An In-Depth Look At Portfolio Rebalancing Strategies

Executive Summary

- Rebalancing is the process of buying and selling investments in a portfolio to adjust their weightings back to the target allocation of the portfolio. Done systematically, it is intended to keep portfolios 'on target' for their allocations, and become a systematic process of "buying low and selling high" to enhance returns.

- A significant caveat of rebalancing is that when it is done between investments or asset classes with materially different returns (e.g., stocks and bonds), regular rebalancing can actually *lower* long-term returns by systematically selling the better-performing investment. On the other hand, rebalancing in such situations may still be 'necessary', or ongoing compounding of a higher-returning asset can result in material distortions to asset allocation – and potential excess risk-taking – over multi-year time horizons.

- When rebalancing amongst similar-returning asset classes, there does appear to be a "rebalancing bonus" available, as long as those investments ultimately revert back towards their long-term expected returns after short-term deviations. The greater the volatility of the investments, and lower the correlations between them, the greater the rebalancing bonus can be.

- The timing of rebalancing is a significant factor in its benefit. Rebalancing too often can further damage returns by selling down favorable investments too early, and buying into declining ones while they are still heading lower. However, rebalancing too rarely forfeits return-enhancing opportunities altogether.

About the Author

Michael E. Kitces, MSFS, MTAX, CFP®, CLU, ChFC, RHU, REBC, CASL, is a Partner and the Director of Research for Pinnacle Advisory Group (www.pinnacleadvisory.com), a private wealth management firm located in Columbia, Maryland. In addition, he is an active writer and speaker, and publishes The Kitces Report and his blog "Nerd's Eye View" through his website www.kitces.com.

- Amongst multi-asset portfolios, there may be so many different investments (each with their own market cycle) that finding an 'optimal' time horizon (e.g., monthly, quarterly, or annually) for rebalancing is difficult. Instead, the optimal strategy shifts to rebalancing based on 'allocation tolerance thresholds', where rebalancing is triggered when an investment deviates too far from its target weighting.

- In portfolios with multiple investments with varying weightings, the most effective approach to tolerance bands is to apply them based not on *absolute* thresholds, but *relative* thresholds. For instance, a 20% *relative* threshold means that an investment with a 10% target weighting would rebalance below 8% or above 12%, while one with a 50% target weighting would rebalance below 40% or above 60%.

- For savers making ongoing contributions to a portfolio, new additions can be used to buy the investments that are the most underweighted, facilitating rebalancing of the portfolio without requiring any sales that trigger tax consequences. Conversely, for those retirees already withdrawing from a portfolio, rebalancing should be executed by first selling (for liquidation needs) whatever is already up the most anyway, which both facilitates rebalancing (by bringing overweighted investments in line) and helps to minimize sequence-of-return risk (by always selling whatever is up and not what has recently declined).

- Rebalancing can and likely will trigger a modest amount of capital gains, since the process by its nature will sell investments that are up (the most, with the most in capital gains). However, relative to the overall size of the portfolio, rebalancing-driven turnover is often still fairly modest, and can be partially ameliorated by both strategic asset location decisions (e.g., putting investments most likely to be frequently rebalanced into a tax-deferred IRA), and simple strategies like capital loss harvesting (to offset any rebalancing gains).

- For some clients, rebalancing may be difficult to execute, because it requires selling what is up and buying what is down (while many clients are behaviorally tempted to do the opposite. On the other hand, committing to a rebalancing strategy in advance can actually *help* clients to avoid this harmful psychological challenge.

Introduction

The conventional view of rebalancing is that it is one of the "free lunch" opportunities in investing – a systematic strategy that enhances long-term returns, and a widely accepted best practice where the only question is "just how often should you do it?"

Yet a more nuanced look at rebalancing reveals that in reality, regular rebalancing can be a return enhancement when done across investments with similar long-term return expectations, but can actually *reduce* long-term portfolio value when done across investments or asset classes with materially different returns! In the case of the latter, rebalancing may still be worthwhile, but only because the 'value' of rebalancing as a risk management tool is worthwhile, even at the cost of less wealth in the long run.

In addition, the long-standing approach of rebalancing at regular time intervals – like monthly, quarterly, or annual rebalancing – may not necessarily be best either, both due to the impact of portfolio turnover (triggering capital gains and transaction costs), and also simply because it fails to recognize the momentum (to the upside and downside) that many investments exhibit in the real world.

In this month's newsletter, we take a deep dive into rebalancing, looking at where it actually does enhance returns, where it's better as a risk management strategy, why a "tolerance bands" approach to rebalancing may be more effective than just doing rebalancing at regular time intervals, and why rebalancing is still be worth doing in the long run, notwithstanding all of these challenges!

What Is Portfolio Rebalancing?

The basic concept of portfolio rebalancing, as the name implies, is to realign the balance of investments in a portfolio, generally to stay in accordance with the original target weightings for that portfolio.

> *Example 1.* In the simplest case, imagine a portfolio that has $500,000 in stocks and $500,000 in bonds, such that the portfolio is a 50/50 stock/bond allocation. As a result of a recent bear market, stocks declined in value and bonds rallied in response, and by the end of the year, the portfolio's stock allocation is down 20% to $400,000 while the bonds are up 10% to $550,000, for a total value of $950,000.

On a now-current basis, the portfolio's allocation has gone from 50/50 to 42/58 as a result of the market gyrations, so the goal of rebalancing would be to sell the now-overweighted bonds and buy the now-underweighted stocks. Thus, as shown in Figure 1 below, the investor would sell $75,000 of bonds (reducing the bond position down to $475,000) and use the proceeds to buy $75,000 in stocks (bringing the stock allocation up to $475,000). The end result: the portfolio is back to being 50/50 in stocks and bonds once again.

Rebalancing For Risk Management

At its core, the exercise of rebalancing accomplishes two key tasks. The first is simply the fact that the portfolio gets back in sync with its original target allocation. After all, in the example above, the portfolio had effectively become "underweighted" to equities relative to its target allocation – once the bear market occurred, holding "just" $400,000 on a then-$950,000 portfolio was an equity weighting of only 42%. Therefore, the process of rebalancing brought that 42% equity allocation back to 50%, and ensured that the portfolio was still taking the desired level of risk – in this case, to be able to participate in market upside and growth.

Notably, in a bull market – where equities outperform bonds and the allocation of stocks rises *above* its target – rebalancing can help to ensure that the portfolio does

Figure 1. Sample Rebalancing Transaction Amidst Market Volatility

	INITIAL ALLOCATION	-	RETURN	=	NEW ALLOCATION	+/-	BUY/SELL	=	FINAL ALLOCATION
STOCKS	$500,000	-	20%	=	$400,000	+	$75,000	=	$475,000
BONDS	$500,000	+	10%	=	$550,000	-	$75,000	=	$475,000
TOTAL	$1,000,000				$550,0000				$950,000

© Michael Kitces, www.kitces.com

Figure 2. Year Two Sample Rebalancing Transaction Amidst Continued Market Volatility

	INITIAL ALLOCATION	+	RETURN	=	NEW ALLOCATION	+/-	BUY/SELL	=	FINAL ALLOCATION
STOCKS	$475,000	+	30%	=	$617,500	-	$64,125	=	$553,375
BONDS	$475,000	+	3%	=	$489,250	+	$64,125	=	$553,375
TOTAL	$950,000				$1,106,750				$1,106,750

© Michael Kitces, www.kitces.com

not become so overweight in stocks that it begins to violate the client's risk tolerance.

Example 2. Continuing the prior example, assume that after the market's decline, it experiences a significant rally. In the subsequent year, equities rise by 30%, while bonds are only up 3%. By the end of the year, the once-rebalanced portfolio now has an equity position up to $617,500, while the bonds are "only" $489,250, for a total portfolio value of $1,106,750. Which means by the end of year 2, the total portfolio is again out of whack, with what is now approximately 56% stocks and only 44% bonds.

In this case, the mis-rebalanced portfolio is problematic because the client's risk tolerance specified a target equity allocation of "just" 50%. Fortunately, as shown in Figure 2 above, rebalancing again will solve the problem; a sale of approximately $64,125 of stocks (with the proceeds used to purchase bonds) will once again bring the portfolio back to its 50/50 target.

Rebalancing For Enhanced Returns

A secondary benefit of rebalancing is the fact that it becomes a structured means to execute transactions in order to buy low and sell high.

In the preceding examples, this "annually rebalanced" portfolio finished the end of year 2 at $1,106,750 in total value. However, had the original portfolio simply kept its *original* holdings throughout without rebalancing,

the stocks would have fallen to $400,000 and 'only' risen back to $520,000 with the 30% year-2 rally, while the bonds would have climbed to $550,000 at the end of year 1 to $566,500 at the end of year 2. Which means, as shown in Figure 3 below, the buy-and-hold portfolio would have finished with a total value of just $1,086,500, while the rebalanced portfolio had finished at $1,106,750.

In other words, the portfolio finishes with an extra $20,250 at the end of year 2 in the scenario with rebalancing over the buy-and-hold scenario without rebalancing! This amounts to an 'excess' return of about 1%/year (annualized) over the (admittedly very volatile) 2-year period, thanks to rebalancing.

Two Key Benefits Of Rebalancing

These examples ultimately highlight the two core benefits of a systematic rebalancing process:

1) **Keeping the portfolio "on target" for its risk exposure**, avoiding the scenario where returns cause the asset allocation to drift in a manner that is too conservative or too aggressive; and

2) **Creating sell-high-buy-low situations** where rebalancing triggers the investments or asset classes that are up the most to be sold (because they're over the target weighting due to returns) and buy the asset classes that are down the most (which will be most under-weighted due to negative returns).

Or stated more simply, the primary benefits of rebalancing are to "manage risk" and to "enhance returns" in the long run.

