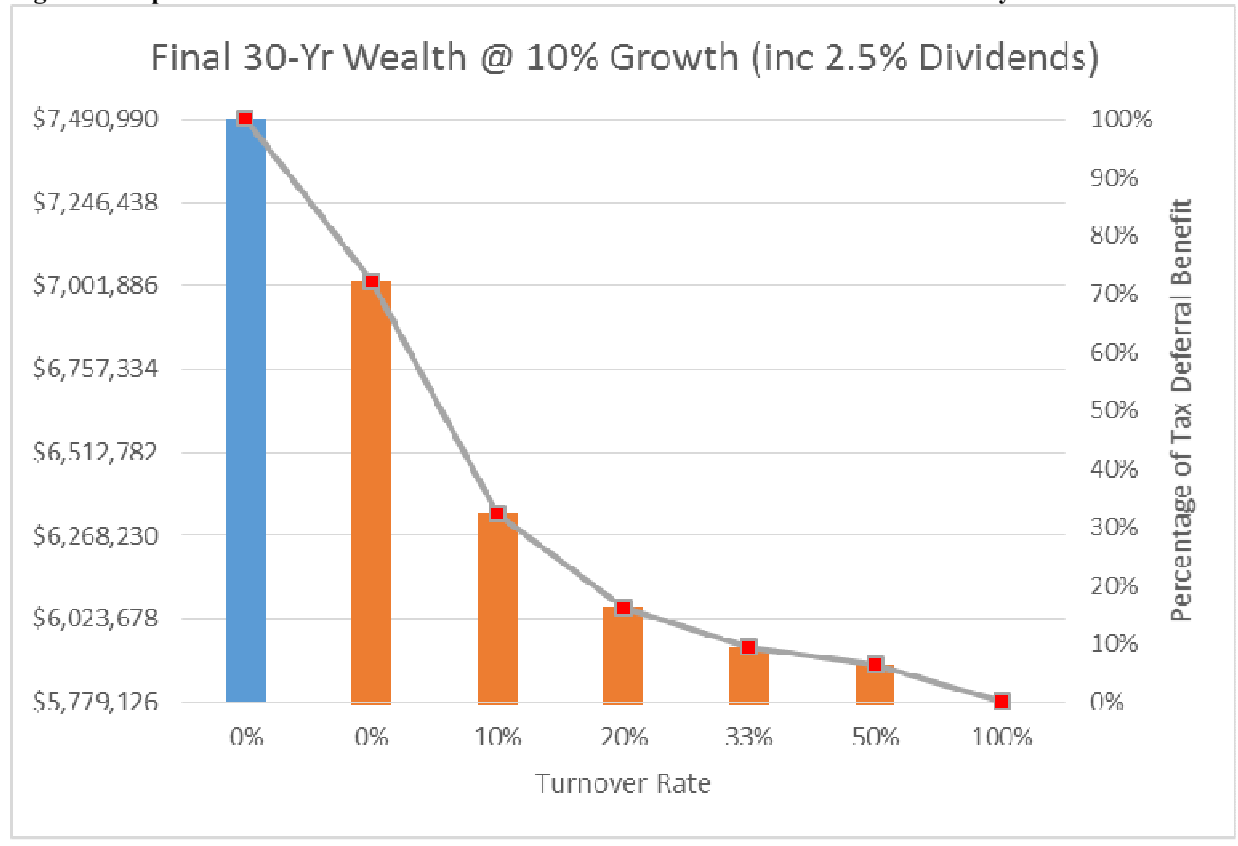
Yet this still includes no actual turnover and no capital gains appreciation recognized until the end of the 30-year time horizon. With any ongoing taxation in the form of turnover (in addition to dividends), the gap closes even further.

