



Capital Sigma: The Advisor Advantage

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Based on research
developed by
Envestnet | PMC's
Quantitative
Research Group

Executive Summary: An ongoing debate among investment advisors and their clients centers on value: creating it, preserving it, and perpetuating it. Each faces a different challenge: Advisors are tasked with delivering worth to their clients, and clients need to understand what they can expect for the dollars they spend.

Capital Sigma is Investnet's term for the sum total of advisor-created value, and includes financial planning, asset class selection and allocation, investment selection, systematic rebalancing, and tax management. Under this aegis, this white paper embraces five areas that engender measurable value to the client. Beginning with the baseline of financial planning, we then examine asset allocation, investment selection, systematic rebalancing, and tax management. Each element can contribute "alpha," or excess return over a given benchmark—the traditional mark of gauging advisor value. According to our research, the combination of successfully implementing these sources has produced around **3%** of value add annually (see Table 1 below). We explain each one, and assign a figure to quantify the value it generates.

The first pillar of value, financial planning, starts with a deep dive into understanding who the client is and what he seeks to accomplish. When properly grounded in trust and transparency, it serves as the roadmap to achieving the client's goals—ranging from short-term income needs and extending to estate planning and philanthropy. Getting from here to there requires attention be paid to all aspects of a client's situation: risk tolerance assessment, taxes, insurance, retirement, and estate planning. Knowing your client is more than a regulatory hurdle. Rather, it is the first link in the advisor value chain, and when done properly, can result in a winning partnership that produces solid results. Although the value of financial planning derives mostly from its qualitative nature, its all-important role in serving as the cornerstone for the subsequent parts of the advisor/client relationship must be considered in the value equation. The potential added value is difficult to quantify precisely for all sub-components of financial planning, but for asset location advice alone it is about **50 basis points** of value annually.

The second pillar of advisor-added value is based on crafting an appropriate asset allocation portfolio that positions the client to achieve his goals. The process begins with determining the proper level of portfolio risk to suit his comfort level, an exercise performed in the financial planning stage, as outlined above. That decision then drives asset class selection. Molding a suitable asset allocation harnesses both diversification and exposure to a range of investments that can deliver value across a complete market cycle. It also combines a sophisticated, institutional methodology that can be tailored to meet a client's personal objectives.

Several pillars, or sources, of advisor-created value can be quantified. These pillars include financial planning, asset class selection and allocation, investment selection, systematic rebalancing, and tax management. The combination of successfully implementing these sources can produce around 3% of value add annually.

Capital Sigma: The Advisor Advantage

That approach may include alternative asset classes, strategic portfolio tilts that apply over- or underweights to capitalize on pricing anomalies, and an array of risk-mitigation techniques to respond to changing capital markets and economic conditions. We present examples, explain their advantages, and offer suggestions on how to use them in a portfolio to minimize risk. We demonstrate that a thoughtfully developed asset allocation that is both diversified and consistent with the client’s risk profile and investment objectives can add **52 basis points** of value annually.¹

Once the asset allocation is set, the advisor is tasked with choosing how best to implement it— which specific investments he should select to create a customized portfolio for his client. This constitutes the third pillar of advisor-added value. An array of investments is available, ranging from actively managed portfolios to finely tuned and deftly sliced passive strategies. Active asset class managers must generate excess returns over a benchmark to justify their fees, and methods exist to measure how these managers perform. On the passive side, tracking error, portfolio liquidity, and delivery of cost-efficient beta are among the issues the advisor must consider in his investment selection process. Our research has determined that employing a strategy of selecting active mutual fund managers according to certain risk-adjusted return characteristics can add **67 basis points** of value annually to a diversified portfolio, and implementing the portfolio with passive investments can add **61 basis points** of value each year.

We then address the fourth pillar of advisor- added value—systematic portfolio rebalancing. We demonstrate the advantages of regular, systematic rebalancing and how it can help both to control risk by reducing portfolio volatility and also enhance returns. We contrast the effects of more- and less-frequent rebalancing, and offer a rationale to explain why an annual rebalancing frequency is optimal. The process of systematically rebalancing a diversified portfolio annually can add **30 basis points** of value each year, compared with a naïve strategy of rebalancing once every three years.

The fifth and final pillar of advisor-added value is tax management. Although various tax optimization methods and applications exist (see Financial Planning section for more detail), in this section we focus on potential after-tax benefits an investor can achieve from informed tax management in an all-equity portfolio. A good starting point from a tax-efficiency perspective is a buy-and-hold portfolio. However, it does not accommodate offsetting realized capital gains outside the portfolio, the heart of the “tax-loss harvesting” approach to tax optimization. Also, it takes considerable quantitative skill to build a portfolio that tracks a benchmark when only a fraction of that benchmark’s holdings can be used. We demonstrate how a sophisticated tracking portfolio that can track a benchmark and accommodate tax harvesting can add considerable after-tax value, about **100 basis points** of annual value add.

Table 1

Source	Annual Value-add
Financial Planning:	> 50 bps
Asset Selection and Allocation:	52 bps
Investment Selection:	
Active Management:	67 bps
Passive Management:	61 bps
Systematic Rebalancing:	30 bps
Tax Management:	100 bps
Total:	Around 3%

Source: Envestnet; Morningstar; Vanguard

¹In the previous update of this white paper, which was done in 2014, we used the Russell 3000 Index as the benchmark for this calculation. Since then, international equity asset classes have become staples in well-diversified portfolios. This broad change in the way the international equity asset class is viewed then necessitates a change in the benchmark against which the asset class selection and allocation decisions are measured. To capture this correctly, we use the MSCI ACWI benchmark in this version of the paper, instead of the Russell 3000 Index. For completeness, had we used MSCI ACWI benchmark in our 2014 version of this paper, the Asset Class Selection and Allocation and Systematic Rebalancing components of Capital Sigma would have been equal to 63 and 39 basis points, respectively.