Figure 3. Final Outcomes With Versus Without Rebalancing

	STARTING ALLOCATION	+/-	RETURNS IN YEAR 1	+/-	RETURNS IN YEAR 2	=	FINAL VALUE W/O REBLANACING	FINAL VALUE WITH REBLANACING
STOCKS	$500,000	-	20%	+	30%	=	$520,000	$553,375
BONDS	$500,000	-	10%	+	3%	=	$566,500	$553,375
TOTAL	$1,000,000						$1,086,500	$1,106,750

© Michael Kitces, www.kitces.com

Figure 4. Asset Allocation Of 50/50 Portfolio Over Time With Return Drift
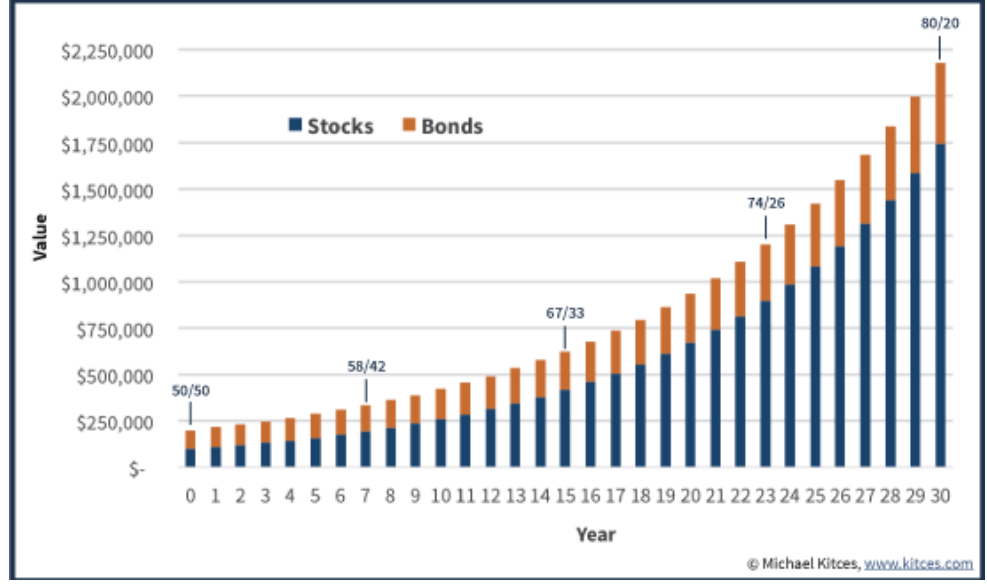
and larger over time.

As shown in Figure 4 (left), the "bad" news of this scenario is that over time, the excess returns of the stocks over the bonds will cause the stocks to become a larger and larger portion of the portfolio. What starts out as a 50/50 portfolio drifts to 67/33 by 15 years, and 80/20 after 30 years! Thus, just buying and holding this way can eventually lead equity exposure to become far greater than what was originally intended, and perhaps greater than what the client can tolerate.

Yet the reality is that by systematically rebalancing, to keep the client's equity exposure from drifting too high, cumulative portfolio returns will actually be *reduced*, not enhanced! After all, rebalancing in this scenario will just end out systematically selling the higher-returning asset (stocks) to buy more of the lower-returning asset (bonds), which just drags down the long-term return!

As Figure 5 below shows, the process of rebalancing to prevent equity exposure from drifting higher also curtails the favorable returns that come with allowing equities to compound! The portfolio that is annually

A Deeper Look At The "Return Enhancements" Of Rebalancing

While the classic view of rebalancing is that it will enhance returns over time, in practice this purported benefit will not always occur, especially when rebalancing between asset classes with materially different returns, such as stocks and bonds.
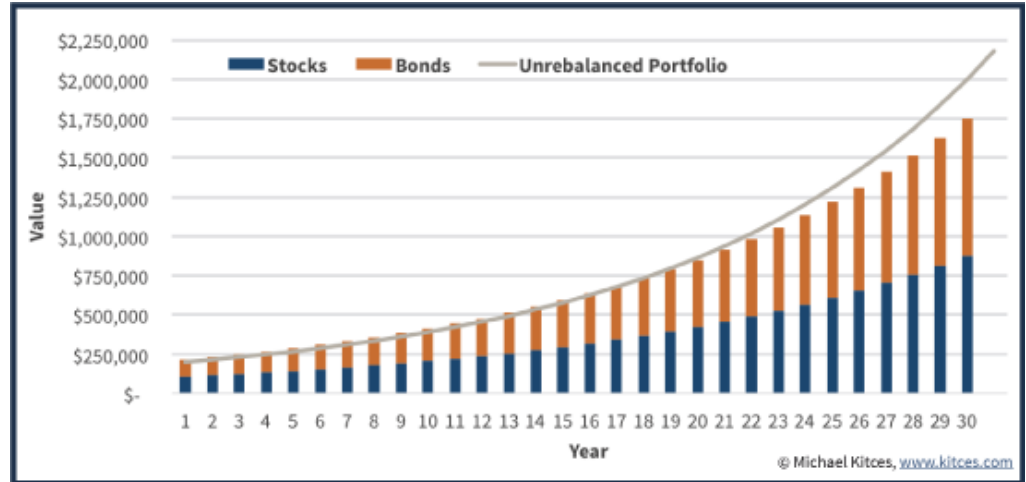
For instance, consider for a moment the fact that the long-term return on stocks is about 10%/year, while the long-term return on bonds is only 5%. A portfolio that is allocated 50/50 to each, and buys and holds those asset classes for the long run, will grow the stock portion at 10%/year *compounding*, while the bond portfolio will "only" grow at 5%/year. Which means that with growth, the percentage of the portfolio allocated to equities will become larger

Figure 5. Rebalancing A 50/50 Stock/Bond Portfolio Over Time, Versus The Unrebalanced Value

rebalanced only grows to $1,750,991 over time, compared to the buy-and-hold-and-don't-rebalance portfolio that grew to $2,177,134 instead.

Granted, the latter portfolio only grew to greater wealth *because* it allowed equity exposure to drift higher and higher, potentially beyond the client's tolerance (and the client may not have even *needed* to take the risk!). Yet still, the process of rebalancing the portfolio to keep that risk exposure constant was not a return *enhancement*; instead, it was a *detriment* to returns, but a trade-off that may have been deemed necessary to manage risk.

Rebalancing With Real World Stock/Bond Returns

Of course, a notable caveat of the prior example about the impact of rebalancing between stocks and bonds is that while stocks may outperform bonds in the long run, they rarely ever do so in the exact "straight line" path shown earlier. Instead, bond and especially stock returns are more volatile, once again introducing the possibility of selling stocks when they're up to buy bonds when they're down, or selling bonds when they're up to buy stocks after a crash.

The question emerges, then, of whether there's more return given up in the long run by rebalancing out of higher-return stocks into lower-return bonds, than is gained by the timing of those rebalancing trades to capture the sell-high-buy-low opportunities given volatility along the way.

Figure 6, right, shows the outcome of this process over rolling 30-year historical periods, for rebalancing between large-cap US stocks and intermediate-term government bonds. As the chart reveals, in the long run, the portfolios are still consistently giving up returns by rebalancing from stocks into bonds.

Of course, given that an unrebalanced portfolio can drift to

80%+ in equities over a multi-decade period, regular rebalancing in such situations may still be appealing as a means to manage risk and avoid excess exposure to (the excessive compounding of) risky-but-high-return investments. Still, what this ultimately means is that in situations where rebalancing is occurring between stocks and bonds, the reality is that rebalancing is not a return *enhancing* strategy, but instead a *return reducing strategy* that is done for *risk management* purposes. (Though, notably, the results may lead to slightly higher *risk-adjusted* returns, and a slightly improved Sharpe ratio.)

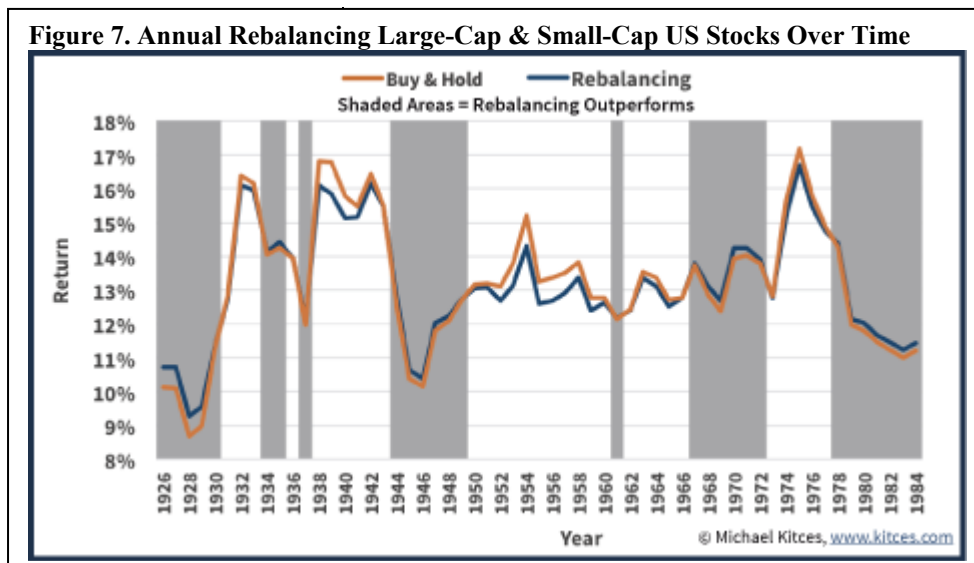## Rebalancing Between Similar-Return Asset Classes Or Investments

While rebalancing between high- and low-return asset classes (e.g., stocks and bonds) becomes a process that systematically sells higher-returning investments to buy those with lower returns, in the case of rebalancing between investments that have similar returns, though, the outcome is different.

When the available investment choices have a roughly similar long-term return, rebalancing amongst them will not necessarily alter the risk characteristics of the portfolio; instead, it will simply create opportunities to sell-high-and-buy-low as the investments periodically outperform or underperform each other. In other words, if we assume that the investments will have a similar long-term return, then short-term outperformance by one implies that the other may be more likely to outperform in the future as their long-term returns revert towards the (equal) mean of the two. Which in turn means that rebalancing amongst them actually *should* be able to take advantage of those regression-to-the-mean opportunities.

Figure 6. Annual Rebalancing Of Real-World 50/50 Stock/Bond Portfolio Over Time

© Michael Kitces, www.kitces.com
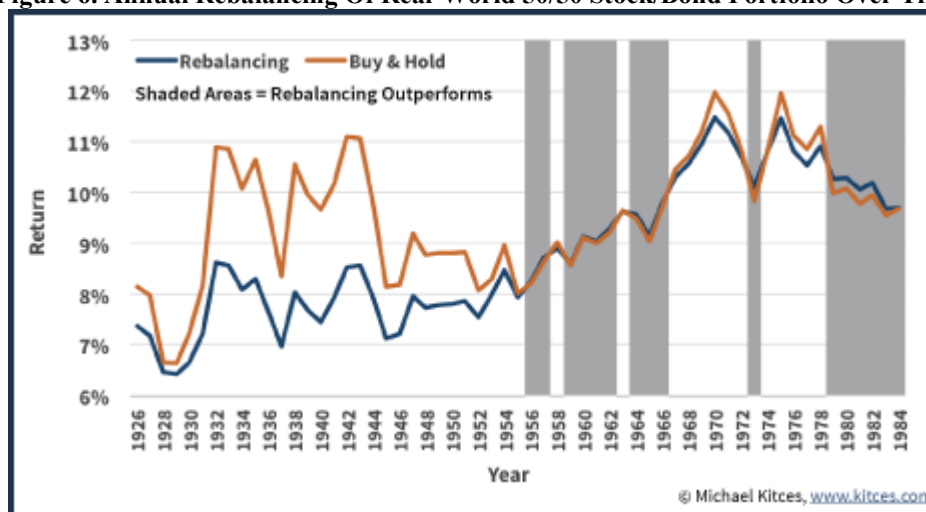
And in fact, that's exactly what we see when we look at two volatile asset classes – large cap and small cap US stocks – which do have roughly the same long-term expected return (small cap stocks have historically outperformed, but only slightly). Rebalancing between the two, which have similar returns and a high-but-not-perfect (i.e., less than 1.0) correlation, actually *does* enhance the returns compared to just buying-and-holding each, as shown in Figure 7.

