



Outcome-Oriented Alternative Investments

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“Outcome-orientation” is an important maxim in today’s investment management community. This maxim signifies that financial assets ought to be managed in such a way as to generate outcomes desired by investors. On the surface, it seems to merely emphasize the quintessential mission of the investment management business. In reality, it also underscores an important shift from a strategic asset allocation-oriented approach to more flexible and diverse investment approaches tailored to meet investors’ needs. Many types of alternative investments are inherently outcome-oriented. In this paper, we will discuss different types of outcomes that investors can pursue through an array of alternative strategies. We will also address a set of risk management considerations that can improve the probability of attaining one’s desired investment outcome.

Characteristics of Outcome-Oriented Investments

Some financial services organizations, including investment managers, use the expression “outcome-oriented investments” as a convenient marketing tool to re-classify existing funds and investment strategies. Add a word or two to traditional classification schemes such as “income” or “growth” and one seems to have created a fresh investment platform which purportedly addresses the needs of today’s discerning investors. As a matter of fact, for many large organizations with a number of legacy products, this may be a rational and self-justifying course of action.

In order to improve the probability of attaining the desired outcome, however, each outcome needs to be defined more precisely than is done in the currently accepted practices in the industry. The shape of a return distribution suitable to each outcome may deviate from a normal or other elliptical distribution, and investors’ unique needs can materialize in the values of skewness

and kurtosis. In addition, the timing of cash flow matters to investors depending on the desired outcome. Although the multifariousness of addressing the third and fourth moments of distribution, along with the time series property of cash flow, may render it difficult to express a desirable distribution in a mathematically tractable form, it is imperative to pay attention to these parameters. It is worth noting that having a non-normal distribution by itself should not pose a problem for investors unless potentially significant losses are implied. In fact, many investors would pursue a strategy with an expected leptokurtic distribution with a reasonable level of a mean return and a very small value of standard deviation around its mean, if such a strategy can be found.

Underpinning the trend toward an outcome-oriented approach and away from the traditional strategic asset allocation (SAA) approach based on a mean-variance optimization, is a growing recognition that a static decision framework based on parameters such as expected return, risk, and correlation will not always lead to satisfactory outcomes. The financial markets are simply too dynamic to be represented in a static framework when investors have specific future cash flow needs to fill within a given time horizon.

With the traditional SAA approach, investors first determine a policy asset mix and then evaluate performance of a particular investment relative to a relevant benchmark for each asset class. Thus, the decisions of investment managers become “relative return oriented.” In addition, in estimating and calculating returns, typically no distinction is made between income gains and capital gains. The distinction can be critical for both institutional and individual investors. Moreover, since the mean-variance optimization by definition relies on the first and second moments of return distribution (mean and variance), the third and fourth moments (skewness and kurtosis) are inevitably disregarded.¹ Nevertheless, the shape of return distribution matters when focusing on a certain outcome in investment decision making, as was mentioned previously.

By contrast, a true outcome-oriented investment should be managed with the objective of improving the probability of meeting future cash flow needs of investors, including capital gains, in accordance with the particular outcome being sought.² To illustrate, certain investors may wish to receive a steady flow of current income without inflation causing an erosion of purchasing power, as well as to realize some growth of principal. On the other hand, other investors may be more focused on controlling overall portfolio volatility to avoid major losses at any point within the relevant investment horizon.

For this reason, outcome-oriented investments need to have the following two characteristics at minimum. First, an outcome-oriented investment should be essentially agnostic of asset classes or investment opportunities.³ In fact, an allocation within each strategy’s investment universe is typically managed dynamically. This means the responsibility for identifying and exploiting sources of returns is left in the hands of an investment manager. This is in contrast to the manager’s investment decisions being constrained by a benchmark as a result of strategic asset allocation decisions.

