



LIFE AFTER BETA

RESETTING EXPECTATIONS FOR THE ROLE OF
ALTERNATIVE INVESTMENTS

IN THIS PAPER: Historically, alternative investments have been effective at enhancing traditional portfolios, but headwinds have held them back in recent years. Investors' experiences with alternatives allocations have ranged from satisfying to disappointing. We think it's time to reset expectations—and apply a stronger framework to matching investors' specific needs with the appropriate alternative strategies.

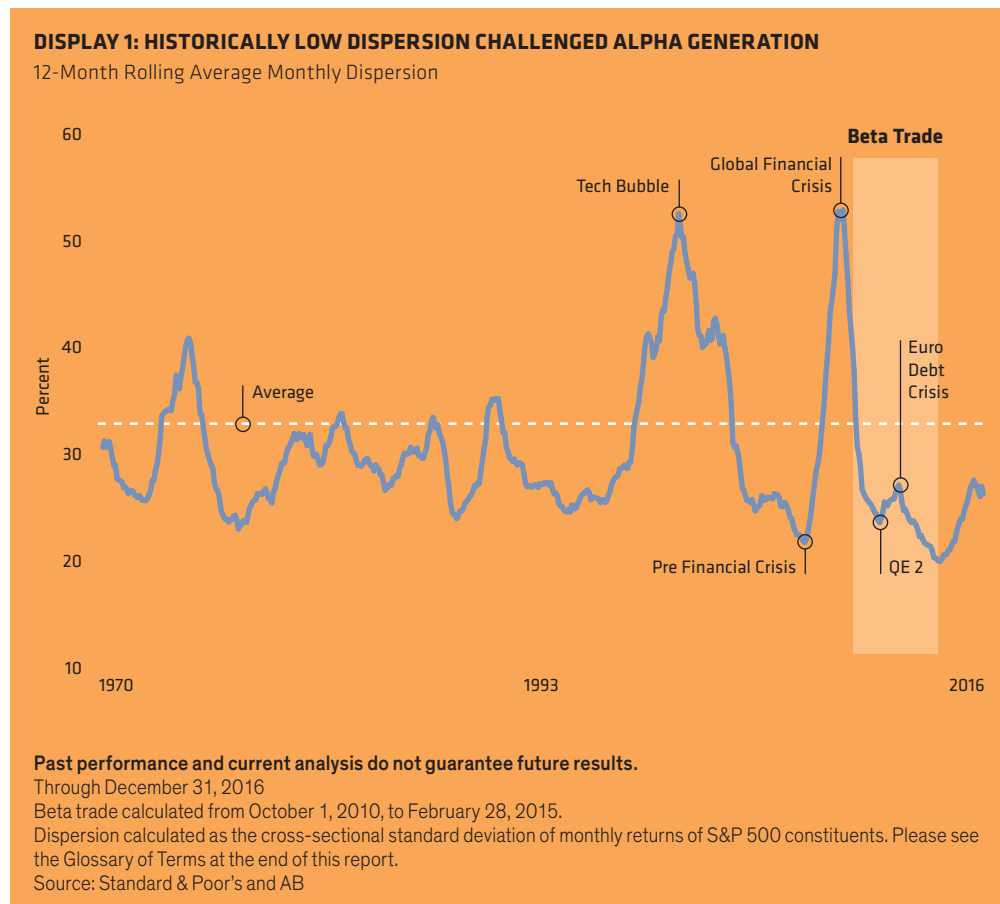
A BETA-DRIVEN MARKET PLACED A SPOTLIGHT ON THE ROLE OF ALTERNATIVES

The multiyear market rally that started after the global financial crisis had a far-reaching impact on investors all over the world.

By mid-2015, the S&P 500 Index was almost 250% above its March 2009 bottom on a total-return basis. For the MSCI World Index (in local-currency terms), the gain was 185%. Global central banks fueled the rally by running unprecedented programs of monetary easing.

In that environment, even passive exposure to stocks and bonds was very effective. Beta—returns from broad market movements—ruled. With few exceptions, anything that diversified portfolios away from, or even reduced, stock or bond exposures cost investors in terms of missed returns.

This environment created headwinds for alternative investments.