Figure 7. Annual Rebalancing Large-Cap & Small-Cap US Stocks Over Time

In fact, investment guru William Bernstein (in a white paper aptly entitled "The Rebalancing Bonus") found that in general, for similar-returning asset classes, the higher the volatility of assets *and the lower their correlations* – creating even more rebalancing opportunities – the greater the potential "Rebalancing Bonus" will be. (Though Bernstein also noted that with different-return asset classes, like rebalancing across stocks and bonds, the rebalancing process will lead to lower returns, albeit with the 'benefit' of lower risk.)

Optimal Rebalancing Time Intervals

When evaluating the prospective benefits of rebalancing, it is crucial to recognize the important distinction between rebalancing between investments with *similar* returns, versus rebalancing between investments that have *different* expected returns. As summarized in Figure 8 (right), similar-return investment rebalancing can be a return-enhancer, while different-return investment rebalancing

can be good risk management but at a 'cost' of reduced long-term returns by systematically selling higher-return investments for lower-returning ones.

In either case, though, it is still necessary to determine the optimal frequency *for* rebalancing. In particular, if we look at the real-world trends of many investments, that can have positive forward momentum until eventually they move to extremes, "snap back" and revert back towards the average, and then often overshoot in the opposite direction… then if rebalancing occurs too frequently, it can adversely impact the results by curtailing upside and amplifying downside.

For instance, if an investment was about to go on a huge run of outperformance for a year, rebalancing monthly *out* of it will just keep selling down the investment's gains prematurely. And if the investment was about to decline in a year-long crash, rebalancing monthly *into* the falling investment will just keep buying more shares to experience the subsequent decline as the investment continues its path downwards.

Figure 8. Impact Of Rebalancing Similar- Or Different-Returning Investments
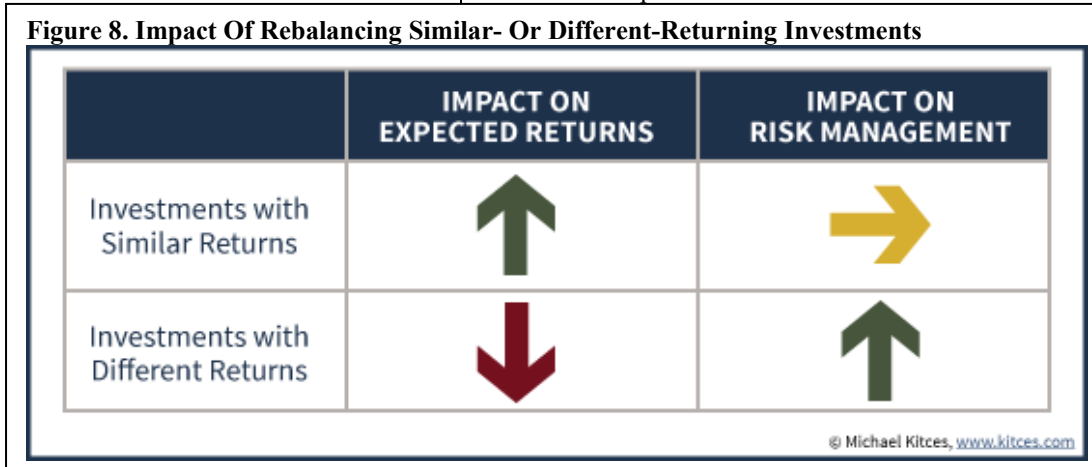
These dynamics are true whether the investment returns are similar or different – in the short-to-intermediate term, either bull or bear market situations can produce scenarios where one investment has significant *relative* outperformance or underperformance that extends for months or even a year or few at a time, and rebalancing too frequently curtails the positive momentum and adds too quickly into the negative. And of course, highly frequent rebalancing can also grind down the long-term benefits of rebalancing simply due to the transaction costs.

Yet on the other hand, there is such a thing as rebalancing too infrequently as well. With asset classes of materially different returns, waiting too long to rebalance runs the risk that the higher-returning investment had a big run, and then a subsequent bear market or big pullback as the returns revert to the mean… such that by the time the rebalancing trade occurs, the returns are already back in line with the average and that (temporary) upside *never* gets captured.

In addition, with too-infrequent rebalancing, risk

exposure can get very 'out of whack' along the way as well. For instance, as shown in Figure 9 below, annual rebalancing may not perfectly time each buy or sell rebalancing trade, but it will generally still sell stocks when they are outperforming and buy when they are underperforming. Infrequent rebalancing, though, may miss these opportunities altogether, and/or allow equities to become a disproportionately high percentage of the portfolio before a single sell trade goes off. And in the case of investments with similar returns, again waiting too long may similarly miss any of the opportunities that might have occurred along the way when one investment outperformed the either for a limited period of time before snapping back, while more frequent rebalancing has more chances to capture those opportunities… though "too frequent" rebalancing may still become costly in terms of transaction costs (and/or sell the winners and buy the losers *too* fast while they are still trending up or down).

Thus, ultimately the goal in rebalancing is to rebalance "often enough, but not too often." Which raises the question of how often rebalancing *should* be done? Monthly appears to be too frequent, but what about quarterly? Is annual a better frequency, or would it be

Figure 9. Annual Rebalancing Timing Amongst Similar- Or Different-Return Assets
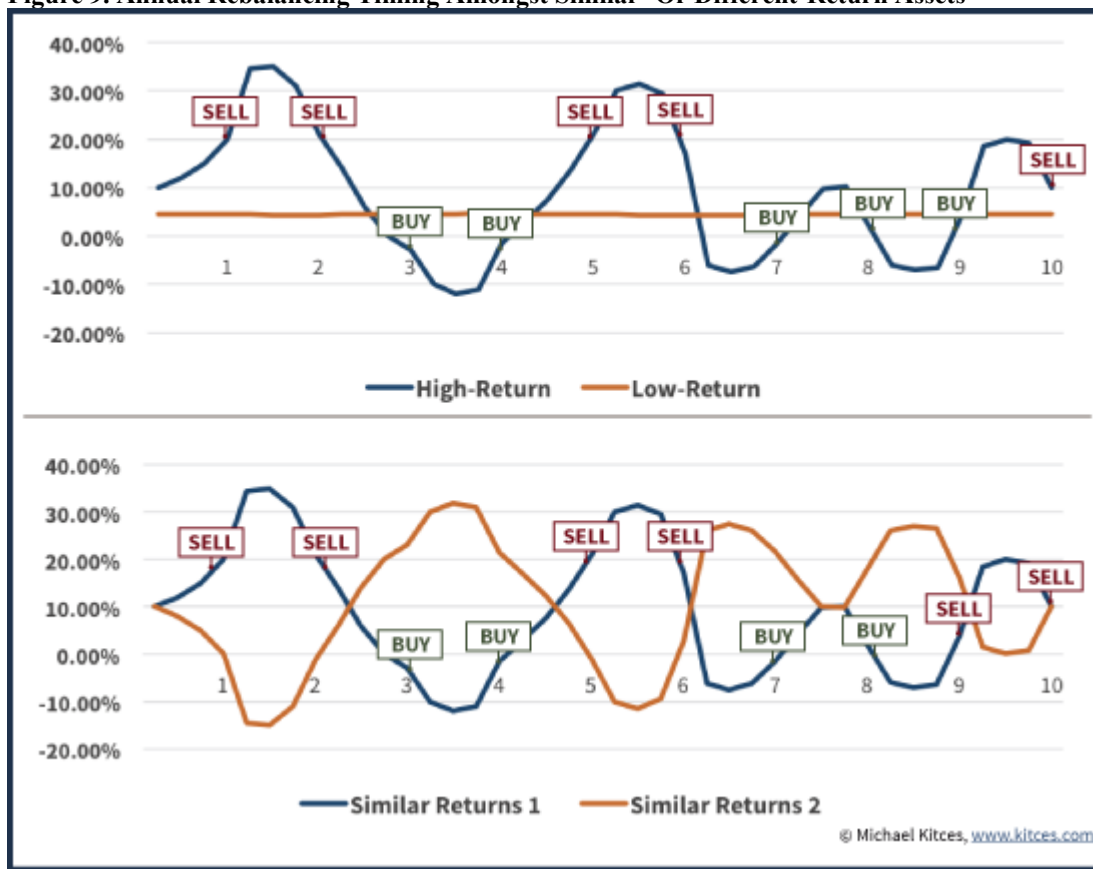
wiser to wait every two years, or even every five years? How often do asset classes shift their direction of returns, to try to optimize the timing of the rebalancing trade? For instance, if the average bull market lasts for seven years, then in theory rebalancing every seven years –

Figure 10. Lack Of Synchronous Market Cycles For Rebalancing Optimization Amongst Multiple Investments

© Michael Kitces, www.kitces.com

from one market peak to the next – would become the optimal rebalancing frequency (the span of one market cycle).

Unfortunately, the research on optimal rebalancing frequency is mixed at best. A study by Smith and Desormeau, from the *Journal of Financial Planning*, found some benefit to longer rebalancing time periods as much as 3-4 years, but only in a portfolio that was comprised of two asset classes (large-cap US stocks and long-term government bonds) and likely simply because longer time periods allow the higher-returning asset class to compound greater returns before being rebalanced.

A study from Vanguard, by Jaconetti, Kinniry and Zilbering, basically found no material differences in outcomes for time horizons varying from monthly to annual with similar data, once measured on a rolling period basis. And a *Journal of Financial Planning* study by Gobind Daryanani found that once transaction costs are considered, almost any rebalancing frequency greater than annual wasn't very beneficial (with a roughly 0.2% reduction in returns for monthly rebalancing, and significantly lower returns with greater frequencies due to trading costs). More generally, though, Daryanani simply found that almost any rebalancing time horizon was inevitably out of sync with at least some investments in a multi-investment portfolio.