Second, the risk management skills of an investment manager are an integral part of outcome generation. The investment manager should be able to adjust dynamically to diverse investment opportunities based on known or inherent risk factors within each strategy. Security selection alone cannot deliver investors’ desired outcomes. What is more, attaining an outcome means providing the desired series of future cash flows. Thus, the time series property of investment products cannot be treated as path-independent, as is often presumed in traditional SAA.

The two characteristics just mentioned aptly apply to alternative investments. These investments are by no means relative return products, and an innumerable number of alternative investment managers enjoy a substantial degree of freedom in pursuing sources of returns. In addition, alternative managers are often considered to pursue absolute returns. In their effort to generate returns irrespective of market conditions, these managers frequently deal with more complex risk challenges than managers of traditional investments, to the degree that these investments involve long and short exposures, as well as the use of leverage and derivatives. Thus alternative investments can be viewed as inherently outcome-oriented.

Outcomes for Investors in Alternatives

There are different ways to classify outcomes desired by investors. The frequently claimed outcomes for traditional investments such as stable income and diversified growth tend not to be sufficiently investor-centric. In analyzing what kind of benefits investors in alternatives are seeking and why some investors choose a particular alternative investment over others, the four major categories of outcomes can be identified.

The four categories of outcomes for alternative investments are: (1) inflation protection and real return, (2) volatility and risk management, (3) equity risk diversification and market neutrality, and (4) alpha opportunities from expanded sources of returns.⁴ Each category of outcome has a unique expected value of returns along with a variable degree of return dispersion.⁵ In addition, time series property of each outcome can differ markedly.

It is also crucial to keep in mind that these outcomes are by no means mutually exclusive; by achieving one outcome, another outcome may be simultaneously attained at least in part. For instance, a certain strategy can contribute to reduction in portfolio volatility through its effect on equity risk diversification. Such a strategy, if successful, is likely to generate returns that comfortably exceed inflation rates.

Exhibit 1 (on the following page) lists four archetypal outcomes along with examples of alternative strategies and primary performance metrics corresponding to each outcome. The list of strategies is compiled from various papers published by diverse organizations including a major financial services firm, a pension consultant, an investment management company and a management consultant.⁶ The list is by no means exhaustive as there are myriad other alternative strategies. Some organizations may classify strategies differently from what is shown in the table. Also, many alternative strategies potentially deliver multiple outcomes. In those cases, an attempt has been made in Exhibit 1 to classify each strategy into what seems to be its primary outcome and avoid double listings under another outcome.

Outcomes	Alternative Strategies*	Primary Performance Metrics
Inflation Protection and Real Return	<ul style="list-style-type: none"> • Commodities • Relative Value • Global REITs • Unconstrained Bond 	<ul style="list-style-type: none"> • Correlations to Inflation Measures • Interest Rate Sensitivity
Volatility and Risk Management	<ul style="list-style-type: none"> • Global Macro • Managed Futures • Fund of Hedge Funds (FoHFs) • Multi-strategy Alternatives • Risk Parity 	<ul style="list-style-type: none"> • Degree of Volatility Control
Equity Risk Diversification and Market Neutrality	<ul style="list-style-type: none"> • Equity Market Neutral • Equity Long/Short • Event-driven • Risk Premia 	<ul style="list-style-type: none"> • Equity Beta and Alpha
Alpha Opportunities from Expanded Sources of Return	<ul style="list-style-type: none"> • Private Equity • Private Direct Real Estate • Early Stage Ventures • Distressed Lending • Direct Lending • Timberland, Water 	<ul style="list-style-type: none"> • Alpha

Exhibit 1: Investment Outcomes and Examples of Alternative Strategies

[Note] *Most of these alternative strategies are listed in the following: Morgan Stanley Wealth Management “An Outcomes-Oriented Approach to Alternatives,” February 2014; Callan Institute, “New Generation of Multi-Asset Class Strategies,” January 2018; Prudential Investments, “Evaluation of Outcome-Oriented Strategies,” 2016; and McKinsey & Co., “The Asset Management Industry: Outcomes are the New Alpha,” October 2012.