For instance, the chart in Figure 3 below shows – continuing the 2.5% dividends and 7.5% capital appreciation of scenario 1a – how final wealth changes with either 10% turnover (gains are liquidated every 10 years), 20% turnover (every 5 years), 33% turnover (every 3 years), 50% turnover (every other year), or 100% turnover (gains recognized every year, but still assumed to be long-term). In this chart, the blue bar on the left represents the “perfect” tax efficiency scenario, the first orange bar is the result of just including dividends (reducing the tax efficiency by 28%, with just over 70% remaining), and the impact of further turnover is shown to the right. At 100% turnover, the end result is basically the “worst case scenario” shown earlier, where 100% of gains are taxed annually (albeit still at long-term capital gains rates) and the portfolio effectively just grows at 8.5%/year.

As the results reveal, even just a modest amount of portfolio turnover like 10% - amounting to recognizing gains no more than once a decade – has a *dramatic* effect on the value of tax deferral, chopping it by a whopping 68%. With just 10% turnover and a 2.5% dividend, the final after-tax value of stocks at the end of the 30-year time horizon is only \$6,332,286, which is *actually below the after-tax value of holding them in the IRA* (as shown earlier in Figures 1 and 2)! In other words, with stocks that merely have a 2.5% dividend and are turned over once a decade, *it’s worth holding them in an IRA and converting the gains to ordinary income just for the superior tax efficiency!*

As Figure 3 further illustrates, more turnover just brings the value of holding equities in the brokerage account down even further, though notably the effects are diminishing – going from 0% to 10% turnover (which drops the tax efficiency down to barely over 30%) is more severe over the 30 year time horizon than going from 10% to 100% turnover (which only sheds that last remaining 30% of tax efficiency)! In other words, planners and their clients may be overestimating the consequences of high-turnover portfolios, and underestimating how much tax-efficiency is lost by

Figure 3. Impact Of 2.5% Dividend And Various Levels Of Turnover On Tax Efficiency



even just having once-per-decade turnover.

This is not to suggest that the differences between low-turnover and high-turnover portfolios should be ignored; it simply makes the point that with *any* amount of turnover across a multi-decade time horizon, most of the value of holding equities in a brokerage account begins to vanish, and with an ongoing portion of growth paid as dividends as well, can quickly eliminate any benefit of holding equities in a brokerage account, *even with preferential long-term capital gains and qualified dividend tax rates!*

Or viewed another way, the key point is that while the preferential tax treatment of long-term capital gains is valuable, the benefits of compounding tax deferral in an IRA over multi-decade time horizons are even greater (so much that they can overcome/overwhelm the unfavorable ordinary income treatment). Thus, as long as the time horizon remains relatively short, equities may be tilted towards brokerage accounts, but with anything less than near-perfect tax efficiency, the case is suddenly far less clear.

How Tax Efficient Are Equity Investors Really?

The reason the previously discussed issues of dividend and turnover tax efficiency are important is that, even while many advisors advocate a buy-and-hold passive, strategic investment approach, it's notable that the turnover of portfolios is rarely a perfect "zero" percent (and even if it is, high dividends can undermine much of the tax efficiency value anyway).

The primary reason that turnover is rarely 0% even for buy-and-hold portfolios is simply the impact of rebalancing. After all, due to the ongoing effects of compounding – where

stocks compound at a higher rate than bonds – what starts out as a 50/50 stock/bond split would end out being more than 80% in equities after 30 years due to the "equity drift" effect (as the growth of stocks outpaces that of bonds, over time the stock allocation grows relative to the bond allocation). Accordingly, the advisor and client will almost certainly need to engage in a significant amount of rebalancing over an extended time horizon just to keep the portfolio allocation on target – never mind rebalancing opportunities to buy and sell due to volatile markets – which in turn will result in recognizing a significant portion of the ongoing gains even with a passive approach. In other words, to the extent that rebalancing and maintaining a steady asset allocation is important to the client over long time horizons – to avoid excessive equity exposure, not to mention for the other benefits of rebalancing trades – the reality is that most investors *will* have at least some modest ongoing level of turnover... and as shown in the prior section, even just a small amount of turnover significantly diminishes the tax-efficiency over long time horizons.