The problem is that even with relatively "simple" asset classes like stocks and bonds, or between large-cap and small-cap, the timing *of* market cycles is not consistent. If bull markets always went for the same duration before turning, it would be easier, but that's
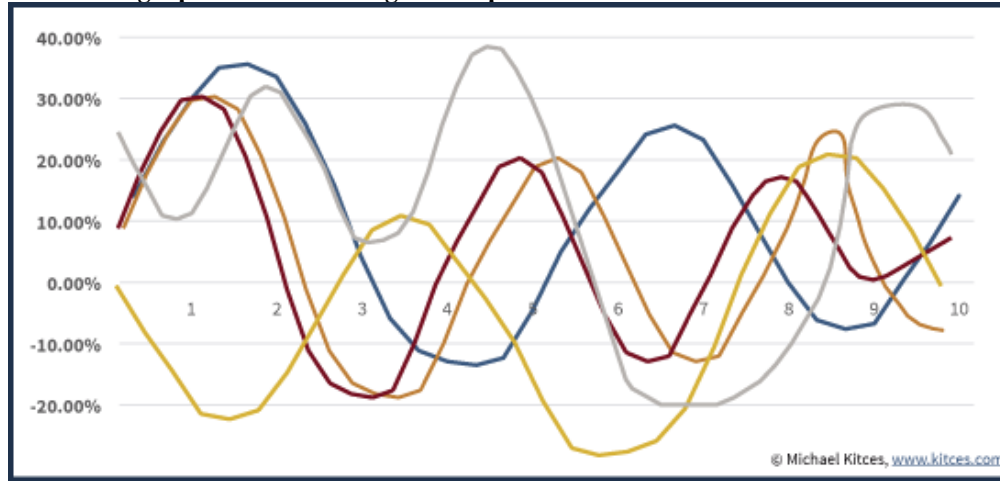
not the case. Some bull markets are long with few or no corrections, while others are more volatile and/or run shorter. And bear markets tend to occur more quickly than bull markets, which means rebalancing to a bull market cycle (e.g., rebalancing every few years to try to time sell near the tops) will leap past missed opportunities to rebalance again and buy not long thereafter at the bottom. And as the number of asset classes expands, so too does the number of potential investment cycles to optimize, which as shown in Figure 10 (above), will virtually *never* actually be fully in sync with each other (and especially not on a consistent and sustainable time horizon)!

Rebalancing With Allocation Tolerance Bands

As noted earlier, the ultimate goal of rebalancing is to sell down an investment or asset class *after* it has fully (or at least mostly) had its favorable run, and similarly to buy an investment *after* it has fully (or at least mostly) declined. Accordingly, rebalancing too frequently risks curtailing that favorable momentum (or amplifying the unfavorable). Yet rebalancing too rarely – by waiting "too long" – can miss the market cycles and buy/sell opportunities altogether.

And unfortunately, such market cycles tend to play out with different frequencies over time, making it difficult to find an optimal rebalancing frequency. And across multiple investments and asset classes that each have their own timing, finding the 'right' rebalancing frequency across all of the investments in a broadly diversified portfolio is virtually impossible. Any

Figure 11. Timing Of Trades With Annual Vs Tolerance Band Rebalancing
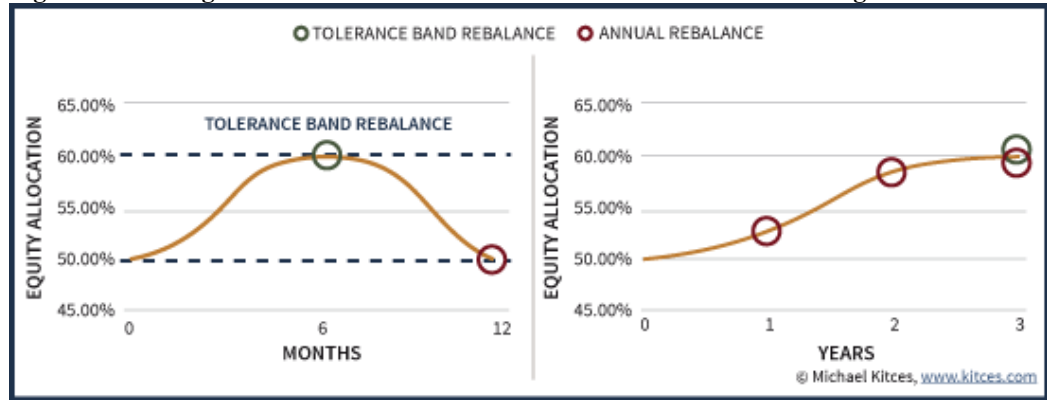
rather than appreciate. Thus, if equity exposure started at 50% but fell (due to a bear market) down below 40%, a rebalancing purchase would be triggered. And again, the rebalancing event would only be triggered once the allocation actually crossed that lower threshold; if a sharp bear market caused equity exposure to cross the line in just six months, the rebalancing trade would occur in six months, and if it took a longer, more protracted bear market that lasts 18 or 24 months, the rebalancing trade would occur then instead.

frequency will end out being mistimed for at least some of the investments in the portfolio.

An alternative, however, is to restructure the process so instead of rebalancing based on a time horizon, to rebalance based on a target for how "out of whack" an asset allocation (or the allocation of any particular investment *in* the portfolio) is permitted to be, before reigning it back in again.

For instance, a portfolio that was targeted to be 50% in equities (with the other 50% in bonds) might aim not to just rebalance annually, but to rebalance whenever the total equity exposure grows above 60%, which would signal a significant level of outperformance between stocks and bonds. If the equities appreciated rapidly and reached the threshold in just six months, then the rebalancing trade would occur in six months. If equities grew more slowly and it took three years before the portfolios' equity exposure finally drifted up to 60%, then it would be three years before the first rebalancing trade occurred. Either way, as shown in Figure 11, the rebalancing trade would not occur until equities had outperformed by enough, cumulatively, to cause the equity allocation to rise to 60%, while also avoiding rebalancing trades that are either too late (after the asset already falls back to its neutral weighting) or too early (e.g., rebalancing sales while the investment is still rising).

Notably, this kind of approach would also have a comparable "buy" trigger if equities were to decline

The end result of establishing these kinds of minimum/maximum allocations before a rebalancing trade is triggered is that a form of "allocation tolerance bands" have been created, as shown in Figure 12. A portfolio that was targeting 50% in equity exposure will now trigger a rebalancing trade if the allocation falls below 40%, or above 60%. Anywhere in between those thresholds and the portfolio simply remains a buy-and-hold strategy. When either tolerance threshold is breached, to the upside (or downside), a sell (or buy) is triggered.

It is important to note that in this context, allocation bands are based not on portfolio *dollar* amounts, nor on how much an investment has appreciated or declined in

Figure 12. Rebalancing With Annual Vs Tolerance Band Thresholds
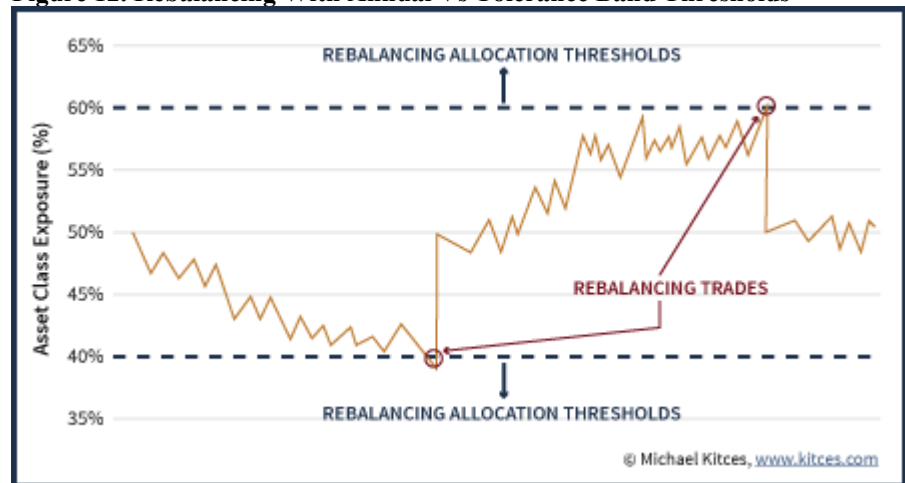
value, but on portfolio allocation *percentages*. The distinction is important, especially in the case of investments that otherwise have similar returns (good or bad), because it ensures that rebalancing trades don't just happen because both investments happen to decline or appreciate. As shown in Figure 13 (right), it happens because they move in *different* directions, creating a material difference in *relative* values in the portfolio (however long it takes to get there).
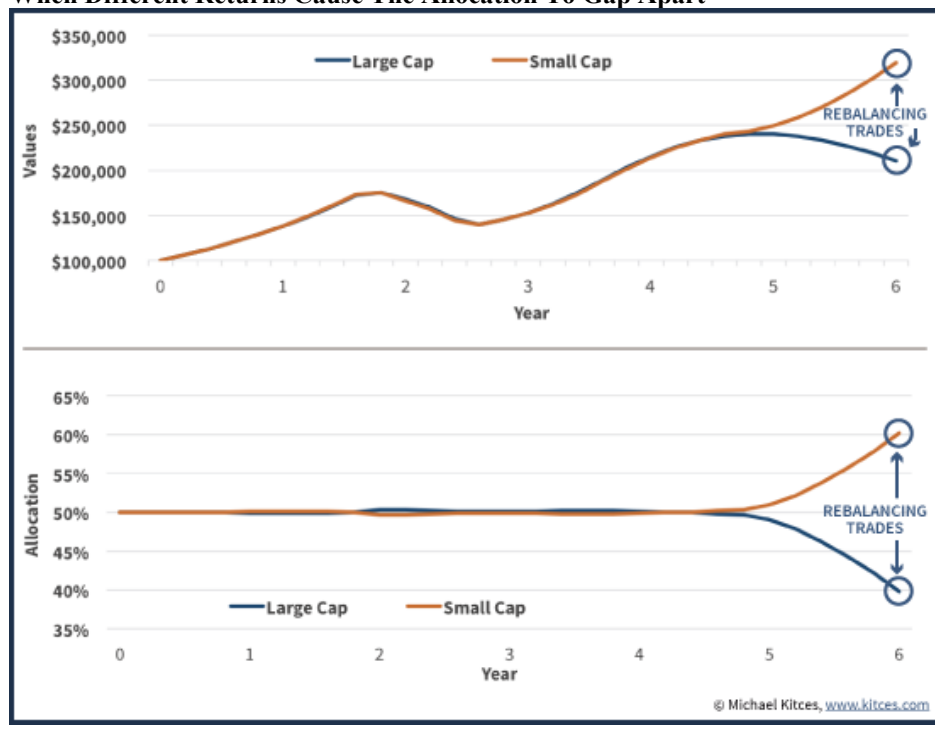
Two- Vs Multi-Asset-Class Portfolios

Figure 13. Tolerance Band Rebalancing Only Triggers When Different Returns Cause The Allocation To Gap Apart

© Michael Kitces, www.kitces.com

So if ultimately the goal is to rebalance after an investment or asset class runs – but not too soon that it chops off the momentum – why not just rebalance based on return targets? For instance, to rebalance any time stocks are up 20%, or 50%, or 100%, or some other number.