Let us examine Exhibit 1’s outcome more closely. First, the outcome of inflation protection and real returns relates to the investor goal of capital preservation and income generation.⁷ For instance, “commodities” are real assets that can retain value under inflation and work as a hedge against unexpected inflation. In fact, price changes in some commodities directly affect the prices of food, beverages and transportation, items that constitute a component of inflation measures. Real estate investments with high liquidity such as “REITs” can also function as a means of capital preservation and potential enhancement of returns while generating current income. The “unconstrained bond” strategy can generate income comparable to the broad investment grade market, and can perform better in a rising rate environment.⁸ In addition, some “relative value” strategies are considered yield alternatives and may include energy infrastructure or real estate in generating returns.⁹ The primary performance metrics are correlations to inflation measures and interest rate sensitivity. Some strategies such as REITs and unconstrained bonds will at times far-outperform inflation measures.

Second, managing volatilities and other risks is an important task for any investment manager, and is crucial in seeking capital appreciation. In fact, except for operating straight index funds, generating returns is not possible without some form of active risk management. Excess returns in the form of allocation alphas often come from volatility management and many alternative strategies include volatility management in their investment processes. “Risk parity” and “volatility targeting” are prime examples. “Fund of hedge funds” and “multi-strategy alternatives” benefit from diversification and are also typically designed to control overall portfolio volatility. However, strategies included in the outcome of volatility and risk management do not necessarily seek to minimize volatility or target a certain level of volatility. In fact, some directional strategies such as “global macro” and “managed futures” are often intended to generate returns under the conditions of heightened market volatility, potentially countering an adverse impact on returns of other investments. The primary performance metric for this outcome should be the degree of volatility control for a particular strategy or an entire portfolio.

Third, it is well-known that traditional investments have a high level of equity risk even within a typical asset class diversification.¹⁰ When an inclusion of alternative investments is considered, the principal role of those alternative investments is often to further diversify an existing traditional portfolio. Therefore, it makes sense for investors to seek outcomes to neutralize extreme market movements, underpinning the need for the outcome of equity risk diversification and market neutrality. For this purpose, an uncorrelated or low beta strategy such as “equity market neutral” and “equity long/short” makes sense. In addition, “event driven” strategies such as merger arbitrage tend to have a payoff pattern similar to a dynamically managed short position on the stock market.¹¹ These strategies bring diversification effects on equity risk. Moreover, the “risk premia” strategy combines risk factors that are uncorrelated to each other and to equity market risk. The strategy is ideally suited to seek performance in a market neutral fashion. For many strategies belonging to this outcome, it is only natural to use equity beta as the primary performance metric. For truly market neutral strategies, however, alphas beyond risk free rate or another hurdle rate are an appropriate performance metric.

Fourth, there are a variety of private capital investments that attempt to exploit alpha opportunities from expanded sources of returns. Beyond harvesting true alphas due to the selection capabilities of an investment manager, private capital strategies typically contain illiquidity risk and its attendant risk premium. Extracting illiquidity premia requires time and skill, as well as the active involvement of an investment manager. These investment opportunities include “private equity,” private credit (“distressed lending” and “direct lending”), “direct real estate” and “early stage ventures.” The shape of a return distribution is likely to be unique because of the illiquid nature of these investments. For instance, it is known that senior debt strategy, a major type of direct lending, tends to have a negatively skewed distribution with a few larger than expected gains.¹² In addition, some natural resources such as “timberland” and “water” also belong to this category of investment, though they may fulfill the outcome of inflation protection as well. For the strategies supporting this outcome, alpha over a certain hurdle rate is the relevant performance metric when investment managers are involved.

Strategy and Manager Selection

While Exhibit 1 points out which type of alternative investment products one may wish to explore in order to seek a particular investment outcome, examining a specific manager or fund’s risk-return characteristics is essential in bringing success. For outcome-oriented investments, as the expression indicates, what matters ultimately is the end outcome delivered through a risk-driven investment process, i.e., how well cash flow needs can be fulfilled. In this section, how a suitable selection of an alternative strategy or a combination of strategies can contribute to raising the probability of receiving desired cash flows will be discussed.