Of course, for advisors and clients who follow more active investment management strategies, clearly turnover will be higher, even if routinely held long enough to be eligible for long-term capital gains tax rates. As the earlier charts showed, merely having 10% turnover is enough to erode more than half the tax deferral benefit, and relatively modest 33% turnover

erodes nearly half of what was left. For "low turnover" active strategies that have "just" a 50% turnover rate, more than 90% of the tax deferral value is *already* gone! Consequently, over multi-year time horizons, it seems clear that virtually *any* level of active investing will need to be cognizant of the impact of tax drag over time. Similarly, investors that use actively managed mutual funds will face capital gains distributions from time to time, which will also be recognized by the investor as less-than-perfectly-efficient equity investments.

Out and About

- Michael will be presenting at the NAPFA South Region Symposium in Atlanta, GA on March 3rd regarding "Understanding the New World of Health Insurance"

- Michael will also be presenting on "Expanding the Framework of Safe Withdrawal Rates" on March 4th for the "Best of IMCA" Series in Chicago, IL

- Michael will speaking about "Asset Allocation In Retirement: Is A Rising Equity Glidepath Actually Best?" for FPA Greater Phoenix on March 26th

Interested in booking Michael for your own conference or live training event? Contact him directly at speaking@kitces.com, see his calendar at www.kitces.com/schedule, or check out his list of available sessions at www.kitces.com/presentations.

Another factor to consider in the tax efficiency of equity investors is eligibility for qualified dividend treatment, which also currently enjoys preferential tax treatment, but only if the requirements are met. Most long-term equity investors – even with moderate turnover – will likely meet the holding period requirement (which is just that the stock be held for a period of at least 60 days including the dividend date, or 90 days for a preferred stock). And the other requirement for qualified dividend treatment – that the stock either be a C corporation based in the U.S., or certain foreign ADRs traded on U.S. exchanges – is also easily satisfied. As a result, all of our earlier scenarios examining the impact of dividends assumed qualified dividend rates.

However, given the U.S. C corporation requirement, most foreign stocks will not be eligible for qualified dividend treatment, such that foreign equities – especially higher-dividend-paying foreign equities – are significantly less tax efficient (as dividends will be taxable when received as dividends, and at ordinary income tax rates due to nonqualified dividend status). As a result, foreign equities may be handled differently than domestic equities when considering the anticipated tax efficiency of available equity investments.

On the other hand, it's notable that the relative impact of turnover and capital-gains recognition, and the taxation of qualified dividends, will vary depending on the tax rates of the investor themselves; at higher brackets the tax drag can be more severe, while at the lowest tax brackets, the optimal asset location decision and the impact of turnover can be reversed altogether (see sidebar)!

Asset Location Complications Of Additional Asset Classes

In the real world, asset location decisions aren't as simple as just comparing "stocks" to "bonds" because the reality is that advisors and their clients often hold not only multiple subcategories and types of stocks and bonds, but may hold other asset classes as well. And unfortunately, as the number of asset classes and investments increase, so too does the number of permutations of how to combine those available assets into the available types of accounts. For instance, if a portfolio was going to hold 25% each in stocks, bonds, real estate, and commodities, then for a \$500,000 IRA and a \$500,000 brokerage account, we'd have to test all the different two-asset

Tax Efficiency At Varying Tax Rates

Tax efficiency is not only a matter of the pace at which income/growth on an investment – in the form of interest, dividends, and/or capital gains – is realized. The importance of tax efficiency itself is also dictated by the tax rate of the investor themselves; not surprisingly, at higher tax rates, the adverse consequences of "tax drag" are only more severe.

As a result, the relative importance of taking into account tax efficiency when making good asset location decisions should be adjusted by the expected tax rate of the client themselves. In today's tax environment, this can span what are effectively four different long-term capital gains (and qualified dividend) tax brackets: the 0% rate for those in the bottom brackets, the 15%, an 18.8% rate (for those subject to 15% capital gains *and* the 3.8% Medicare surtax on net investment income), and a top rate of 23.8% (including the new 20% top rate on capital gains, and again the 3.8% Medicare surtax). For those subject to the top 23.8% tax rate on long-term capital gains and qualified dividends, the adverse impact of ongoing taxation shown earlier is even more severe.