The caveat to doing so, as illustrated above, is that if everything is moving together, there may be no need to rebalance at all. For instance, if both large-cap and small-cap have unusually good returns, but do it together, there's actually nothing TO rebalance in the first place! Both investments could be up 80%, but their relative allocation doesn't change at all, *because* they're both up the same amount.

In other words, rebalancing triggers are really more about *relative* returns (which impacts the percentage allocation of each), than absolute returns. That's actually the whole point, especially in rebalancing asset classes that have similar long-term expected returns. The goal is to recognize situations where an asset class is performing unusually well or especially poorly relative to its long-term trend (and/or relative to other competing assets in the portfolio with a similar long-term expected return trend), and taking advantage of an opportunity when the relative under- or out-performance reaches an extreme to either sell

(after a run-up) or buy (after a decline), before the returns eventually revert back towards the long-term average return.

The approach of using allocation tolerance bands becomes especially relevant once more investments or asset classes are added to the portfolio. As noted earlier, a challenge of using time-based intervals for rebalancing is that it's rarely the case that all the investments are "due" for a rebalancing trade at the same time. Rebalancing the entire portfolio at a single point in time may rebalance whatever investment was most 'out of whack', but it rebalances everything else, too, even if it wasn't necessary. This incurs additional (and unnecessary) transaction costs, in addition to the fact that it may curtail upside momentum (or amplify the downside).

By contrast, rebalancing that is triggered by allocation bands can more effectively be done on an investment-by-investment basis. In other words, as shown in Figure 14 (top of next page), the rebalancing is *only* triggered for the one particular investment that crosses the threshold, and *that* investment is bought/sold as appropriate. This reduces the number of trades that occur for rebalancing purposes, even while focusing the trades that *do* occur on the investments that have moved

Figure 14. Tolerance Band Thresholds And Monitoring For A Rebalancing Opportunity
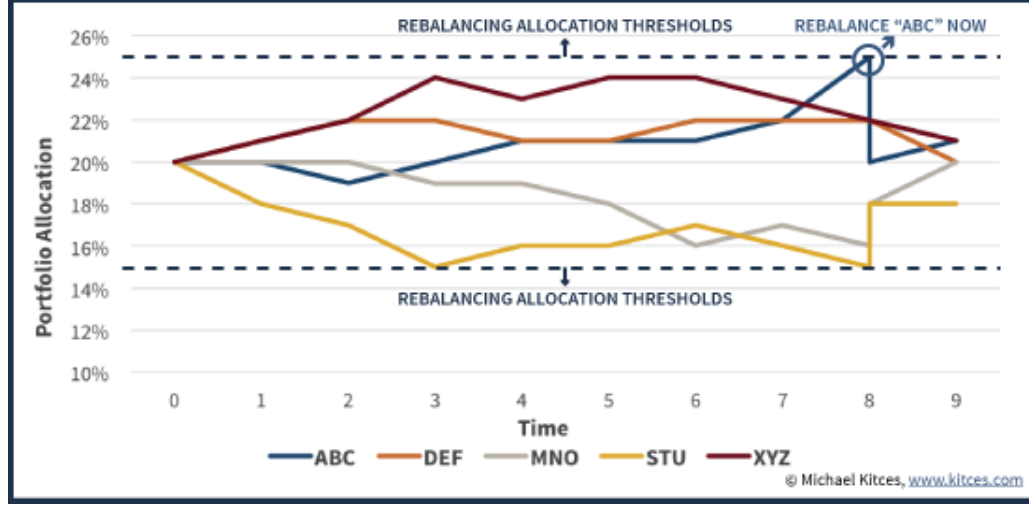
The problem with setting allocation bands based on an absolute magnitude change – e.g., plus or minus 10 percentage points – is that it quickly becomes problematic when there are more, smaller investment positions in the portfolio. If the portfolio is diversified across 10 different investment positions, each one only has a 10% allocation in the first place; plus or minus 10% would be a range between 0% and 20%, which would require *very* extreme portfolio changes to ever trigger a trade (literally, the investment would need to have massive *relative* outperformance or underperformance compared to its peer investments, in excess of plus or minus 100%!).

Of course, the target allocation bands could be made smaller for a portfolio that averages smaller positions – e.g., set the targets at "only" 3%, as moving from a 10% to a 13% allocation is still a very big relative move – but this only works well when all the positions in the portfolio have a similar allocation percentage. For instance, if the portfolio is a "core-and-explore" approach with 50% in a core equity position, and a series of five satellites with 10% each, the 3 percentage point band would trigger the satellites to rebalance at 7% or 13% (which may be reasonable) but the core equity position will rebalance at 47% or 53% (which given the relative size of the position, will be triggered far more often).

An alternative solution to scale the allocation bands to the size of the portfolio positions – whatever they may be – by setting target allocation bands based on a *relative* percentage of the investment position. For instance, rebalancing might occur any time the investment's *weighting* moves more than 20% from its original target weighting. So if the investment's original allocation was 50%, and 20% of that is 10%, then

to the greatest extreme and most deserve and need to be rebalanced.

Setting A Target Allocation Band For Rebalancing

While conceptually the idea of establishing target allocation bands for rebalancing is relatively straightforward, the question still arises about exactly what the optimal threshold levels would *be* for those tolerance bands – as ultimately, similar to a time-based interval for rebalancing, it is still necessary to come up with an overall rule framework to apply uniformly for the portfolio. And making the tolerance bands too wide or too narrow can have deleterious effects on rebalancing, just as it occurs when rebalancing time intervals are set too wide or too narrow.

Absolute Vs Relative Tolerance Bands

For instance, should an investment or asset class only be rebalanced when its allocation moves more than 10 percentage points from its original target (e.g., an investment with a 50% allocation has thresholds at 40% or 60%, as shown earlier)? Or only five percentage points? Or should the allocation band be even wider, at 15%, to allow more room for favorable investment performance to extend (and for a declining market to 'finish' its decline)?

the portfolio would be rebalanced when the investment's weighting moves up to 50% + 10% = 60%, or down to 50% - 10% = 40%. On the other hand, if it was only a 10% allocation, the rebalancing trade would occur at thresholds that are 20% of the 10%, which means rebalancing would occur at 8% or 12%. Either way, the investment must effectively outperform all the others by approximately 20% on a relative basis, to cause its relative weighting to drift above or below the thresholds.

In other words, setting the thresholds for target allocation bands on a *relative* basis – e.g., 20% *of* the target weighting itself – creates a mechanism where any one particular investment that moves to a high or low extreme will be sold or bought accordingly, because its performance is so different than everything else. But rather than forcing a rebalancing transaction for *all* investments in the portfolio – whether necessary or not – as would occur with time-based intervals for rebalancing, a relative threshold to the target weighting will just trigger rebalancing trades for the exact investment that moves away from the rest. This will trigger a "trim" to an investment in the midst of a strong run, and a purchase for one that has just crashed (relative to the others).

Target Thresholds For Relative Deviations In Asset Allocation

Of course, the caveat to this approach is that it is still necessary to set what the rebalancing bands should *be* in the first place – how much of a relative movement is appropriate to trigger a trade? As with any allocation band (or any other rebalancing) approach, the key here is to set the threshold wide enough that it won't trigger an excessive volume of trades (which racks up transaction costs) or repeatedly curtail positive momentum (or amplify a crash), but not to set the thresholds *so* wide that no trades are triggered at all.

The 2007 Daryanani study found that the optimal rebalancing threshold was at a *relative* threshold of 20% of the investment's original weighting. Setting the thresholds narrower, such as only 10% or 15% bands, produced less favorable results, as did rebalancing bands that were 25%. The goal, again, is to set a threshold that is 'far enough' out to allow investments to run near extremes, but not so far that they run to extremes *and* bounce back again, without ever triggering a buy or sell trade.

On the other hand, it is still important to note that the wider the bands are for rebalancing, the more material the underlying equity (or other) allocation changes can be in the first place, and the less frequently rebalancing will be triggered. If the 'neutral' weight of the investments is 20%, then a 'narrower' 20% tolerance band would only rebalance if the investments fell below 16% or over 24%, while a 40% tolerance band would trigger trades far more rarely, only once investments fell below 12% or over 28%. For instance, as shown in a hypothetical example in Figure 15, the narrow tolerance bands trigger nine rebalancing trades for various investments, while the wider tolerance bands would only trigger three (including several missed "buy" opportunities for investments that were down, but not enough to hit the wide lower band).

Notably, for clients whose portfolios may already be near their maximum risk tolerance level, it may be necessary to use narrower bands, to avoid the danger that the portfolio drifts 'materially' above the client's tolerance for risk in the first place.

Figure 15. Rebalancing Frequency With Wide Versus Narrow Tolerance Band Thresholds
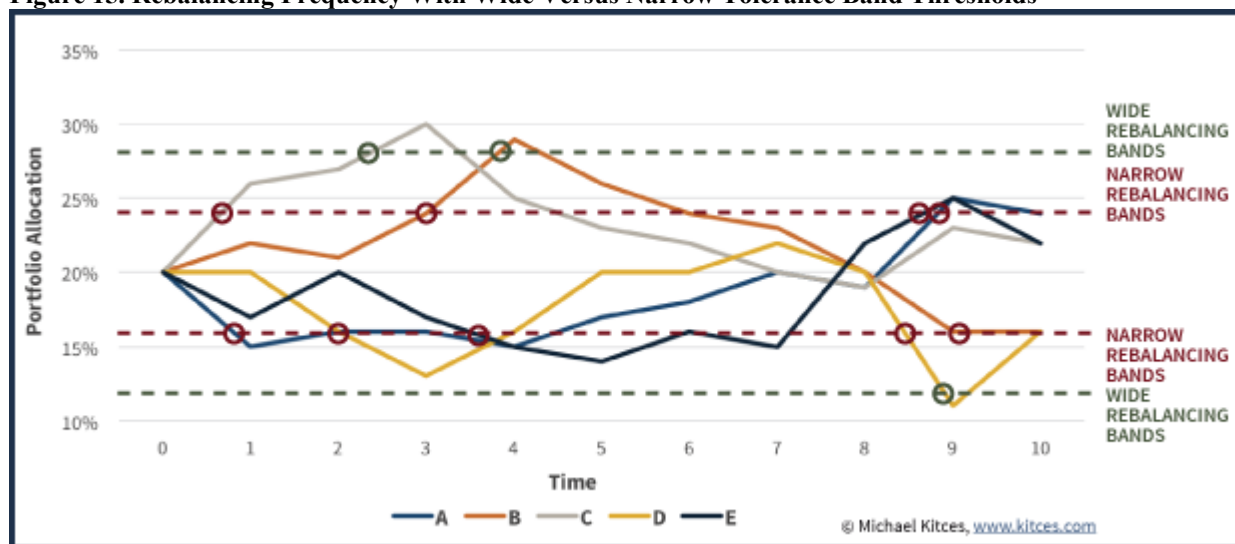
Rebalancing Strategies For Savers And Spenders

When it comes to those who are ongoing savers or spenders, the process of rebalancing a portfolio is executed a bit differently, due to the ongoing demands for buying or selling that *already* occur as a function of the cash flows going in or out of the portfolio.