Alternative strategies are designed to reduce broad market exposure and lean more heavily on alpha—outperformance using security selection or other means to generate returns. It’s this lower market exposure that offers protection in difficult markets; historically, alternatives have been largely effective in doing this. However, market downturns in the recent past tended to correct quickly, and the stumbling block for alternatives was their lack of upside participation as markets continued to surge forward.

How much was the deck stacked against alternatives? The S&P 500 Index returned more than 32% in 2013; a long/short equity strategy with a beta of 0.5 (half as sensitive as the market) would have returned just 16% from market exposure. That shortfall required alternatives to generate enormous amounts of alpha—year after year—just to narrow the gap.

At a time when alpha potential was very low, closing that gap was a big challenge. In addition to strong market returns, the beta trade featured unusually low dispersion (*Display 1, previous page*)—smaller differences between asset returns. This environment made it hard for alternatives to produce enough alpha to make up the ground lost from lower beta exposure.

MARKET LANDSCAPE IMPROVING FOR ALTERNATIVES

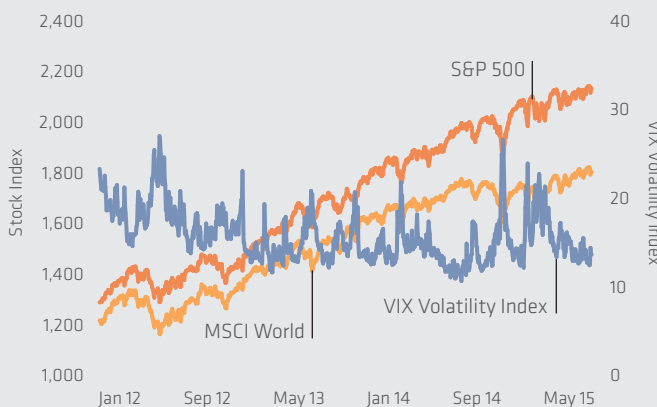
The good news for alternatives is that the strong wave of market returns couldn’t last forever. In fact, it seems to be subsiding. Since June 2015, the S&P 500 has returned just 6.2% and the MSCI World Index 2.3% (in local-currency terms) annualized (*Display 2*), with sell-offs sparked by growth concerns about China, plunging commodity prices and the Brexit shock.

Volatility has been a challenge, too. We’ve seen more volatility spikes in the past two years than in the previous 20 years. During many of these periods, alternatives did what they were supposed to do: provide diversification and downside protection. Downside protection historically has been a key element that defined alternatives’ return path—and has driven their historical success.

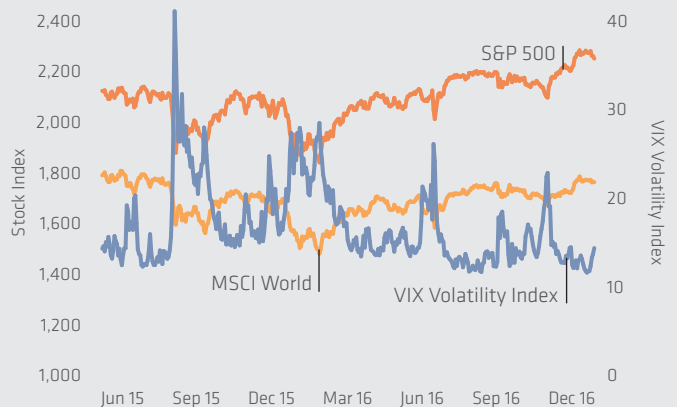
We expect most markets to deliver below-average returns in the years ahead. Volatility is likely to increase—especially as US interest rates continue their upward trajectory. Higher volatility tends to create more dispersion among asset returns, increasing security-selection opportunities to generate alpha.