Source 1: Financial Planning

An ongoing debate among investment advisors and their clients centers on value: creating it, preserving it, and perpetuating it. Each faces a different challenge: Advisors are tasked with delivering worth to their clients, and clients need to understand what they can expect for the dollars they spend.

In many respects, the financial planning component of professional advice is the leading source of advisor alpha—it establishes the framework for each subsequent fiduciary decision made by the advisor and client.

The advisor's relationship with the client is an acknowledged, but often too little emphasized, element of the overall financial planning process. Know Your Customer has benefits beyond merely satisfying the regulatory suitability requirements. A client expects the advisor to investigate the products offered, and relies on the advisor's honesty, professionalism, and ability to make important decisions about his wealth.

Many advisors possess technical expertise and maintain ethical standards, but the true value of the relationship is the interpersonal understanding between the advisor and the client. Assuring the client that the advisor understands his needs, financial situation, and risk profile is vital to a successful relationship. He also must pledge to use his experience and judgment to make suitable investment recommendations driven by the client's interests.

A strong bond with the client, based on trust and transparency, is the cornerstone of achieving client objectives. A relationship founded on trust makes the client more willing to share extensive personal information about finances, attitudes toward money and investing, financial objectives, and life goals. The client depends on the advisor to deliver a holistic financial plan.²

Gaining client knowledge fosters a partnership whereby the advisor develops insightful solutions to create value for the client along several dimensions. The result is not only a long-term relationship throughout different life stages, but also a journey that is enjoyable along the way. The client can feel secure in knowing the advisor has his best interests at heart and is there to lean on when circumstances get rough. The advisor functions not only as a financial planner, but also as an ally, offering the client advice, instruction, and personal counseling. This becomes especially important during market downturns. Behavioral biases, when left unchecked, can cause a client to act impulsively and to the detriment of his long-term financial goals. By leveraging the bond he has forged with the client, the advisor, instead, can steer the client toward an outcome that is both prudent and beneficial and consistent with his objectives. In the end, such an "advisor value chain" does more than simply produce a portfolio to outperform a benchmark; it can help the client establish a lasting legacy amalgamating charitable, philanthropic, and generational features.

We can subdivide further the financial planning portion of the wealth management process into the following distinct areas of the advisory relationship: risk tolerance assessment; tax advice; insurance; retirement; and estate planning. Each of these plays integral roles in the process, and can maximize generational wealth transfer.

²See research by Jon Cockerline, "New Evidence on the Value of Financial Advice," Center for Interuniversity Research and Analysis on Organizations (CIRANO), 2012. Among other things, it finds that "Advice positively impacts retirement readiness, even after factoring out the impact of a myriad of other variables," and "Having advice is an important contributor to levels of trust, satisfaction and confidence in financial advisors—a strong indicator of value."

i. Risk tolerance assessment

An essential part of the wealth management advisory process is gauging a client's risk tolerance: his willingness and ability to sustain short-term losses. These losses oftentimes are represented by the annual volatility of a particular product or portfolio, and connote the potential for capital loss associated with the investment. This exercise helps to determine the appropriate level of equity in the client's portfolio, commensurate with his tolerance for risk.

It is important to remember that the financial risks facing the client are limited not only to investment losses, but should include other risk dimensions, as well. Examples of these include: longevity risk, sequence of return risk, withdrawal risk, etc. Examining these risk dimensions can help to measure the portfolio's projected success by adding time and mortality probabilities to the calculations. The choice of which of these risk dimensions to include will depend on the client's financial goals and his investment timeline. Accurately assessing these risks can be highly predictive in measuring both the probability and expected magnitude of retirement ruin.³ The computation and interpretation of these measures require sophisticated modelling and simulation techniques, and an advisor, armed with the appropriate tools, can add substantial value.

ii. Tax planning

An advisor's tax planning advice can include several tax optimization strategies. First, if the client has both tax qualified (e.g., IRA) and nonqualified accounts, then the advisor can provide "asset location" guidance. The "asset location" approach views the qualified and nonqualified accounts in a holistic way. It implements the overall asset allocation by placing less-tax-efficient asset classes (e.g., fixed income and dividend-paying equities) in the qualified accounts, and putting more-tax-efficient asset classes (e.g., equities and municipal bonds) in the nonqualified accounts. A study by Vanguard notes that this advice can generate up to 70 basis points of additional value,⁴ while a study by Morningstar suggests such guidance can produce 54 basis points of added return.⁵

Second, tax planning also can encompass advice on how to structure a client's retirement portfolio (e.g., investment in regular IRA vs. Roth IRA accounts) and his estate. The advisor must consider the client's unique circumstances (e.g., current and expected future income, investment horizon) along with existing tax legislation and anticipated changes to it.