Rebalancing For Savers

Someone who is saving and adding to a portfolio on an ongoing basis must invest the dollars that go in (presuming that the funds are intended to *be* invested and not just sit in cash). Classically, if a portfolio was broadly diversified into multiple investments, each contribution into the portfolio would be invested to the same target allocation. Thus, for instance, if the portfolio was invested 1/10th into 10 different asset classes, each new contribution would be invested 1/10th into each asset class in the same way.

However, that approach is not practical for many, if only simply due to transaction costs (as 1/10th into each of 10 investments with modest ongoing contributions can add up quickly when paying 10 trading charges, even if the transaction costs are fairly small for each individual trade). In addition, though, allocating each chunk of new dollars into each of the investments in the portfolio neglects the reality that the portfolio will inevitably get at least slightly "out of whack" with its asset allocation anyway, creating an opportunity to use each new contribution to shore up whatever investment has become the most underweighted due to market performance.

For instance, imagine a relatively simple portfolio that had 4 investments that started out with a 25% allocation each, but due to poor relative performance (either because it was down, or just not up as much as the others) one of the investments has drifted down to being only 22% after a year. As shown in Figure 16 (top of next page), when the new contribution comes, the funds are used to buy *just that investment* to shore up its allocation back closer to 25%. The end result is that the portfolio ends out getting back closer to its target allocation, and no investments had to be sold in a rebalancing transaction to do it. Instead, adding the new dollars to the most underweighted investment(s) has the same effect as selling investments that were up – both of which rebalance the portfolio – but without the additional transaction cost (and potential to trigger

How Often Should You Check For A Rebalancing Opportunity?
In a world where rebalancing is done on time-based intervals – e.g., once a year – the effort of rebalancing itself simply becomes a once-per-year endeavor. Most commonly, advisors doing annual rebalancing simply plan to do it all at once for all clients at the same time, typically around the end of the year. All portfolio rebalancing trades are calculated and executed at once, along with end-of-year tax loss harvesting.

With rebalancing that's based on target allocation tolerance bands, however, it becomes necessary to regularly "check" the allocations of the portfolio, to see whether it is due for a rebalancing trade in the first place. After all, while the reality is that it could be months or even years before a particular investment moves above or below the thresholds that would trigger a rebalancing trade, if you only check every several months or once a year, you could miss the opportunity altogether. An investment that ran too far too fast could already have a correction before its departure across the allocation threshold is noted, with the sell-high opportunity gone and lost, or similarly an investment that crashed and then rebounded would be a buy-low rebalancing opportunity that was missed as well.

Accordingly, then, while rebalancing using target allocation tolerance bands might not necessarily trigger trades very often, it becomes necessary to "check" relatively often to see if those rebalancing opportunities are present in the first place. The "Opportunistic Rebalancing" study from Daryanani suggests that anything *less* frequent than checking every two weeks will risk missing opportunities, and that if feasible it's best to literally check *every day* for a potential rebalancing trade, even if the overwhelming majority of days will simply indicate that nothing is to be done.

Given the intensive nature of monitoring required for such rebalancing strategies, this kind of approach is especially conducive to being implemented with technology that is capable of monitoring all the different investments and their target allocation threshold levels, to determine when/whether a trade is triggered. In point of fact, implementing rebalancing on this basis has become one of the primary reasons that "rebalancing software" has become so popular for financial advisors in the first place. Because anything beyond a relatively simple time-based interval approach can be difficult to implement by hand or using spreadsheets alone!

Figure 16. Rebalancing For Accumulators By Using Incremental Savings To Supplement Underweight Investments
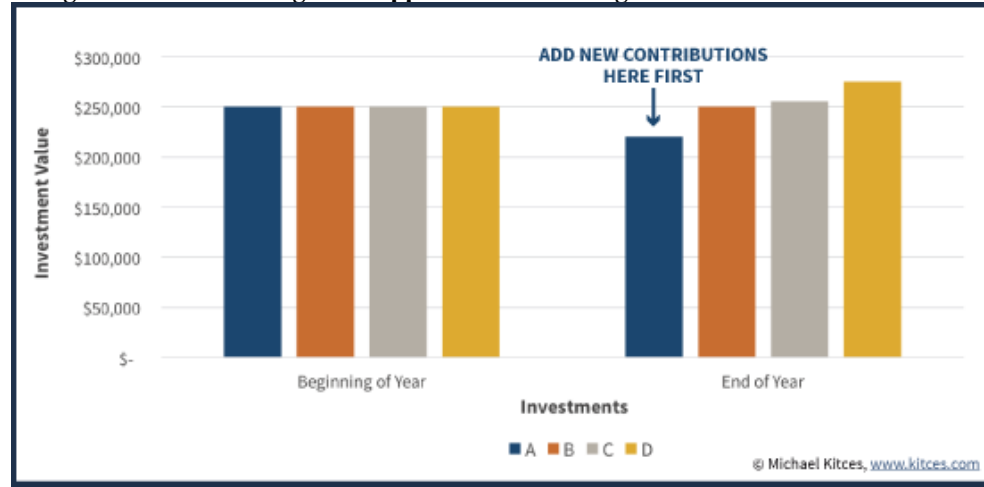
portfolio), there may not be enough dollars to sufficiently supplement the investment that is most underweighted and get it back near its target allocation. Nonetheless, at worst, using ongoing contributions to supplement the lowest-allocation investments will still support the rebalancing process, and likely at least reduce the number of trades, transaction

capital gains) of actually selling the investments that were up!

In practice, this approach of using new contributions to execute rebalancing will systematically purchase whatever has been recently performing the worst in the portfolio – such that its allocation will have drifted below target. In turn, this is also indirectly an effective strategy to ensure that the investor is not chasing whatever has been the recent best performer (which may now have become "expensive"!), but instead is investing into whatever has recently become cheaper instead. In other words, always using new dollars to buy the most under-weighted investment becomes a systematic "buy low" approach (at least for investments that are otherwise deemed worthwhile to have/keep in the portfolio in the first place).

Ultimately, whether new savings can handle *all* the rebalancing "work" of a portfolio will depend on the size and frequency of contributions. If new additions are too rare, investments in the portfolio may cross allocation thresholds that trigger a rebalancing trade sooner than the new contribution can get it done instead. And if new additions are too small (relative to the total size of the

costs, and potential capital gains events, even if it doesn't quite obviate them altogether.

Rebalancing For Retirees

When it comes to retirees who are taking net withdrawals from a portfolio, the rebalancing opportunity is similar to that of savers – except instead of adding contributions to the investments or asset classes that are down, *the retiree withdraws from the investments that have gone up the most.*

Thus, continuing the earlier example, if the saver would have added to the asset class that was most underweighted, the retiree instead will sell the investment that has become the most overweighted, as shown in Figure 17. In a similar manner, both approaches will help to bring the portfolio back in line

Figure 17. Rebalancing For Accumulators And Retirees With Strategic Purchases Or Liquidations
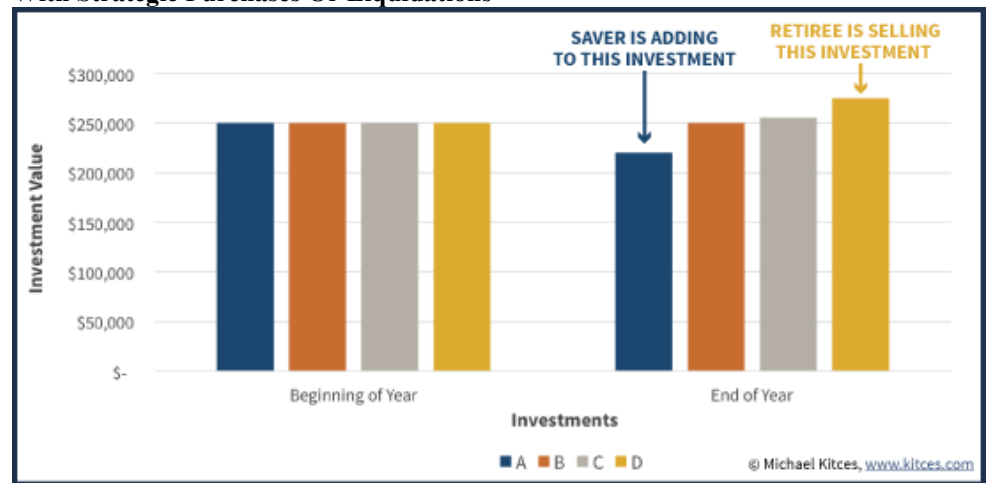
to its target allocation, simply accomplished with the purchases or liquidations that were *already* happening!

Notably, just as the process of always adding to the investment that is most underweighted becomes a systematic "buy low" strategy for savers, the process of always selling from the investment that is most overweighted for a retiree becomes a systematic "sell high" strategy as well.

In fact, the reality is that the process of rebalancing – or using systematic withdrawals *as* a rebalancing strategy – helps to ensure that retirees will never be selling from equities after a market crash (presuming the retiree is diversified into at least some non-equities as well). After all, if the market has just crashed, their weighting will be below-target, while asset classes like bonds that tend to rally in a market decline will have become overweighted.