DISPLAY 2: A TALE OF TWO MARKETS

January 2012 to Mid-2015: Rising Markets and Steady Volatility



Since Mid-2015: Flat Markets and Volatile Volatility



Diversification does not ensure against risk. **Past performance, historical and current analyses, and expectations do not guarantee future results.**

Through December 31, 2016

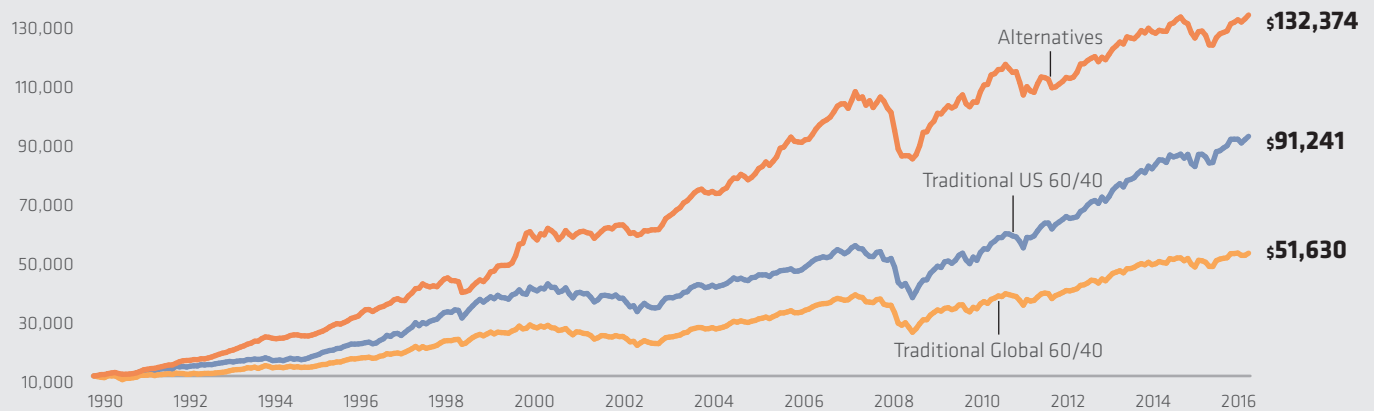
Indices are used for comparison purposes only. An investor generally cannot invest in an index. Please see the Index Definitions and Glossary of Terms at the end of this report.

Source: Bloomberg, Chicago Board Options Exchange, MSCI, S&P and AB

Over the last 25 years, alternatives have been effective enhancers for traditional portfolios.

DISPLAY 3: ALTERNATIVES—ATTRACTIVE RISK/RETURN PROFILE

Growth of US\$10,000 (January 1990–December 2016)



Performance

	Return	Standard Deviation	Sharpe Ratio	Sortino Ratio	Max Drawdown	Up Capture	Down Capture
Alternatives	10.1%	6.7	1.1	1.7	-21.4	84.9%	37.2%
Traditional US 60/40 Portfolio	8.6	8.9	0.6	1.0	-32.5	105.2	85.7
Traditional Global 60/40 Portfolio	6.3	8.9	0.4	0.6	-33.8	100.0	100.0

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Through December 31, 2016

Risk statistics are relative to 60% MSCI World Local/40% Bloomberg Barclays Global Aggregate Bond. Alternatives represented by HFRI Fund Weighted Composite USD. US 60/40 represented by 60% S&P 500/40% Bloomberg Barclays US Aggregate Bond. Portfolio rebalanced monthly. Global 60/40 represented by 60% MSCI World Local/40% Bloomberg Barclays Global Aggregate Bond. Portfolio rebalanced monthly.

Source: Bloomberg Barclays, Morningstar Direct, MSCI and S&P

In other words, we think we're moving into an environment in which alternatives will tend to thrive, and which could reintroduce their benefits to investors. Over the last 25 years, alternatives have produced a strong risk/return profile (*Display 3*) that can make them effective enhancers for traditional portfolios.

Before digging deeper into how to deploy alternatives, it helps to clarify what they are. Alternatives have grown into a diverse universe

that includes asset classes, illiquid investments and a wide range of strategies (*Display 4, page 3*).

Alternative strategies range from event-driven to global macro and long/short equity. Here, we'll focus mainly on long/short strategies, because investors' experiences with them illustrate the recent challenges—and confusion—with alternatives.

DISPLAY 4: ALTERNATIVES—WHAT'S IN A NAME?