Finally, tax planning can address tax optimization by realizing capital losses to offset capital gains—the so-called "tax-loss harvesting." We cover this approach under the "Source 5: Tax Management" section of this paper.

iii. Insurance planning

Insurance is considered to be the risk management component of a financial plan. A trusted advisor opens difficult conversations, such as "How will your loved ones manage financially if you are not there for them?" The complex insurance market has many types of products to meet different needs. Each carries distinctive features and varying fee structures. The advisor weighs the client's insurance needs in the context of his entire financial picture, and recommends appropriate solutions. He then crafts an insurance plan, which must be periodically reviewed and analyzed, just as investments are regularly monitored and adjusted. Having the right insurance plan is the key to protecting the client, either from being overinsured or becoming financially devastated should the unexpected occur.

³W. Van Harlow, Ph.D., CFA, "Optimal Asset Allocation in Retirement: A Downside Risk Perspective," June 2011, Putnam Institute.

⁴Francis M. Kinniry Jr., CFA, Colleen M. Jaconetti, CPA, CFP®, Michael A. DiJoseph, CFA, and Yan Zilbering, "Putting a value on your value: Quantifying Vanguard Advisor's Alpha," March 2014, Vanguard.

⁵David Blanchett and Paul Kaplan, "Alpha, Beta, and Now...Gamma," Morningstar, 2012.

iv. Retirement planning

Retirees face several retirement risks, such as longevity risk, inflation risk, and sequence of return risk, which may not be present during their working years. Retirement planning integrates factors such as cash flow needs, health care, and long-term-care coverage. It balances the interplay among income, investment, and risk management, as well as tax and estate planning, and the role that annuities can play.⁶

v. Estate planning

Helping the client to pass on wealth in the most efficient way and create a family legacy that spans generations are components of essential value that the advisor can add. Estate planning can be a complicated, time-consuming, and often emotional exercise. It addresses many vital issues, including heirship distribution control, charitable giving, and end-of-life considerations. Estate planning confronts the challenges of family dynamics and individual values that extend beyond the twin legacies of family and social capital. The most important result of a successful plan is not to avoid probate or minimize the tax bill, but to achieve family harmony. A trusted advisor-client relationship can simplify the planning process. Because the advisor already knows the client on a deep level, he can design a legacy consistent with the client's financial and philanthropic aspirations.

In essence, financial planning never ends. Life is full of changes, and each new set of client circumstances has different priorities and goals. The advisor maintains a collaborative relationship with the client to reflect, reconsider, and reorient during each phase, change, or transition. The advisor assumes the dual role of coach and skillful confidant who knows the client's entire story. As with the various elements of the investment planning process that will be discussed below, financial planning is ongoing and iterative. It lasts as long as the client relationship, and may extend even further, as wealth is transferred to future generations with whom the advisor has built a bond based on mutual trust and commitment.

⁶According to research by David Blanchett and Paul Kaplan, "Alpha, Beta, and Now...Gamma", Morningstar, 2012, advice regarding allocation to annuities alone can contribute around 0.24% annual value add.

Source 2: Asset Class Selection and Allocation

A thoughtfully developed asset allocation that is both diversified and consistent with the client's risk profile and investment objectives can add 52 basis points of value annually.

A second source of advisor-created value is derived from the advisor's ability to select from a palette of asset classes to mold an asset allocation consistent with the client's risk profile and investment objectives. Both academic and industry research often highlight the importance of the asset class selection and allocation decision.⁷

Asset Class Selection and Asset Allocation

A crucial component of a thoughtfully constructed allocation policy is determining the asset classes to include. Asset class selection is made during the development of the Investment Policy Statement.

Table 2: World Market Capitalization Portfolio, January 2018

US Large Cap	28.1%
US Small Cap	2.3%
Real Estate	1.1%
Int'l Developed Equity	16.7%
Emerging Mkts	6.0%
Commodities	4.0%
US Fixed Income	18.9%
High Yield	1.5%
Non-US Fixed Income	21.4%

Source: Envestnet | PMC

For most clients, a good starting point is a diversified group of those asset classes with the highest weights in the world market capitalization portfolio (see Table 2).

Customization of the asset allocation portfolio begins in the financial planning stage, specifically, in the Know Your Customer phase. That is the step in which the advisor assesses the client's particular goals and objectives and determines the appropriate portfolio risk to match his comfort level. The client's risk tolerance then helps inform the asset allocation's relative equity/fixed income split—for example, 60%/40%. Tailoring this equilibrium strategic asset allocation policy can occur at several points, including:

- 1. Incorporating of specific diversifying asset classes such as commodities, REITs, and emerging markets debt, among others, and**
- 2. Excluding of specific industries or sectors to which the client may have outside exposure.**

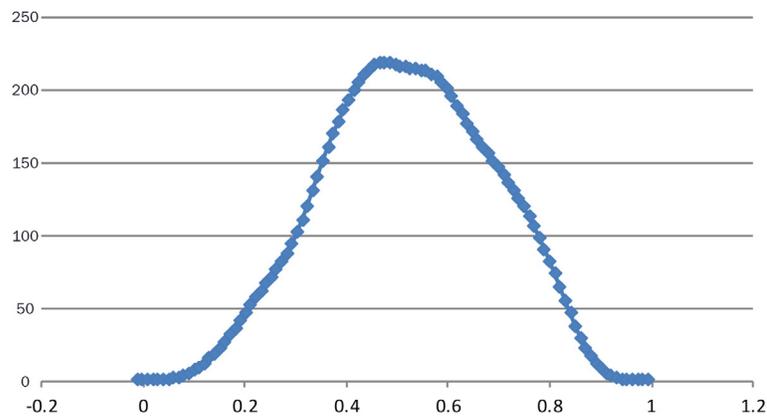
⁷Gary P. Brinson, L. Randolph Hood, and Gilbert L. Beebower (1986). "Determinants of Portfolios Performance," *Financial Analysts Journal*, v.42(4), pp.39-44.