On the other hand, it's also notable that for those who are eligible for 0% long-term capital gains and qualified dividend rates, the tax-efficient asset location picture begins to look quite different. When growth can be had effectively "tax-free" the value of holding equities in a taxable brokerage account increases tremendously, as it effectively becomes the "perfect" tax-efficient growth vehicle, *regardless* of turnover or the flow of dividends (as long as both remain eligible for that 0% tax rate). In the near term, the most tax-efficient strategy actually becomes a deliberate *harvesting of capital gains* to ensure that the 0% tax rate is utilized to get a "free" step-up in basis!

To say the least, the fundamental point is that even as tax efficiency is considered, it must be recognized that tax efficiency is dictated not only by the merits of the investment and how it will be held or traded, but also the tax circumstances of the individual owning that investment in the first place!

combinations of whether the IRA should have stocks and bonds, stocks and real estate, stocks and commodities, bonds and real estate, bond and commodities, or real estate and commodities (not to mention combinations with a portion of three, or a smaller percentage of all four!).

As a result, sorting out exactly which subsets of the portfolio should be allocated to the taxable account versus the retirement account grows far more complex, especially as continuous investment returns – i.e., changes in value – could require continuously updated calculations.

However, the reality is that the calculations don't necessarily have to be so complex. Imagine for a moment that our \$1,000,000 investor has only \$100,000 in IRA funds, and \$900,000 held in his/her taxable account. Given a portfolio that might hold multiple different asset classes and even more investment positions, the only thing that's *really* necessary is to figure out which of those investments are *most* suitable to be held in an IRA; after all, once we work through the first few positions that are most appropriate for the IRA, all of the IRA dollars will be allocated, and at that point it won't really matter how to locate the remaining assets, because the only amounts *left* will *all* be in the taxable account! For instance, even if we had 10 different investment options at \$100,000 each, all we need to do is figure out which *one* is *most* appropriate for the IRA, fill the IRA with that entire one asset, and then everything else is in the taxable account. This significantly reduces the number of combinations to test amongst 10 assets that would otherwise apply.

Similarly, if the investor actually had \$900,000 in her IRA and only \$100,000 in the brokerage account, the exercise would be the same, just in reverse. The only real issue would be to determine which few asset(s) were *most* suited for being in the brokerage account – ostensibly because they're already tax-efficient and eligible for preferential tax rates – and to prioritize those first. After a relatively modest allocation, all of the brokerage dollars would be used up, and everything left would be located in the IRA, as that's where all the remaining available funds would be.

In fact, even in situations where the available dollars in each account really is about the same - \$500,000 in the taxable account, and \$500,000 in the IRA – there will likely be a subset of assets that “clearly” belong in the IRA (extremely tax-inefficient), and another subset that “clearly” belong in the taxable account (highly tax-efficient), and then a group of assets in the “muddled middle” (not extremely tax-efficient, but not extremely in-efficient either) where they could really go either way, and will fall wherever they may

after the other high-priority assets have been placed at either extreme. In other words, getting asset location “right” will matter more for some assets that are especially tax-efficient – or especially tax *in*-efficient – compared to others, and those are the ones that can be focused upon first.

However, the caveat to all of this is that ultimately, there are actually two different reasons an investment might end up in the muddled middle of the list: it may be mid-way between being highly tax-efficient and very in-efficient, or it may simply have a return so low that it just doesn't matter.

The Impact Of Expected Return

The benefits of tax-deferred compounding growth can add up significantly over time, but the reality is that, simply put, tax-deferred compounding growth yields a lot more value when there's more growth to compound in the first place.