Being unconstrained by a relative performance benchmark, many alternative strategies have the freedom of dynamically pursuing long and short investment opportunities while often using derivatives for return enhancement. Due to significant differences in manager skills, this tends to result in wide performance differences among investment products in the same category of alternative strategies. A study shows, for instance, that the

difference in performance of the top decile return and the bottom decile return among global macro funds for the period 2000 through 2013 was 17.1% per year. Among real estate funds, the same measure was 13.8%.¹³ Thus, manager skills are critical in attaining an intended investment outcome.

Given the available investment opportunity set, it may make sense to invest in multiple funds in the same category of strategies instead of attempting to fill each type of strategy with a pre-determined number of funds. For instance, when combined with an existing portfolio, one may find multiple managers with excellent skills to deliver the outcome of equity risk diversification in the event driven strategy, but only marginally satisfactory managers in the equity long/short strategy. In those cases, adding an equity long/short fund will not contribute to realizing the outcome. Moreover, a manager with the right set of investment skills to complement a particular portfolio may not be the right match for another investor’s portfolio even if the desired outcome is the same, as each portfolio’s expected return distribution and future cash flow pattern vary.

It is often the case that an alternative investment is not treated as a complement to a portfolio consisting of traditional securities. Instead, a majority of assets may be allocated to a variety of alternative investments. The endowment style of investment embodies such an investment philosophy. Exhibit 2 compares the cumulative performance over the 20 year period ending in 2017 between the Yale endowment and the S&P 500 with dividends.

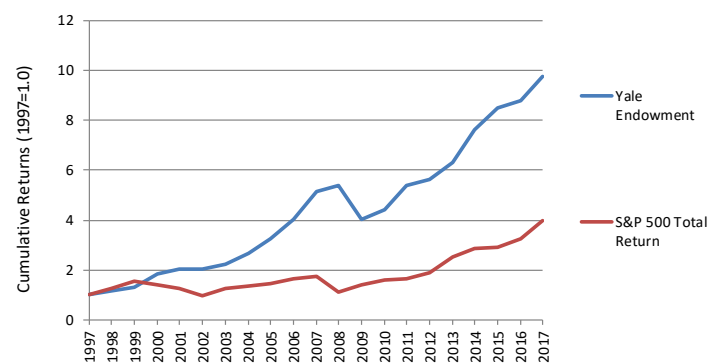


Exhibit 2: Cumulative Returns in the Past 20 Years: Yale vs. S&P 500

Source: Yale Investments Office, “Endowment Report,” various years.

While the S&P 500 has quadrupled in value (including dividends) since the end of 1997 to 2017, the Yale Endowment grew tenfold over the same period of time.¹⁴ In other words the cumulative return of the Yale endowment was 579% greater than the cumulative return of the S&P 500 over the same period. The endowment has certainly generated an extremely impressive investment result.

The Yale Endowment’s allocation as of June 2017 is shown in Exhibit 3. At that point in time, over three-quarters of the endowment’s assets are dedicated to alternative investments. Combined with the outsized returns shown in Exhibit 2, this provides e prima facie evidence that alternatives can outperform traditional investments alone. In addition, it is noteworthy that 50% of Yale’s endowment assets (private equity, natural resources, real estate, and venture capital) were of an illiquid nature. As a long-term investor, the endowment can take advantage of the

Allocation	
Alternative Investments:	75.10%
Absolute Return (Event-driven and Value-driven)	25.10%
Private Equity (Leveraged Buyout)	14.20%
Natural Resources	7.80%
Real Estate	10.90%
Venture Capital	17.10%
Traditional Investments:	23.70%
Domestic Equity	3.90%
Fixed Income	4.60%
Foreign Equity	15.20%
Cash	1.20%

Exhibit 3: The Yale Endowment's Allocation as of June 2017

Source: Yale Investments Office, "Endowment Report," 2017.

risk premia harvested through illiquid investments. Skillfully combining alternative investments can result in an extraordinary result.