ALTERNATIVE ASSET CLASSES

- + Commodities
- + Real Estate
- + Infrastructure
- + Currencies

ALTERNATIVE STRATEGIES

- + Long/Short Equity
- + Event Driven
- + Relative Value/Credit
- + Macro
- + Market Neutral
- + Multi-Strategy
- + Multi-Manager

ILLIQUID INVESTMENTS

- + Private Credit
- + Private Equity
- + Direct Real Estate

Source: AB

DIVERSE EXPERIENCES WITH ALTERNATIVES

As with any investment, investors' experiences with alternatives haven't been uniform. We think it's possible to segment investors' recent alternatives experiences into three categories:

- + **"Alternatives are doing what I need":** These investors have been largely satisfied with how alternatives have performed in their portfolios. In their assessment, alternatives have delivered downside protection and diversification.
- + **"Alternatives haven't been great, but I get it":** These investors recognize that alternatives' performance hasn't been favorable in the past few years. But they also acknowledge that they shifted some of their beta exposure into alternatives in a beta-driven market.
- + **"Alternatives haven't worked":** This group of investors is wondering what happened with their alternative allocation in the beta rally. As they see it, allocating to alternatives robbed performance from their portfolios.

These diverse attitudes were shaped by three factors: the specific point when investors allocated to alternatives, how clearly they set their expectations and how well they evaluated the options to allocate one or more alternative strategies to their portfolios.

THE CHALLENGES OF ALTERNATIVE SELECTION

One challenge in choosing an alternative strategy lies in the way they're categorized.

In the US, Morningstar has worked to provide a framework around alternative strategies, adding categories and a style box. However, strategies with shorter track records aren't included. In Europe, Morningstar has created more defined alternative categories, but no longer provides category rankings.

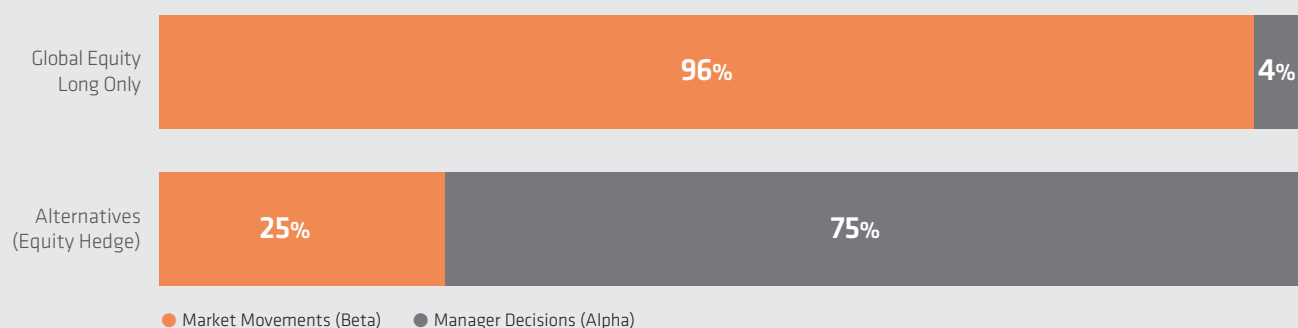
To compound the challenge, managers who run alternative strategies within those categories can use a wide universe of investments, tools and approaches. As a result, selecting an alternative strategy is in many ways more complicated than choosing a stock or bond strategy.

The rapid growth in alternatives has brought more investors face-to-face with this challenge. Many investors are still becoming familiar with the metrics and mind-set needed to choose the right strategies. They've been drawn to the *idea* of alternatives without clearly defining the *behavior* in an alternative that would best complement their portfolio and objectives.

These complications have left many investors convinced that alternatives can't do what they want them to. The case for alternatives allocations hasn't been helped by the long market rally that has turned the typical experience of strong up/down capture—a signature of alternatives' success—on its head.

DISPLAY 5: ALTERNATIVE RETURNS LEAN MORE ON ALPHA

1990–2016



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Through December 31, 2016

Global equity long-only managers represented by the World Stock Morningstar category. Alternatives managers represented by the HFRI Equity Hedge Total Return (USD). Beta is calculated using a linear regression against the market, as represented by MSCI World. Alpha is calculated as return not attributed to beta. Please see the Glossary of Terms at the end of this report.

Source: Hedge Fund Research, Morningstar, MSCI and AB

2010–2015: AN UPSIDE-DOWN WORLD FOR UP/DOWN CAPTURE

Alternatives are largely defined by their up/down capture: what percentage of up markets and what percentage of down markets do they deliver?