Crafting a personalized asset allocation portfolio is a challenging task. Yale University's endowment office is widely heralded for its sophisticated asset allocation policy, which includes large exposures to nontraditional asset classes such as private equity and hedge funds. But in many respects, endowments such as Yale's may be easier to manage than individual client portfolios. For example, endowments are typically a single institutional portfolio focused on one client, with no tax, retirement, or estate planning constraints. Advisors, on the other hand, may serve many clients with disparate and ever-evolving needs and objectives, often complicated tax situations, and sometimes intricate retirement and estate planning hurdles. In other words, advisors need to apply an institutional mindset to a personalized and customized asset allocation policy to serve a range of clients.

Numerical Results

To determine the value added through asset class selection and allocation, we follow a numerically based methodology. We first establish a benchmark against which to measure these decisions. We begin with a naïve strategy portfolio that approximates the world market capitalization portfolio's equity/fixed income allocation split of 58%/42% (see Table 2). The equity component of this naïve strategy is represented by the MSCI ACWI Index, and the fixed income allocation's proxy is the Barclays U.S. Aggregate Bond Index.

Figure 1: Distribution of Asset Allocation Alphas (December 1996 — August 2018)



We then compare this naïve strategy to one that is diversified across three dimensions. First, we use the same equity/fixed income split of 58%/42% represented in both the naïve strategy and the world market capitalization portfolios. Second, we diversify within the domestic equity asset class, by establishing multiple combinations, or tiers, of the nine domestic equity styles (i.e., large cap, mid cap and small cap, each with value, core and growth components). Finally, we add combinations of seven diversifying asset classes to each domestic equity tier. Among the diversifying asset classes are REITs; commodities; high yield fixed income; global fixed income; Treasury inflation-protected securities (TIPS); emerging markets fixed incomes; and bank loans. These various combinations result in 1,664 diversified portfolios.⁸

We then calculate each portfolio's alpha relative to the naïve strategy over a 22-year period covering December 1996 through August 2018, which is the longest period common to all of the benchmarks we use to represent the various asset classes. The asset allocation alpha relative to the naïve strategy is quite stable across the 1,664 diversified portfolios mentioned above (see Figure 1). The diversified portfolios have no negative alphas, which indicates that all the portfolios in the universe of diversified portfolios noted above added positive asset allocation alpha. The minimum and maximum alphas are positive 11 and positive 87 basis points per year, respectively, whereas the mean and the median alphas are the same, due to the symmetry of the distribution, and equal **52 basis points**.

⁸As mentioned earlier, because of the ubiquity of international developed markets equity and emerging markets equity asset classes in the portfolios, we assumed that these two asset classes, along with domestic equity and fixed income, are always present in the portfolio. This, of course, also needs to be reflected in the benchmark, which is the reason why we have switched from Russell 3000 to MSCI ACWI for the purposes of evaluating these results.

Incorporation of Risk-Mitigating Strategies

The above-described asset class selection and allocation process can be extended to incorporate various risk-mitigating strategies. For decades, Modern Portfolio Theory (MPT), first introduced by Harry Markowitz in 1952, has been the de facto method for developing diversified asset allocations. The MPT framework includes a host of assumptions, several of which were severely tested in the financial crisis of 2008. One key assumption of MPT is that correlations among asset classes are constant and fixed. However, correlations across asset classes converged toward 1.0 during the financial crisis, causing seemingly well-diversified portfolios to suffer significant losses. For this reason, many advisors have embraced supplementing MPT with other risk-mitigating approaches when structuring strategic portfolios, such as:

- **Tactical overlays**—Given the perception of a breakdown of MPT in 2008, the number of strategies designed to maneuver tactically through the market's gyrations has greatly increased. These “fund strategist portfolios,” or FSPs, typically comprise ETFs and/or mutual funds. The tactical manager generally employs a model indicating which asset classes or market segments to over- or underweight. The goal is to allocate dynamically across asset classes to reduce volatility and mitigate losses. Advisors often include tactical FSPs alongside the strategic component in an overall asset allocation. Tactical FSPs attempt to participate fully in market advances while protecting capital during market declines. Their goal is to derive correlation close to 1.0 in positive environments and below 1.0 when markets are volatile.
- **Liquid alternatives overlay**—Liquid alternatives are another means of mitigating risk, but are designed to provide lower correlation in all market environments. Whereas tactical FSPs could be referred to as sources of “active beta,” liquid alternatives are designed explicitly to generate alpha while maintaining low correlation to equities and fixed income. Advisors are increasing exposure to liquid alternatives in client portfolios as both a unique source of alpha and a means of dampening portfolio volatility.
- **Liquid Endowment Portfolios**—Yet another, and increasingly popular, risk-mitigation construct for asset allocation is the “liquid endowment portfolio” (LEP). As its name suggests, borrows key design elements from university endowments such as those of Yale and Harvard. LEPs combine three allocation components: an MPT-based strategically allocated piece, a tactical allocation, and exposure to liquid alternatives. Research done by Envestnet | PMC demonstrates that a 50%/25%/25% combination of these elements can yield a favorable risk/return profile.