It is also noteworthy that the Yale Endowment's alternative allocation included strategies classified as inflation protection and real return (e.g., "commodities" such as oil and gas), equity risk diversification and market neutrality (e.g., "event driven") and alpha opportunities from expanded sources of returns (e.g., "leveraged buyout," "real estate," "venture capital," and "timberland"). With such a phenomenal performance, the endowment seems to have attained three different outcomes simultaneously. The endowment also accomplished this success while contributing substantially to Yale University's operating budget each year.

Outcome-Oriented Risk Management for Investors

As described at the outset, an emphasis on risk management is a key component of successful outcome oriented investments. Alternative strategies have highly divergent risk characteristics, and understanding and managing risks of a particular alternative product or of the entire portfolio which includes alternatives is a critical component of attaining desired outcomes. Unlike the traditional strategic asset allocation (SAA) approach, investing in alternatives can address skewness and kurtosis of a return distribution, as well as the time series property of cash flow. From an investor's perspective, there are at least five ways to pursue risk management to generate a better outcome during the process of selecting and monitoring investment products. In the paragraphs below, these five ways will be discussed.

First, one method of selecting and monitoring investment products is through portfolio replication. Replicating a certain hedge fund performance to a reasonable degree can be surprisingly easy. Replication allows an insight into what type of exposure is taken by an investment manager. If a reasonably

good approximation can be attained with the use of indices and/or liquid financial instruments, one can budget his/her risk accordingly. Performance information of alternative products is usually disclosed with some delays. With a replicating portfolio, one can observe its proxy indices on a real time basis. This can be an extremely powerful tool in risk budgeting and monitoring of investments.

Second, another risk management method, which may or may not involve replication, is identifying and potentially implementing hedges. If the future shape of distribution for a particular strategy can be reasonably estimated based on repeatable historical performance or through replication, one may be able to devise an effective hedging strategy for unwanted risks. In addition, many alternative strategies have a non-linear payoff distribution, which poses a challenge to risk management. A decomposition of non-linear distribution often allows mitigation of at least a part of investment risks. Moreover, one can also focus on the downside aspect of a strategy by using analytical concepts such as the Extreme Value Theory (EVT), if a left tail distribution of the strategy poses serious concerns. This is especially important when dependency of risk factors among different strategies is expected to manifest at a time of market challenges.

Third, rather than focusing on risk return characteristics of an individual strategy, an investor may wish to examine the marginal impact of adding an alternative strategy to an existing portfolio. Depending on the co-variance structure a particular strategy has with a given portfolio, its effect on the entire portfolio may be suitable to reaching the desired outcome. Suppose that an institutional portfolio appears to be reasonably diversified in terms of exposure to various types of risks. Upon conducting a rigorous stress test, however, the portfolio is found to be vulnerable to large movements in currencies. Adding a global macro hedge fund that generates higher than average returns at the times of extreme currency moves can be highly accretive in terms of creating a probability distribution for the entire portfolio that matches the desired outcomes. Viewed individually, however, the global macro fund may have a comparatively low Sharpe ratio given its level of volatility.

Fourth, some investors pursue alternative investments largely independently from traditional asset classes. In the case of the Yale Endowment described in the previous section, while the entire allocation is carefully constructed, alternative investments dominate its allocation and clearly have contributed to long-term out-performance over US equity.¹⁵ Various alternative strategies can be combined to improve the chances of attaining outcomes such as the ones in Exhibit 1. In most cases, one is likely to combine multiple strategies listed for the same outcome. However, under some circumstances, it may make sense to combine a strategy belonging to another outcome. In the end, the capability of a specific investment product to generate a desired outcome, either standalone or in combination with other products or an existing portfolio is what matters.