For instance, as noted in the earlier examples, bonds that yield 5% but are subject to a 25% tax rate effectively grow and compound at a 3.75% tax rate. After 30 years, a \$100,000 investment grows to \$1,508,736. By contrast, bonds held inside of a non-deductible IRA (now assuming a \$500,000 of basis) that grows on a tax-deferred basis compound all the way up to \$2,160,971, and after netting out the government's 25% share of the growth, is still worth \$1,745,728. This result reflects a tax-deferred benefit of \$1,745,728 - \$1,508,736 = \$236,993 of additional after-tax economic value, and is the equivalent of getting about 0.49% of extra compounded annual growth over the 30-year time horizon.

Of course, in today's environment bonds aren't yielding 5%, and instead the yield might be closer to 3%. At this lower rate, the taxable bond account grows to \$974,697, while the tax-deferred bond account grows to only \$1,035,223 on an after-tax basis, for a difference of \$60,527 and an economic tax deferral value of only about 0.20%. By contrast, if the bonds were substituted with an alternative high-yielding investment that returned 10% annually, the economic value of the tax deferral over the time horizon is a whopping 1.41% of extra annualized growth.

Accordingly, the reality is that the decision about where to

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Written and edited by Michael E. Kitces

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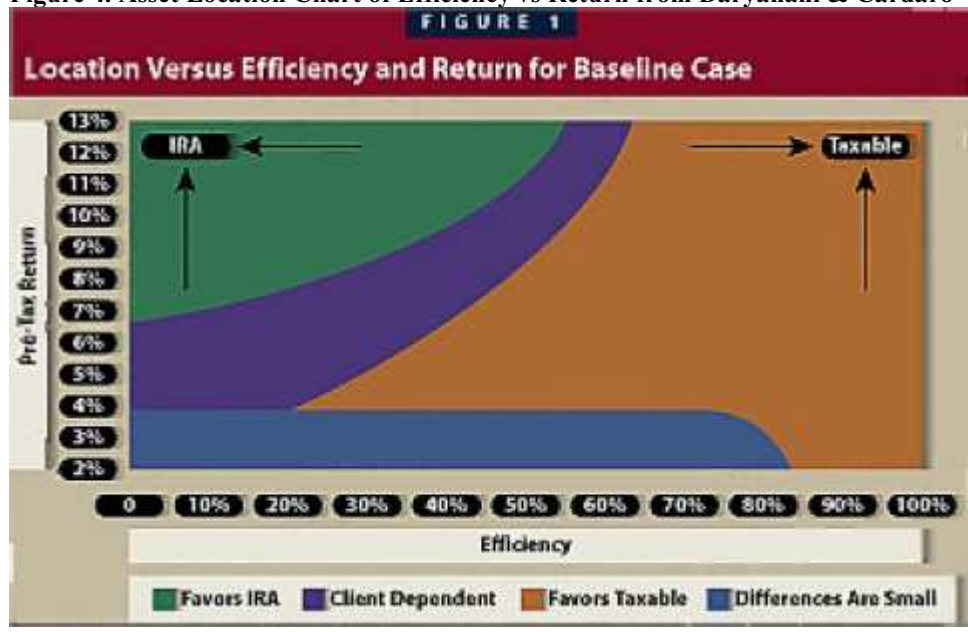
locate an asset amongst accounts of various types is impacted not only by the prospective tax-efficiency of the investment, but also its expected return. In situations where the investment has a low expected return, the actual impact of the asset location decision is small (as in the case of the lower-yielding bond) or entirely negligible (in the case of near-zero cash returns). Conversely, with investments that have a higher expected return, the impact of a good asset location decision that maximizes compounding return – especially if the high-return investment is also tax-inefficient and faces significant tax drag – produces the greatest value.