Source 3: Investment Selection

Employing a strategy of selecting active mutual fund managers according to certain risk-adjusted return characteristics can add 67 basis points of annual value to a diversified portfolio, and implementing the portfolio with passive investments can add 61 basis points of value per year.

Once the asset allocation has been crafted from a palette of asset classes, the next step in the advisor value chain is to breathe life into it by selecting the most appropriate investments. These then are knitted together thoughtfully to create a portfolio customized to the client's individual objectives. This phase has several facets, and advisors must make insightful decisions, including whether the overall implementation approach should seek alpha through selecting active managers or by choosing passive investment options (e.g., ETFs and index funds). In this section, we quantify the benefits of both the active and passive implementation options.

Quantifying the Value Add of Active Management

Whether or not active management adds value after fees is a debate that has raged for years. Several studies indicate that, on balance, active management does not generate alpha over time.⁹ Other research holds that it can add value in certain asset classes, particularly those that are less efficient. In this section of the study, we assume that the advisor's portfolio construction and investment selection process uses only active managers.

In its research on characteristics contributing to manager performance persistence, Envestnet | PMC's Quantitative Research Group (QRG) studied many potential indicators of future cross-sectional dispersion of active returns. Although several factors may contribute to active returns, QRG found that the historical information ratio¹⁰ is prominent. The evidence also suggests that the historical information ratio is a useful metric in most asset classes.

Our strategy for selecting active managers using historical information ratio has several steps. Each quarter, we calculate the three-year information ratio for actively managed funds relative to each investment style (e.g., large cap growth, small cap value, international developed markets, etc.) benchmark. We then combine the data, and map it for each investment style into the following primary asset classes: domestic equity, international equity, domestic fixed income, domestic high yield and international fixed income. The time period of the study is September 30, 1996 through June 30, 2018.

The funds in each primary asset class then are ranked by the information ratio, and grouped into deciles to measure performance. In other words, funds that generate the top 10% of information ratios within the primary asset class are included in the top decile, the next 10% comprise the second decile, and so on. Fund constituents within each decile are weighted equally. Performance is calculated for each decile over the subsequent quarter, and the decile's total return equals the average total return of each constituent fund. To calculate the decile's active return for the quarter, we compare the return of each constituent fund to its investment style benchmark, and then average those differences for each fund in the decile. A positive active return indicates that, on average, the funds in the decile outperformed their benchmarks net of fees.

The next step is to establish a strategy for selecting active managers. Within each primary asset class we use the average active return of the top three deciles, as that universe roughly corresponds, in percentage terms (i.e., top 30%), to Envestnet | PMC's Quantitative Approved List.¹¹

⁹ See, e.g., Fama, Eugene and Kenneth R. French (2010). "Luck versus Skill in the Cross-Section of Mutual Fund Returns," *Journal of Finance*, Vol. 65, No. 5.

¹⁰ The ratio of a portfolio's excess returns to the volatility of those returns. The information ratio is often used as a measure of consistency of excess returns.

¹¹ The Envestnet | PMC Quantitative Approved List is constructed using various quantitative measures, one of which is historical information ratio. Funds ranking in the top 30% of its asset class according to these quantitative measures constitute the Approved List.

Table 3

	Weight in World Market Capitalization Portfolio*	Annual Active Return	Weighted Active Return	Weighted Average ETF Expense Ratio	Total Alpha
Domestic Equity	35.5%	0.78%	0.28%	0.15%	0.43%
Int'l Equity	22.7%	0.17%	0.04%	0.09%	0.13%
Domestic Fixed Income	18.9%	-0.20%	-0.04%	0.03%	-0.01%
Domestic HY	1.5%	-0.20%	0.00%	0.01%	0.00%
Int'l Fixed	21.4%	0.18%	0.04%	0.08%	0.12%
Total			0.31%	0.36%	0.67%

*As of January 2018. The world market capitalization portfolio is derived using the market capitalizations of the various asset class indices comprising the world portfolio.

Source: Envestnet | PMC

We then weight each primary asset class's annual active return by its weight in the world market capitalization portfolio. The result—0.31%—is the active return of the active manager selection strategy for a diversified portfolio (see Table 3).

We then establish a naïve benchmark against which to measure the added value of the selection strategy. We use an ETF portfolio as a reasonable benchmark to measure the efficacy of an active manager versus a passive strategy. We assume the active return of each benchmark's primary asset class equals the weighted average expense ratio of the ETFs that comprise it.¹² Thus, we reduce the naïve benchmark's active return by the weighted average ETF expense ratio. As in the active manager selection strategy, we weight each primary asset class's annual active return by its weight in the world market capitalization portfolio. The naïve strategy results in an active return of -0.36% (see Table 3).

Finally, we calculate the added value of the active manager selection strategy. We add the annual weighted active return for the active manager selection strategy to the weighted average ETF expense ratio for each primary asset class. This is because the ETF expense ratio is a cost that is “saved” by not adopting the naïve benchmark strategy. We then calculate alpha for each of the asset classes, add the asset class alphas, and determine the total value added by the active manager selection strategy: **0.67%** (see Table 3).

This strategy considers the averages of active funds and ETFs within a primary asset class, so performance may differ when using particular active funds in portfolio construction. Though it may be impractical to use a strategy that buys all of the funds in the top three deciles of an asset class, QRG's research shows that active returns improve similarly when using the higher information ratio segments of the fund universe.