Finally, it is also critical to examine the time-series property of an investment opportunity, to the degree that an outcome-oriented investment addresses the future cash flow needs of an investor. For instance, the return distribution for the outcome of inflation protection and real return may embody a serial correlation if a periodic and fixed amount of cash flow is expected. Depending

on the sources of the stable cash flow, the investment opportunity can be equivalent to writing out-of-the-money (OTM) put options.¹⁶ It is well-known that occasional but substantial losses often accompany such a strategy after a long succession of positive returns. The presence of serial correlations will also affect the shape of return distribution including skewness and kurtosis. Risk management for investors in alternatives should address all of these statistical properties. Applying varied means of risk management to deliver successful outcomes is what distinguishes investment in alternatives from implementation of the traditional SAA.

Conclusion

The maxim “outcome-orientation” has an implication well beyond its apparent investor-centricity as to how professional investment management should be pursued. It signals a major shift from the traditional strategic asset allocation approach to the asset class agnostic and risk-driven approach. Alternatives are naturally suited to outcome-oriented investments. Such investments should be measured with proper performance metrics.

By analyzing the reasons that investors seek alternatives, four types of outcomes from engaging in alternative investments can be identified. They are: (1) inflation protection and real return, (2) volatility and risk management, (3) equity risk diversification and market neutrality, and (4) alpha opportunities from expanded sources of returns. Various alternative strategies are classified into a relevant type of outcome. Performance metrics that suit each objective should be utilized.

Each outcome is expected to have a unique return distribution in terms of its mean (or its median), its standard deviation, its skewness, and its kurtosis. Each outcome also has different cash flow expectations. There are alternative products that contribute to delivering each outcome, or a combination thereof. While investors cannot directly engage in risk management of these investment products, there are a set of activities in which investors can engage. With the right selection of alternative products and a judicious engagement of risk management, an investor can pursue the outcomes that raise the probability of meeting his/her needs for future cash flow, including capital gains.

Endnotes

1. In other words, a return distribution is assumed to be Gaussian, which can be described by only a mean and a standard deviation.
2. CaseyQuirk (2013), page 3.
3. See Callan Institute, (2018). While most outcome-oriented investments are asset class agnostic, certain alternative strategies are pursued with a narrow group of investment opportunities. These strategies, however, still maintain flexibility in pursuing specific investment opportunities.
4. Some of these outcomes are similar to the ones described in Morgan Stanley Wealth Management (2014).

5. This also means that a return distribution may deviate away from Gaussian, and has the values of skewness and kurtosis that differs from those of normal distribution.
6. The organizations are Morgan Stanley Wealth Management, Callan Institutes, Prudential Investments, and McKinsey & Co. Some of these organizations’ studies also discuss traditional investment products such as target date funds. Such traditional investment products are not included in the table.
7. Morgan Stanley makes a distinction between capital preservation and income. It also lists “balanced growth,” “market neutral,” and “opportunistic growth” as other categories of investment outcomes. See Morgan Stanley Wealth Management (2014).
8. Prudential Investors (2016). The unconstrained bond strategy also clearly has an element of another outcome: volatility and risk management.
9. See Hedge Fund Research, <https://www.hedgefundresearch.com/hfr-hedge-fund-strategy-classification-system>.
10. For instance, a study shows that a portfolio consisting of 36% US equity, 24% non-US global equity, and 40% US fixed income (in other words, a conventional 60-40 portfolio) has an over 90% concentration of equity risk. This example shows that a fixed income allocation in reality does not function as a diversifier to an equity allocation. See Callan Institute (2018).
11. Fung and Hsieh (2013).
12. See Cambridge Associates (2017).
13. Morgan Stanley Wealth Management (2014).
14. Note that the growth of assets in Exhibit 2 is based purely on investment returns and does not include “contributions” to the endowment.
15. In the 10 year period leading up to June 2017, foreign equity also contributed substantially given its high level of returns and relatively high allocation.
16. For instance, a study shows that between 1991 and 1997, 6% OTM puts on the S&P 500 index had losses every month. Therefore, writing such put options would have generated profits every month for 8 years consecutively. See Brodie et al. (2009), pages 4493-4529.

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