The chart in Figure 4 shows one representation of this dynamic, from a study entitled “Asset Location: A Generic Framework for Maximizing After-Tax Wealth” by Daryanani and Cordaro in the January 2005 issue of the *Journal of Financial Planning*. As the illustration shows, the most tax-efficient investments should end up in the taxable account, while the more tax-inefficient investments are tilted towards the IRA. However, the priority for the IRA is not merely *any* tax-inefficient investments, but specifically the subset that *also* have the highest expected returns. In the context of investments that just have a lower overall return – such as today’s bonds at ~3% yields on the 10-year Treasury (and lower for those owning shorter-term bonds to defend against potential rising rates) – the reality is that the differences are small, with little impact regardless of where the investment is located!

Creating The Asset Location Priority List

In light of the fact that asset location decisions are impacted by both the expected return and the anticipated tax efficiency of the investment, it’s possible to create a ranking, or “priority list” for the asset location of available investments.

Figure 4. Asset Location Chart of Efficiency vs Return from Daryanani & Cardaro



The first step is to prioritize the highest return investments, which can be split into those that are the most tax-efficient (to be tilted towards the taxable account) versus those that are the most tax-inefficient (which clearly will benefit from being held inside the IRA). These might include investments like an S&P 500 index fund that will be bought and held on one end (high return, tax-efficient), and a high-yield bond fund, a commodities fund that passes through all its gains annually as ordinary income, or an active trading strategy (with high turnover and a lot of short-term capital gains) at the other end (tilted heavily towards the retirement account).

Between these two end points of the spectrum – high return and tax-efficient, and high return but tax-inefficient – are the investments in the middle, which are those with more modest returns such that the priority simply isn’t as high as other higher-return investments, or those investments where the returns are *so* low that the asset location just doesn’t matter at all.

Accordingly, the priority list of available assets begins to fill in the chart shown in Figure 5, with the assets on the left the highest return most-tax-efficient investments that go in the brokerage account, and the assets on the right the highest return most *inefficient* investments that go in the IRA. In the middle are lower return investments where the location doesn’t really matter, because the return isn’t high enough for tax-deferred compounding to yield much additional wealth anyway.

Figure 5. Asset Location “Smile” For Establishing Priority List



In essence, the asset location list forms an “asset location smile” across the spectrum.

So how might a list of available investments be lined up to the asset location smile? Figure 6 below shows an example of how these investments might be ranked for a particular advisor’s portfolio, which includes an S&P 500 index fund (highly efficient), an international equity index (somewhat less efficient, due to non-qualified treatment of dividends), and MLPs (not quite as high expected return, with some tax efficiency via return-of-capital distributions, but most actual growth still taxable as ordinary income). At the other end of the spectrum there’s a high-turnover trading fund, a commodities fund that utilizes futures that turn over all gains annually and mostly at ordinary income tax treatment, and a high-yield bond position. In the middle there is a cash position – no return makes it location-indifferent – and a government bond position (which receives a slight tilt towards the tax-inefficient side of the spectrum, but only slight as it may be “tax-inefficient” due to its ordinary income treatment but its returns are too low to have a significant impact).

Applying The Asset Location Priority List

The point of creating this asset location priority list (or “asset location hierarchy”) is that once established, it can be applied for any number of clients with different amounts in their various types of investment accounts.

For instance, imagine two clients: both have \$1,000,000 and will be in the same model portfolio with the same investments, but the first (Client A) has \$100,000 in her IRA and \$900,000 in her taxable account, while the second (Client B) has \$100,000 in his brokerage account and \$900,000 in his IRA. Despite these significantly different circumstances, both can follow the same asset location priority list – such as the one previously shown in Figure 6 – to arrive at consistent asset location decisions, simply based on the amounts that each client has available to invest in various locations.

Figure 6. Asset Location Priority List To Align With Asset Location Smile



Thus, in this circumstance, Client A will fill the IRA first with the higher-turnover trading fund and the commodities position; if these investments added up to 10% of the total portfolio allocation, then at that point the IRA has been filled, and the remaining investments would all be allocated to the brokerage account. Conversely, in the case of Client B, the S&P 500 index fund alone may crowd out all of the \$100,000 in the taxable account, and spill over into the IRA as well, with all the remaining investment positions then held in the IRA as well.