Quantifying the Value Add of Passive Implementation

For those clients and advisors who subscribe to the Efficient Markets Hypothesis view of the markets, implementing the asset class portfolio with passive vehicles might be the recommended way to proceed. In this section, we quantify the added value from implementing the portfolio with ETFs—one of the most popular passive investment options.

¹²We use only ETFs on the Envestnet | PMC ETF Approved List. Since low expense ratio is one of the selection criteria for the ETF Approved List, the weighted average expense ratio for the naïve benchmark will be reasonable.

Capital Sigma: The Advisor Advantage

The first step in quantifying the value add of passive implementation is to determine the asset allocation of the portfolio to be implemented. For this purpose, a neutral starting point is the world market portfolio (see Table 3), calculated at the beginning of 2018. We then use Morningstar's peer groups for the various asset classes in the world market portfolio to compute the expected differences in excess return for a median ETF compared with a median active mutual fund (see Table 3). We have made two assumptions: First, an ETF's excess return compared with its benchmark should be equal to the negative of its expense ratio over time, and second, the expected excess return of an average/median active manager should be equal to the negative of its expense ratio, as the expected alpha of active managers as a whole (here represented by the average/median active manager) has to be equal to the negative of their expense ratio.

Note that this second assumption does not contradict our value-add assessment of active managers. In that analysis, we focus on a subset of best active managers, which is consistent with average/median managers having expected alpha equal to the negative of their expense ratio.

Finally, we aggregate these differences across various asset classes in the world market portfolio to arrive at an overall value-add of 61 basis points per year (see Table 4).

Table 4

	Weight in World Market Capitalization Portfolio*	Annual Excess Return (Median MF)	Annual Excess Return (Median ETF)	Total Alpha
Domestic Equity	35.5%	-1.04%	-0.42%	0.22%
Int'l Equity	22.7%	-1.16%	-0.41%	0.17%
Domestic Fixed Income	18.9%	-0.70%	-0.17%	0.10%
Domestic HY	1.5%	-0.95%	-0.40%	0.01%
Int'l Fixed	21.4%	-0.90%	-0.36%	0.12%
Total				0.61%

*These market capitalization calculations are based on data from January 2018.

Source: Envestnet | PMC

Source 4: Systematic Rebalancing

The process of systematically rebalancing a diversified portfolio annually can add 30 basis points of value each year, compared with a naïve strategy of rebalancing once every three years.

Once the asset allocation policy is established and the allocation's underlying vehicles and managers are chosen, the next source of the advisor's value contribution is systematic rebalancing. This is the next step in the continuum from financial and investment planning through the strategy's implementation and execution.

Systematic Rebalancing

Advisors make a material and quantifiable contribution to a client's results by establishing a protocol for systematic rebalancing of the portfolio. Left to their own devices, investors frequently neglect their asset allocation, and turn their attention to what they perceive to be the more interesting process of monitoring the investment vehicles. Just as the target asset allocation policy is vital to achieving the portfolio's overall investment objective, periodic rebalancing is essential to maintaining its efficacy. Two key benefits arise from a carefully constructed, systematic rebalancing policy:

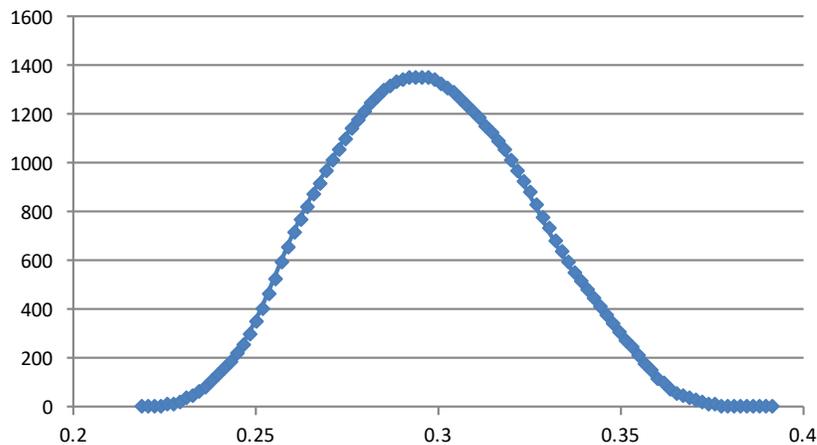
- **Greater Risk Control**—Rebalancing preserves the benefits of diversification by mitigating unintended over- or underexposure to asset classes. Reallocating from more to less volatile ones reduces overall portfolio volatility. It also systematically removes the emotion from the decision.
- **Rebalancing “Alpha”**—Systematic rebalancing also can enhance returns. Rebalancing takes advantage of the cyclicity of performance trends across asset classes. Is there an optimal frequency for rebalancing? Research from Envestnet | PMC's Quantitative Research Group (QRG) indicates that annual rebalancing generates higher returns than doing so either more or less frequently. These results are consistent with much academic research that shows price momentum lasts for about 12 months.¹³ More frequent rebalancing can cut off positive performance trends; doing it less often risks momentum reversion and lower returns in the top-performing asset classes.

¹³See, e.g., Narasimhan Jegadeesh and Sheridan Titman (1993), “Returns to Buying Winners and Selling Losers: Implications for Stock Market Efficiency,” *The Journal and Finance*, v.48(1).