From 1990 to 2009, long/short equity strategies delivered more than twice as much up capture (71%) as down capture (26%). But from 2010 to 2016, their up capture was 47% and their down capture was 62%.¹ In other words, the average long/short equity strategy has captured less up market than down market in recent years.

What turned the up/down capture experience upside down for alternatives over the last five years? Stronger market returns meant that alternatives had to produce more alpha to keep pace. And low return dispersion made it harder for security selection to generate that alpha.

So, the beta trade left many investors uninterested in a key attribute of alternatives. Why pay for an efficient combination of returns and downside protection when easy-money policies handed investors high returns, low volatility and effective downside protection for free?

TWO SIDES OF THE PERFORMANCE COIN: BETA AND ALPHA

To fully understand the ups and downs of alternatives, we have to take a deeper look at how specific market patterns influence alternative returns.

Traditional stock and bond strategies (referred to as “long-only” strategies) are heavily influenced by beta—broad market returns. By definition, alternatives are more exposed to alpha, or security-specific returns.

From 1990 through 2016, the average long-only global equity portfolio generated 96% of its return from beta and only 4% from alpha using the MSCI World Index as a reference. By contrast, the typical alternative strategy generated only 25% of its return from beta and 75% from alpha (*Display 5*). Using the S&P 500 Index as a

¹ Up- and down-market capture ratios calculated for the HFRI Equity Hedge Index vs the S&P 500

reference, the typical alternative strategy's return was 37% beta and 63% alpha.

So, the typical alternative had many times the alpha return of active long-only strategies and only a modest amount of their beta return during this period.

This disparity goes a long way toward explaining why alternatives were so challenged in the recent past: strong market returns, low volatility, high correlation and shrinking performance dispersion among securities all came together to shrink alpha opportunities.

In many ways, volatility is the linchpin in these relationships. When volatility is low, broad market returns tend to be high and dispersion is low—the beta trade experience. On the other hand, as volatility rises, returns tend to be lower and dispersion is higher. The second, more favorable, environment for alternatives is the one we expect ahead.

In equities, for example, valuations are at the high end of their range, driven by expanding valuation multiples and margin gains. Going forward, these drivers should take a back seat to sales growth. The impact of sales growth is likely to make performance more variable and create better security-selection opportunities.

ILLIQUID ALTERNATIVES: HOW MUCH AND WHAT TYPES?

Illiquid alternatives are designed to capitalize on the higher compensation offered to investors for taking risk in some investments that can't be bought or sold as readily as others. Illiquidity risk can come from market trends, certain types of investments or even investment vehicles.

Today, liquidity is relatively scarce, so the compensation for taking liquidity risk is higher than normal. Deciding if—and how—to incorporate illiquid alternatives starts with an investor's net worth and qualifications, needs, risk and illiquidity tolerances, and investment horizons.

Assuming that illiquid exposure makes sense for an investor, three steps can help determine the exposures that create the best fit:

1. **Define**—Determine what percentage of an investor's portfolio can be illiquid. Most investors can't be completely illiquid; many want only a modest amount of illiquidity. Some investors may be able to set aside funds for an extended time

to exploit an illiquid opportunity, while others may only be comfortable accessing liquidity cyclically—as with a traditional high-yield fund.

2. **Structure**—Identify appropriate illiquid opportunities. Some of these will need to be accessed through illiquid structures or assets. Others could actually be added to the portfolio's liquid assets to further adjust the levels and mix of alpha and beta. These opportunities might include long/short equities with low or no leverage, event-driven strategies or global macro funds.
3. **Assess**—Once illiquid opportunities have been integrated into the portfolio's structure, step back and evaluate its exposure to liquid alternatives, illiquid alternatives and alternatives overall. Evaluate the impact on the overall portfolio's risk and return profile. Does it deliver the specific upside participation and downside protection the investor wants? Are the opportunities pursued through the appropriate vehicles?

As this happens, the most productive alternative strategies will likely be driven by a mix of selective beta, alpha and downside protection. But investors need help to identify the right strategies, and that means applying better due diligence.

THE ALTERNATIVES “RESET”: MATCHING OBJECTIVES TO STRATEGIES

It’s time to push the “reset” button with alternatives. An improved framework for due diligence can help investors understand exactly what they want from alternative investments and connect those needs to specific alternative strategies.