In essence, then, rebalancing is actually a retirement liquidation strategy to manage sequence-of-return risk

as well, reducing the need for other types of "bucket" strategies to generate retirement cash flows. Systematic withdrawals of the overweighted asset classes to both generate retirement distributions *and* rebalance at the same time ensures that the only asset classes that are sold are the ones that were up (e.g., bonds after a market crash) and not the ones that were down (e.g., stocks that just crashed). Conversely, if the market is rallying upwards, using a retiree's liquidations to rebalance will end out drawing most/all of the distributions from the rallying equities, systematically selling the investments that have gone up the most and not the ones that are performing the worst (e.g., lagging bonds).

An additional benefit of the strategy for retirees is that, if the size of the distributions are large enough relative to the portfolio, the ongoing liquidations from the asset classes that are up the most will eliminate any further need for rebalancing at all. This helps to reduce the transaction costs of the portfolio over time, as liquidations that needed to occur incur their own transaction costs anyway, but no further rebalancing trades become necessary thereafter.

Using Interest And Dividend Reinvestments For Rebalancing?
While new savings to an account are inflows that can be used to execute rebalancing trades, even portfolios that have no new additions from *outside* dollars may still have new flows from "internal" dollars, generated by the payment of interest and dividends on various investments.

As with new contributions, the cash generated by interest and dividends does represent an opportunity to redirect those dollars to whatever investments are most underweighted, which can help supplement the rebalancing of the portfolio and reduce the need to trigger outright sales of investments that are up (which has both transaction and potential capital gains tax costs).

However, the caveat of using interest and dividends for supplemental rebalancing is that the dollar amounts may be relatively modest compared to the size of the portfolio – which means it may not save much in total rebalancing activity – while flat-dollar transaction costs (even just expenses like $9.95/trade) can add up quickly on small purchases.

To some extent, these transaction costs can be mitigated by accumulating interest and dividends for a period of time, and only using those dollars to execute a rebalancing trade once the total amount of cash is "large enough" to be worthwhile from a transaction cost perspective. However, the bad news is that systematically accumulating cash to wait for a rebalancing opportunity also means the portfolio is potentially accumulating a "cash drag" on long-term returns, to the extent that funds remain in cash for a period of time.

Ultimately, then, whether it is worthwhile to use the cash from interest or dividends (or in the case of mutual funds, even end-of-year capital gains distributions from funds) will depend heavily on the magnitude of those cash flows, the size of the portfolio, and in particular the size of any transaction costs relative to the available dollars to reinvest from interest and dividends.

For those whose transaction costs are higher, but interest/dividend reinvestments are low- or no-cost (as is common for many mutual funds), it may be preferable to just reinvest interest and dividends, and sell shares later to rebalance if/when/as necessary. On the other hand, if interest and dividends can be invested with no transaction charges, even at small dollar amounts, it will arguably still be more efficient in the long run to use the cash accordingly, reducing other prospective transaction costs (e.g., the bid/ask spread of investments that have to be sold) and the potential need to rebalance out of investments that would trigger capital gains.

Tax Complications Of Rebalancing

A significant complication of rebalancing is that it can trigger tax liabilities as the investments that are up are sold/rebalanced to free up dollars that can be allocated into those investments that are down (or at least, have become underweighted).

In practice, the tax problem with rebalancing occurs most frequently for equities and other investments or asset classes that are expected to provide the bulk of their return from capital appreciation; after all, when most of a bond's return is simply from ongoing yield that will be taxable either way, the amount of capital gains or losses tends to be relatively modest.

Rebalancing Amongst Investments With (Materially) Different Return Expectations

Situations where asset classes have different expected returns become *especially* likely to generate additional capital gains from ongoing rebalancing (at least compared to a buy-and-hold portfolio); it's almost inevitable, as the higher returning investment is *expected* to eventually outperform the lower-returning investment, which will compel portions of it to be sold to keep the portfolio's allocation in check for risk management purposes. And each sale for rebalancing purposes of an investment that's become overweighted because it's up will in turn generate a capital gain – it "must" generate a capital gain, because its positive return over time is what causes the rebalancing trade to become necessary!

Figure 18 (right) shows how this effect plays out on average over time. A mere annual rebalancing process ends out producing the equivalent of 2.27% turnover on the equity portion of the portfolio (which is equivalent to 1.16% turnover on the overall portfolio in the aggregate). Notably, rebalancing based on 20% tolerance bands ends out stretching out the rebalancing trades to

occur about every nine years instead, and as a result the amount of turnover ends out being an average annual turnover rate of only 1.71% for the equities (and 1.03% of the overall portfolio).

Rebalancing Across Investments With Similar Return Expectations

In the case of investments with similar return expectations, as noted earlier, the good news of rebalancing trades that are triggered when an investment becomes materially overweighted (or other investments are sold to buy one that has become materially underweighted) is that it becomes a form of a systematic buy-low-sell-high strategy. The bad news is that it still results in scenarios where the investments that are up – and therefore have generated (long-term) capital gains – are the ones being sold, triggering capital gains tax liabilities.

Ultimately, the turnover rate in such scenarios will likely be lower than the turnover with investments that have materially different return expectations. After all, trades are not likely to be triggered on a continuous, ongoing basis simply due to asset allocation drift due to one asset class persistently outperforming the other. Instead, trades will only occur when one investment moves to an extreme relative to the others.

Still, some turnover is expected, and likewise that turnover *is* expected to generate capital gains on average (since it is the investments that are up which will be sold!). Thus rebalancing may still be appealing over time for investment purposes, but it is important to recognize – and plan for – the fact that there will be some tax drag along the way.

Figure 18. Annual Vs Tolerance Band Rebalancing Of Equities Over Time
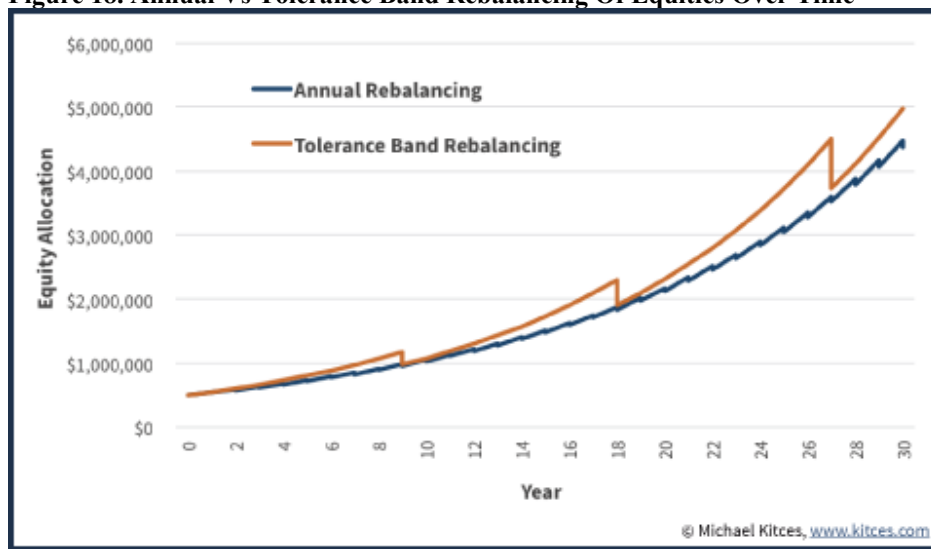
Asset Location And Rebalancing

The conventional view of asset location for households that have multiple types of investment accounts – e.g., taxable brokerage accounts, and IRAs, and Roth IRAs – is that equities and other investments eligible for long-term capital gains treatment are placed in the brokerage account (to ensure getting the preferential tax rate), while investments that generate ordinary income (e.g., bonds) are held inside of an IRA (since the tax treatment will be ordinary income no matter what, may as well get the tax deferral inside the retirement account along the way).

However, ongoing turnover can make holding equities inside of a brokerage account less appealing. The reason is that once turnover is introduced, equities in a brokerage account *do* still get capital gains treatment, but the ongoing drag of taxation means not all the gains can be reinvested every year, which reduces the compounding growth benefit over time. Given enough years, the tax drag effect can be so severe that an investor would have more money by placing the stocks inside of the IRA, *even though* it converts capital gains into ordinary income treatment, simply to ensure the ability to gain fully-tax-deferred compounding growth.

Notably, as shown in Figure 19 (below), the modest turnover rate of just over 2% (combined with a 2.5% qualified dividend) is not enough on its own to merit putting equities into an IRA – even over long periods of time – although rebalancing combined with *any* other/additional level of trading driving up turnover to a 'mere' 10% would push stocks over the line into an IRA with the additional drag of a modest 2.5% dividend as well.

One caveat to asset location in the context of rebalancing based on asset allocation tolerance bands is the potential that an especially sharp move in prices could generate a rebalancing trade on an investment held for less than a year, resulting in a short-term capital gain

(which is taxed even more harshly). However, while this is a conceivable risk, its likelihood is fairly low in a multi-asset-class portfolio (where it takes a *really* significant price movement to trigger a rebalancing trade in less than a year), and as noted earlier, in the long run a tolerance band rebalancing with a 20% relative threshold actually tends to *reduce* the frequency of turnover, not increase it.

Of course, to the extent that there are any Roth IRA dollars available for investing, the first priority for the highest-returning assets is simply to place them into the Roth, which both maximizes tax-free growth *and* eliminates any problems with tax drag for the highest returning asset class that needs to be rebalanced!

Alternative And Cutting Edge Rebalancing Strategies

While rebalancing based on asset allocation tolerance bands seems to have become the most popular approach for rebalancing, it is notable that there may still be room for further improvement in how those tolerance bands are defined and applied.

For instance, it may be better if the tolerance bands are *not* symmetrical. The idea is to recognize that because markets go up more than down, and the sheer magnitude of bull markets often exceeds bear markets; e.g., a significant bear market might result in a 20%+ decline, but an extended bull market can run up 200% or more. Thus, asymmetrical tolerance bands recognize this fact, and give more room for bull markets to run further, even while being ready to add more quickly in a bear

Figure 19. Asset Location Of Stocks In Brokerage Account Vs IRA At Varying Levels Of Portfolio Turnover with 2.5% Qualified Dividend

© Michael Kitces, www.kitces.com
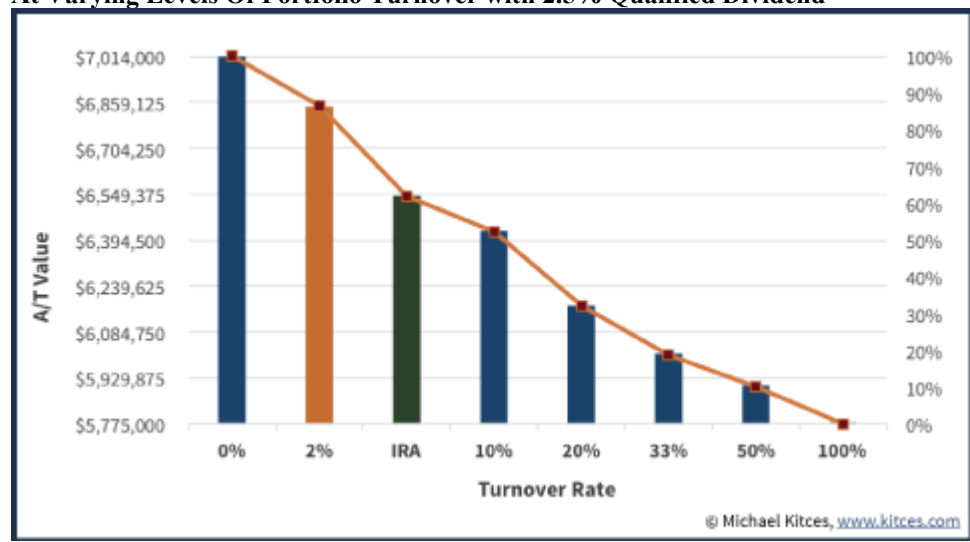
market. In practice, this means that the ideal setting for tolerance bands might not be a relative weighting of +/- 20%, it may be better to set the band at +25% or -15% instead. Expect to see future studies on rebalancing thresholds that analyze this further.