Determining a Rebalancing Strategy

To compute the value added through systematic rebalancing, we compare an uninformed investor's naïve strategy of infrequent rebalancing with one that rebalances often enough to capture the benefits of risk control and asset class momentum. Our portfolio strategy in each case is the same one used to determine the asset allocation alpha in Source 2 (Asset Class Selection and Allocation). Recall that this strategy uses a 58%/42% (see Table 2) equity/fixed income split, and includes various combinations of diversification, both within the domestic equity asset class and across nine diversifying asset classes. We derive the systematic rebalancing alpha from using the same portfolio composition and evaluating it at different rebalancing frequencies.

Figure 2: Distribution of Systematic Rebalancing Alphas (December 1996 - August 2018).



Source: Envestnet | PMC

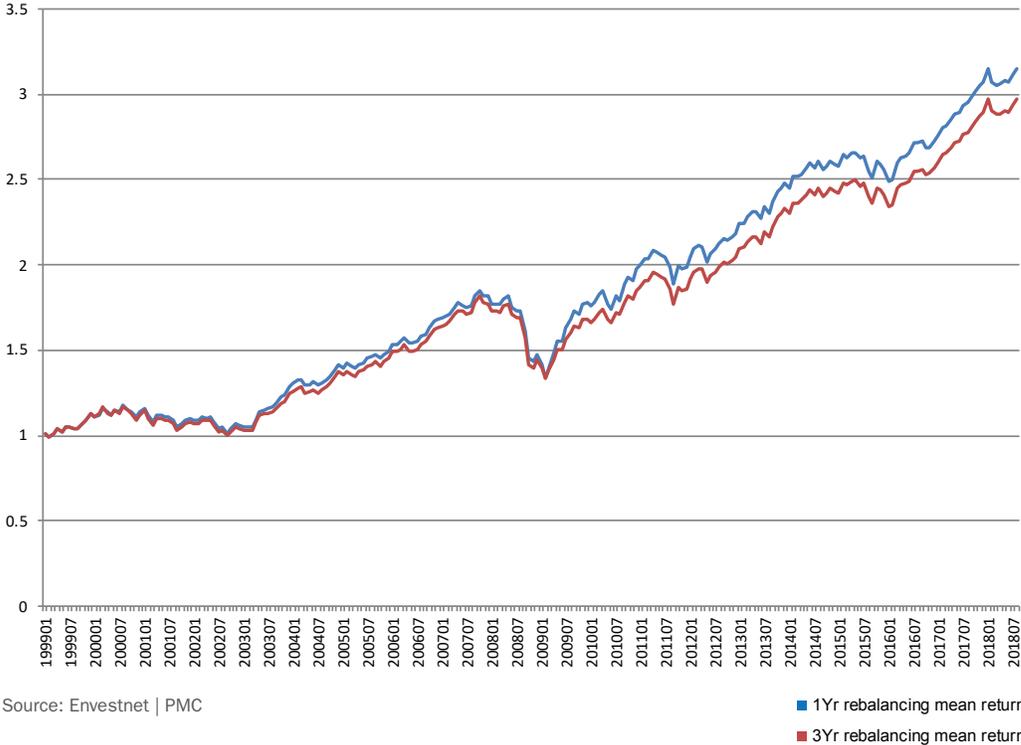
To determine the naïve rebalancing strategy, we assume that individual investors, who lack professional advice, will rebalance less often than is optimal. We use a three-year rebalancing frequency for these purposes, to acknowledge at least some attention being paid to the need for rebalancing.

We calculate our systematic rebalancing alpha by computing the difference in performance between the set of diversified portfolios rebalanced every three years and the same set of portfolios done so every 12 months. We measure the strategies over an 18-year period, from December 1996 through August 2018, which is the longest period common to all of the benchmarks used to represent the various asset classes, just as we did in the asset allocation alpha computation.

Capital Sigma: The Advisor Advantage

The annually rebalanced set of diversified portfolio alphas relative to the naïve strategy of three-year rebalancing remains stable across the 1,664 diversified portfolios and through time (see Figures 2 and 3). The proportion of negative alpha diversified portfolios is equal to zero: In all cases, systematic rebalancing contributed positive performance. The minimum and maximum alphas are 24 and 36 basis points per year, respectively, and the mean and median alphas each are 30 basis points per year.

Figure 3: The cumulative returns of diversified portfolios rebalanced at annual and three-year frequencies.



Source 5: Tax Management

Managing an all-equity portfolio for tax optimization can add approximately 100 basis points of annual value when compared with an investment strategy that is not actively tax managed.

Although it is difficult to disagree with the sentiment that “...in this world nothing can be said to be certain, except death and taxes,” expressed by Benjamin Franklin back in 1789, too often the implications stemming from this statement are ignored in the world of investing. Investment professionals and their clients focus on their portfolios’ pre-tax performance, and frequently ignore the almost certain likelihood that after-tax performance may differ substantially. In this section we focus on the potential after-tax benefits that can be achieved by an informed tax management approach to an all-equity stock portfolio.

Main Principles of Tax Optimization

The source of tax alpha is straightforward: deferring payment of capital gains taxes. A simple example of this is a buy-and-hold investment portfolio, in which no capital gains are realized throughout the investment horizon. In essence, the buy-and-hold strategy amounts to an interest-free loan from the IRS, when compared with a strategy in which all capital gains are realized periodically. The size of that loan equals the deferred capital gains taxes for that period (for example, one year). Although capital gains taxes eventually must be paid when the portfolio is liquidated, postponing payment lets the portfolio earn additional returns that otherwise would be foregone had they been paid immediately.