As we mentioned earlier, many investors have an idea of what they want from alternatives: noncorrelated returns and downside protection. That’s a start, but it’s not specific enough. Short-term bank-secured instruments can deliver those attributes, but their exceptionally low yields don’t provide much help with long-term wealth building.

Many investors who chose alternatives after the global financial crisis identified downside protection as a key need. However, they gave less consideration to the ability to capture upside. As a result, they had protection from a downside that never came—and less upside capture than they thought they’d get in a multiyear rally.

It’s time for investors to get more precise about what they want in alternatives. It helps to start with a simple balancing act: the investor’s needs on one side, and the characteristics of alternatives on the other. The goal is to find the specific balance that works for each investor (*Display 6*).

THE EXPECTATIONS SIDE OF THE EQUATION: CLARIFYING NEEDS

Here’s a good way to start finding that balance: use the list of specific investor needs as a checklist to identify alternative behaviors that define success.

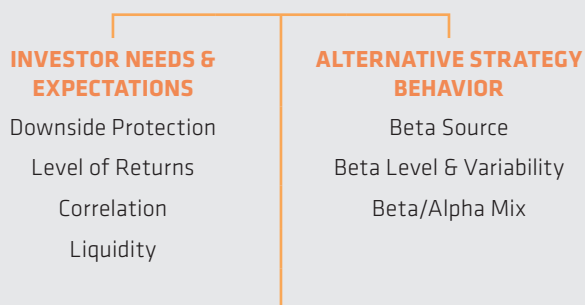
Downside Protection: What level of downside protection makes sense for an investor? For reference, look back to 2008, when the S&P 500 and the MSCI World (in local-currency terms) lost 51% from peak to trough. How much of that loss can an investor tolerate, given the upside he or she is looking for? Would half of that expected loss be OK? What about a 15% loss? Or would a return of zero be acceptable?

Level of Returns: On the other side of the up/down capture coin, what returns would define success? Investors might want a 6% absolute return or want to beat inflation by 2%. Or, they might want 80% of the market’s upside. Again, the key is to be specific.

Together, downside protection and return expectations clarify investors’ needs; they can be a great screening tool for finding a specific alternative strategy with the right blend of the two. Being very explicit about expectations helps avoid the “unicorn dilemma”—an investor who wants the best of everything with no trade-offs.

Correlation: Correlation may be the most interesting lever from a behavioral perspective. Many investors want strategies that don’t act like other assets. This is a challenge for alternatives, because in strong markets, noncorrelation generally means less upside. That return shortfall can make it harder to stay invested in alternatives for the long term. Most investors would be happy if their alternatives were uncorrelated only in a down market!

DISPLAY 6: A NEW FRAMEWORK FOR EVALUATING ALTERNATIVES

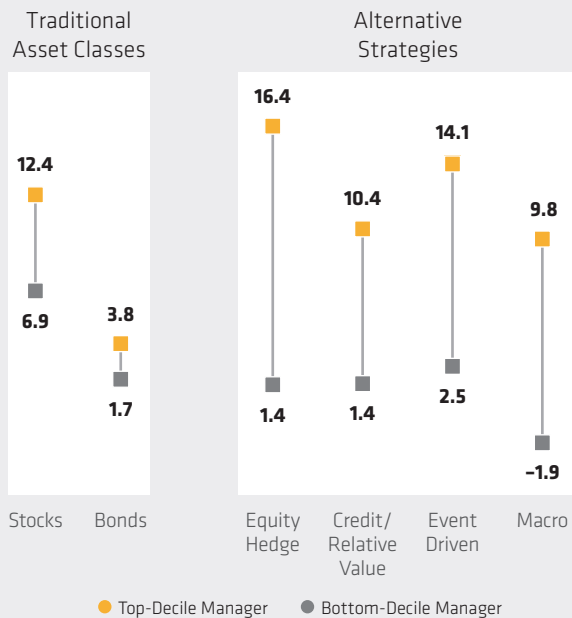


For illustrative purposes only
Source: AB

When working through the downside, upside and correlation checklist, it's important to clarify needs and objectives. What mix will keep investors invested throughout market cycles? It's a critical point for alternatives, because their value becomes clear only after investors experience both up markets and down markets.