In addition, there is the fact that different investments or asset classes have different levels of expected volatility, which suggests that ultimately the ideal rebalancing bands might be drawn on an asset-by-asset basis. As noted earlier, when there are just two or relatively few investments in the portfolio, this may be a moot point, as growth and an increasing in the weighting of one investment corresponds directly to a decreased weighting in another. However, with a large number of positions in a multi-asset-class portfolio, an investment generally won't trigger a rebalancing trade until/unless the few most volatile assets become over- or underweighted. If the tolerance bands are set at +/- 20%, a big run in equities may trigger a sale, and a big decline will trigger a buy, but a "big" move in bonds will still never itself likely be sufficient to trigger a rebalancing trade.

On the other hand, having rebalancing bands for each investment, or at least each asset class – where some bands might be narrower than others – creates the potential for rebalancing to occur based on an 'extreme' movement for *that* particular investment or asset class. This in turn can reduce the number of "missed opportunities" – rebalancing trades that don't occur even though the investment had a buy-low or sell-high opportunity because the weighting hadn't shifted to be extreme enough to trigger a traditional rebalancing trade. Thus, asset classes like government bonds might have narrower bands, but high-yield bonds would be wider (as the investment can move further to one extreme before bouncing back the other way), and while large-cap U.S. equities might have relatively wide tolerance bands already, they might be even wider still for small-cap stocks or emerging markets (which tend to be even more volatile in the first place).

Economic Benefits Of Rebalancing

When it comes to quantifying the economic benefits of rebalancing, estimating the value is 'surprisingly' difficult, due in large part to the previously discussed distinction that rebalancing amongst *similar*-return investments may be a return enhancement but with *different*-returning investments it is often not.

For instance, an aforementioned 2010 study from Vanguard by Jaconetti, Kinniry, and Zilbering found that rebalancing stock/bond portfolios *reduced* returns, generally by about 0.50% in the long run. Strategies that used a form of allocation tolerance bands gave up slightly less ("just" 0.2% - 0.3% in returns for wider rebalancing bands), but the results were still inferior to an unrebalanced buy-and-hold portfolio. Notably, the Vanguard study also found that volatility dropped materially with a regularly rebalanced portfolio, such that *risk-adjusted* returns may have held steady or even been slightly enhanced. But only because when the returns dropped, the volatility dropped even more.

By contrast, one of the earlier studies on rebalancing, by Arnott and Lovell in 1993, entitled "Rebalancing: Why? When? How Often?" found that regular rebalancing did produce a very slight positive benefit over not doing so, and the 2007 study on "Opportunistic Rebalancing" by Gobind Daryanani found a rebalancing benefit of nearly 0.40% to the positive by using tolerance band rebalancing amongst an asset class mix that included numerous similar-return investments with positive rebalancing effects (in addition to rebalancing into bonds). And in higher volatility time periods, Daryanani's work suggested the rebalancing benefit could be even greater.

More generally, as noted earlier, Bernstein's study of the "Rebalancing Bonus" ultimately finds that the benefits of rebalancing will vary directly as a function of the differences in the volatility of the investments, along with how low their correlations are with each other. In other words, the best

investments for rebalancing are the ones that are volatile, can deviate significantly from each other, and tend *not* to move in sync (creating more opportunities for those deviations where rebalancing trades can occur).

In practice, this means the exact 'rebalancing bonus' may vary significantly depending on the exact asset class or investment pairs being compared, potentially even varying from the rebalancing benefit being highly positive (for high-volatility investments with low correlation) to being slightly negative (with lower-volatility assets that are highly correlated, and/or in scenarios where their returns are very different, such as with stocks and bonds).

Psychological Benefits (And Challenges) Of Rebalancing

Notwithstanding the economic benefits of a well-executed rebalancing, it is worth noting that there can be some psychological benefits, and challenges, to implementing rebalancing with clients as well.

The biggest caveat to consider is that, because rebalancing will sell investments that are overweight to buy investments that are underweight, the strategy *will* end out buying the most of whatever has been performing *the worst* in the portfolio. After all, that is what causes an investment to become underweighted. Which means from the client's perspective, the advisor will be advocating selling whatever has been performing the best to buy whatever has been generating the least return. Or at the extreme, the rebalancing trade will be aiming to buy an investment that has been severely declining, which can be an even more frightening prospect in real time (e.g., rebalancing trades to buy stocks in the midst of a crash, as were triggered in late 2008 or early 2009).

On the other hand, getting clients to commit in advance to a systematic rebalancing strategy can actually be an effective means to overcome this very challenge – that when a particular investment or asset class is falling, that's usually not a time to sell it, but a time to buy it, even though clients often want to do the opposite. And rebalancing *will* aim to buy the investment that's down, not sell it. Thus, clients who have pre-committed to rebalance the portfolio – even/especially in times of stress – may be more willing to buy the investments that are down, compared to those who had no such plan and are simply faced with the decision, in real time, whether

or not to buy an investment that is in the midst of a frightening and rapid decline.

Similarly, systematic rebalancing also provides a means to persuade clients to periodically "take gains off the table" and sell investments that are up. Again, to the extent that many clients want to buy *more* of what's up and sell the "losers" that are down (which potentially results in a lot of sell-low buy-high!), rebalancing encourages the exact opposite and generally more favorable approach of selling high (what's up and overweighted) and buying low (what's down and has become underweighted!).

Bringing It All Together

If there is one key distinction to recognize in the evolution of rebalancing research and strategies, it is that the 'traditional' approach of rebalancing based on time intervals – e.g., "annual rebalancing" – is actually *not* the most effective strategy, especially in a well diversified multi-asset class portfolio. Just rebalancing everything annually can create extra and unnecessary transaction costs (and extra turnover triggering extra capital gains) for investments that hadn't actually moved materially from their target weightings, and without further context may unwittingly sell out of an investment with positive momentum too soon, and/or buy into an investment that's falling "too early" when it still has further to fall.

Instead, research suggests the optimal strategy is to allow room for investments to get close to their "full run" – to the upside, or the downside – before triggering a rebalancing trade, and this is better accomplished by setting a tolerance band around the target asset allocation weighting. If the investment moves outside of those thresholds in either direction, it's time to buy or sell it to bring it back in line, with a timing that is likely to be better than just doing so on an arbitrary annual date.

On the other hand, it is important to recognize that a proactive rebalancing strategy has tax consequences as well, which should be considered as a part of the overall approach. Not just to prepare for tax liabilities, but to recognize that the increased turnover – however modest – from ongoing rebalancing and the tax drag that it creates can in turn impact what the optimal asset location may be for certain investments in the first place. High-return investments that are at increased exposure for ongoing rebalancing trades – to reduce what would otherwise be a rising 'drift' to the allocation as it outperforms over time – may actually be shifted to

retirement accounts, even if otherwise eligible for capital gains, as it actually becomes a means to maximize that compounding return to the extent possible, while managing the tax drag that will occur as it is rebalanced. At a minimum, advisors should be ready to do tax loss harvesting of any equities or similarly volatile investments held in a brokerage account that are down, to offset the capital gains that may be generated by tax loss harvesting high-return investments that are up.

As noted earlier, though, at least some of the tax complications of rebalancing can be mitigated for clients who have any cash flows in or out of the portfolio, as whether it's a client who's making additions as a saver, or one who's taking withdrawals as a retiree, cash flows in *either* direction provide an opportunity to rebalance. Of course, withdrawals by a retiree from a portfolio that is up may still also trigger some capital gains, but ostensibly if the client wanted and needed the money, those capital gains were going to happen anyway, and strategic liquidations to both free up spending dollars *and* rebalance in the process will reduce the need for additional tax events from rebalancing. And for savers, using contributions to shore of the allocation really can materially reduce the number of rebalancing sales that trigger tax events (at least if the ongoing savings amounts are material enough to impact and rebalance the allocation in the first place).

And ultimately, it is important to recognize that in practice, all of these rebalancing strategies are realistically best implemented with technology tools, to help both the ability of the advisor to "check frequently" on the current weightings of the portfolio to determine if any have crossed a threshold that would trigger a rebalancing trade, and especially to implement the asset location strategies along with it. Though sadly, not all of today's rebalancing software tools have the capability to implement asset location and rebalancing based on tolerance bands, and even those that do may need further development to implement some of the more "advanced" tolerance band strategies such as tolerance bands specific to each investment/asset class or having asymmetric tolerance bands (e.g., rebalancing if the investment is overweight by 25% or underweight by only 15%).

In the meantime, it's important to recognize that rebalancing has a benefit – to risk-adjusted returns, if not an outright return enhancement – not only from the actual mechanics of rebalancing itself, but the client psychology of getting clients to commit to the strategy ahead of time – which makes it easier to do

the difficult sales of investments that are up and purchases of those that are down (despite the fact clients often want to do the opposite when the time comes). In other words, do not underestimate the power of a rebalancing *plan* or strategy as a means of getting clients to pre-commit to buying and selling that would be difficult to commit to in real-time when one investment is crashing or another is in the midst of a massive run-up. Though in turn, that means it is crucial to effectively communicate, and get buy-in from clients, about what the rebalancing strategy will be in the first place!

What did you think?

Hopefully you found this latest issue of The Kitces Report to be of value to you. However, since it is produced for you, the reader, we would like to hear from you about how the style, format, and content of the newsletter could be further improved to make it more valuable for you.

Please let us know
what you think by emailing us at
feedback@kitces.com!
Thanks in advance
for sharing your thoughts!