A buy-and-hold strategy is an excellent passive tax management strategy, because it realizes zero capital gains during any investment period prior to liquidation. But other methods have the potential to generate even more tax savings. For example, an active tax management strategy that realizes negative capital gains—or “tax-loss harvesting”—also can be used. If the performance of this strategy equals that of the passive index (more on this later), then realized capital losses can offset capital gains realized elsewhere in a client’s portfolio. Although this strategy is not a cash inflow into the portfolio, it effectively reduces cash outflow equal to the capital gains tax that would have been paid to the IRS had those capital gains been realized.

Note that the “tax-loss harvesting” strategy only defers the capital gains taxes—it does not avoid them. Realizing capital losses through active tax management usually results in a lower tax basis for the stocks in the portfolio, and a lower basis generally implies higher capital gains taxes once stocks are liquidated. Deferring taxes makes more dollars available in the portfolio to earn a return.

Tracking Portfolio Construction and Tax Optimization

Suppose that our pre-tax investment strategy requires a tracking portfolio. A tracking portfolio can be warranted for various reasons: individual customization to allow an individual investor to include or exclude certain securities (e.g., socially responsible or faith-based investing purposes); holdings restrictions in a separately-managed account, etc. In these scenarios, the tracking portfolio requires periodic portfolio rebalancing so that the distance between it and the underlying benchmark (known as tracking error) does not exceed a pre-determined level. Both the tracking error and the rebalancing frequency usually are dictated by the performance requirements of the tracking portfolio. Under most circumstances over time, each must be on par with the benchmark.

Because a tracking portfolio must be rebalanced periodically to satisfy its constraints (unlike a buy-and-hold strategy), there is ample opportunity to optimize taxes. The tracking portfolio has dual goals: tracking the benchmark and optimizing taxes. Over time, the tax-optimized tracking portfolio will realize negative capital gains, thereby generating positive tax alpha compared with the buy-and-hold benchmark. However, we also can measure the performance of the

tax-optimized tracking portfolio against one that has the worst performance in optimizing taxes. Although maximizing the tax burden requires skill, it illustrates the degree of negative tax alpha achieved by a carelessly constructed tracking portfolio.

Thus, we can define two types of tax optimization alpha. “External tax alpha” is the difference between the performance of the tax-optimized tracking portfolio and a buy-and-hold benchmark (which realizes zero capital gains and therefore has no tax alpha). “Internal tax alpha” is the difference between a buy-and-hold benchmark and a tracking portfolio that has the worst tax efficiency. The sum of “external tax alpha” and “internal tax alpha” equals the maximum tax benefit derived from a tax-optimized tracking portfolio.

Numerical Results

To quantify the “external tax alpha” and the “internal tax alpha,” we conducted the following numerical experiment. We built a tracking portfolio for the Russell 1000 Index from January 1995 through August of 2018, using daily closing price and weight information on each stock in the index throughout this period. We used the first 36 months of data to estimate the four-factor model, so the portfolio start date is December 31, 1997. We limited our tracking portfolio to 100 stocks, and its annualized tracking error (with respect to the four-factor model) was no more than 150 basis points. We assumed the tracking portfolio was rebalanced at the end of each month. To simplify the tax optimization objective, we further assumed that all realized capital gains were taxed as long-term, as allowing for short-term capital gains would only increase the tax alpha. We also assumed a 20% long-term capital gains rate, which applies to the highest income tax bracket— an appropriate assumption, given the universe of our clients.

The average “external tax alpha” from January 1995 through August of 2018 was about 60 basis points per year and the average “internal tax alpha” was approximately 40 basis points annually.

Note that over the life cycle of a particular portfolio, the marginal contribution of alpha generated from tax management will decline due to two factors:¹⁴ first, the generally rising nature of equity markets, and second, the decrease of the cost basis of stocks in the tax-optimized portfolio. In the early life of a portfolio, the cost basis of individual tax lots is relatively close to the prevailing market levels. Thus, as prices fall below their original cost basis, they present opportunities for tax-loss harvesting. However, once the market begins to trend higher, and the most readily available “tax-loss harvesting” opportunities are realized, prices begin to exceed their original cost basis, and present even fewer loss harvesting opportunities.

Market conditions also affect the level of tax alpha. If a portfolio is funded, and its cost basis is established at the onset of a steady rise in stock prices, it is more difficult to generate tax alpha than can be captured under more volatile market conditions.

In the current environment, advisors are facing mounting fee pressure. The five components of advisor-created value can help advisors demonstrate their worth to clients and articulate what clients can expect for the fees they pay.

¹⁴Other researchers also demonstrate that tax alpha is highest in the early years of a portfolio's life-cycle. For example, see Stein, David M. and Premkumar Narasimhan. “Of Passive and Active Equity Portfolios in the Presence of Taxes.” *Journal of Wealth Management* 2, no. 2 (1999): 55-63.



Index Performance is presented for illustrative purposes only and does not represent the performance of any specific investment product or portfolio. An investment cannot be made directly into an index.

The Russell 1000 Index measures the performance of the largest 1000 US companies in the Russell 3000 Index representing approximately 92% of the investable US equity market.

The Russell 3000 Index measures the performance of the largest 3000 US companies representing approximately 98% of the investable US equity market.

The Barclays US Aggregate Bond Index is a market capitalization-weighted index of investment-grade, fixed-rate debt issues, including government, corporate, asset-backed, and mortgage-backed securities, with maturities of at least one year.

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