In both cases, though, the single asset location priority list ensured that the highest priority assets – the highest return investments that were either very tax-efficient, or very tax-inefficient – ended up in the proper location, as those high return asset placements are most important to maximize long-term wealth accumulation.

Implementing Asset Location

Once the asset location priority list has been established, asset location can be implemented on behalf of clients.

An important caveat of implementing asset location, though, is that not only does the investor need to have more than one type of account to manage in the first place, but the advisor needs to be prepared to manage investments at the client's *household* level, rather than just on an *account-by-account* basis. After all, asset location can only be implemented if every account is going to be invested in the same tax-agnostic manner; almost by definition, effective asset location means that every investment account will have a different asset *allocation*, and the investor's overall asset allocation can really only be seen when reported on a household basis.

In turn, this means that in practice advisors will need to have both trading and performance reporting software capable of managing portfolios and delivering results on a household basis in the first place.

Fortunately, many of today's "rebalancing" and trading software packages are able to have an asset location priority list created, which can then be applied consistently for all clients, with consideration for their specific available assets in various types of accounts. Similarly, there are portfolio reporting

software packages that are able to report the total return results of an entire household portfolio – not just on an account-by-account basis – to facilitate the viewing of the investment process as a household benefit.

Benefits Of Asset Location

The ultimate value of making good asset location decisions is difficult to measure, as it depends on what you measure against – i.e., what you assume the client might have done in the absence of additional asset location decisions. Several studies have attempted to determine this value, though, most commonly by simply assuming that the investor would have held the same allocation in every account. For instance, a client that was going to invest a 60/40 portfolio would have 60/40 in the taxable account and 60/40 in the retirement account as well.

Of course, the benefit of asset location also varies depending on the breadth of accounts available and the associated assets (and their actual returns and tax efficiency). If a client has exclusively taxable account or exclusively IRA dollars, there are no asset location decisions to make. Similarly, if the client's wealth is 90% in one type of account with only 10% in the other, the potential benefit of asset location is limited, as there are only so many assets that can be sheltered in an IRA that is only 10% of net worth in the first place (though notably, since the highest-return most-tax-inefficient and therefore most-benefitted assets are located into the IRA, even a relatively small IRA can have a fairly large benefit).

The estimated value from the aforementioned Daryanani and Cordaro paper was 0bps to 25bps of annualized value, depending on what portion of total net worth was in retirement accounts vs taxable accounts. With an 80/20 split of net worth between taxable and retirement accounts, the paper estimated good asset locations could add 17bps of annualized wealth enhancement.

Similarly, a research paper by David Blanchett and Paul Kaplan of Morningstar, which studied a series of prospective benefits that advisors bring to the table – which they labeled as "Gamma" to contrast with portfolio Alpha and Beta – found the benefits of good asset location (combined with spending liquidation strategies) to be approximately 23bps per year.

Conclusion

Ultimately, asset location represents one of those unique “free lunch” opportunities for wealth creation – a mechanism by which investment strategies that are already being implemented can simply be done in a more tax-efficient manner that maximizes long-term wealth creation, but only if done properly.

In this newsletter, we have established the groundwork for understanding the value of good asset location and how it can be achieved through the creation of an asset location priority list, which in turn becomes the “overlay” through which all client accounts can be allocated, based on whatever investment amounts are available in each type of account. While this may be somewhat more complex, the ability to manage on a household basis – in order to implement asset location effectively in the first place – can be a significant distinguishing value proposition for comprehensive financial advisors, compared to pure investment managers that tend to be tax-agnostic and simply invest each account in the exact same manner.

In the next issue of *The Kitces Report*, we will delve further into more advanced concepts and strategies in asset location, from the incorporation of Roth IRAs and non-qualified deferred annuities, to the ways in which looking at after-tax returns – and even after-tax volatility – can further impact the asset location picture, as well as some of the practical challenges and issues to be aware of in implementing asset location.

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