DISPLAY 7: THE RANGE OF ALPHA OUTCOMES HAS BEEN ENORMOUS

Range of Manager Returns 2012–2016 (%)



Past performance does not guarantee future results. Indices are used for comparison purposes only. An investor generally cannot invest in an index. Please see the Index Definitions at the end of this report. Through December 31, 2016. Stocks represented by active Morningstar category World Stock constituents; bonds by active Morningstar category Intermediate-Term Bond constituents. Equity hedge represented by HFRI Equity Hedge (Total) constituents; credit/relative value by HFRI Relative Value (Total) constituents; event-driven/special situations by HFRI Event-Driven (Total) constituents; macro by HFRI Macro (Total) constituents. Based on historical data, which may not be indicative of future return and risk characteristics of hedge funds in aggregate. Risk and return of individual hedge funds or a portfolio of hedge funds may differ. Source: Hedge Fund Research, Morningstar and AB

WHAT NET AND GROSS EXPOSURES SAY ABOUT RISK

Net and gross exposures are key metrics in assessing how much risk a long/short alternative strategy is taking.

A strategy's net exposure is defined as the difference between its long and short exposures. Net exposure tends to indicate how much market exposure the manager has. So, a long/short equity manager with 100% in long positions and 50% in short positions has a net equity exposure of 50%. This portfolio would be expected to move about half as much as the equity market.

But there are many long and short combinations that can result in a given net market exposure—and these combinations also define the strategy's risk profile.

Gross exposure can help capture these differences. Gross exposure is defined as the sum of long and short exposures. So, a strategy could be 250% long and 200% short in its security exposures. The strategy's net exposure is 50%, but its gross exposure is 450%. That indicates a lot of security-specific exposure and a much more alpha-driven strategy.

DEMYSTIFYING ALTERNATIVES—WHAT MAKES THEM TICK?

Correlation is a somewhat misunderstood statistic as it relates to alternatives. Let's try to remove some of the mystery.

Most alternatives have some correlation to broad markets, but that correlation varies a lot. Managed futures, global macro and market-neutral strategies tend to be less correlated to stocks and bonds, because they aren't driven by classic market trends. These strategies tend to fare well when volatility rises. Other strategies, such as long/short equity, tend to have a higher correlation to markets, because they have some net market exposure.

For this second—and larger—group of alternatives, correlation isn't the real driver of the downside protection alternatives are known for. The real driver is a lower beta than the market. In other words, alternatives still tend to move in the same direction as the market, but they don't move by as much as the market.

DISPLAY 8: THREE LEVERS THAT DEFINE ALTERNATIVE BEHAVIOR

Long/Short Equity

BETA SOURCE

- + Style
- + Industry
- + Sector

BETA LEVEL & VARIABILITY

- + How Much Beta?
- + How Much Does Beta Change?
- + Beta Hedges

BETA/ALPHA MIX

- + Instruments Used
- + Gross Versus Net Exposure
- + Turnover
- + Concentration

Long/Short Credit

BETA SOURCE

- + Geography
- + Fixed-Income Sector
- + Credit Quality

BETA LEVEL & VARIABILITY

- + How Much Beta?
- + How Much Does Beta Change?
- + Beta Hedges

BETA/ALPHA MIX

- + Instruments Used
- + Process/Team
- + Turnover
- + Concentration

For illustrative purposes only
Source: AB

For example, the correlation of long/short equity strategies to the S&P 500 for the 10 years ended in 2016 was 0.87, which is fairly high. But the beta was only 0.5. For global stocks, the numbers are similar. Long/short strategies had a correlation to the MSCI World of 0.91 and a beta of 0.54.

If alternative managers are good at generating alpha, their strategies will produce an effective mix of beta and alpha. This balance drives up/down capture. However, because alpha isn't anchored to the market like beta is, alpha can be all over the map (*Display 7, page 7*).

THE BEHAVIOR SIDE OF THE BALANCE: THREE LEVERS THAT DRIVE ALTERNATIVES

There's no such thing as a typical alternative. To zero in on the right strategy for an investor, we have to fill in the other side of the equation. That means digging deeper into the mix of categories, strategies and approaches that define how alternatives behave.

It helps to simplify the problem into three levers that work together to drive alternatives: the source of market beta, the level of that beta and how much it varies, and the balance of beta and alpha (*Display 8*).

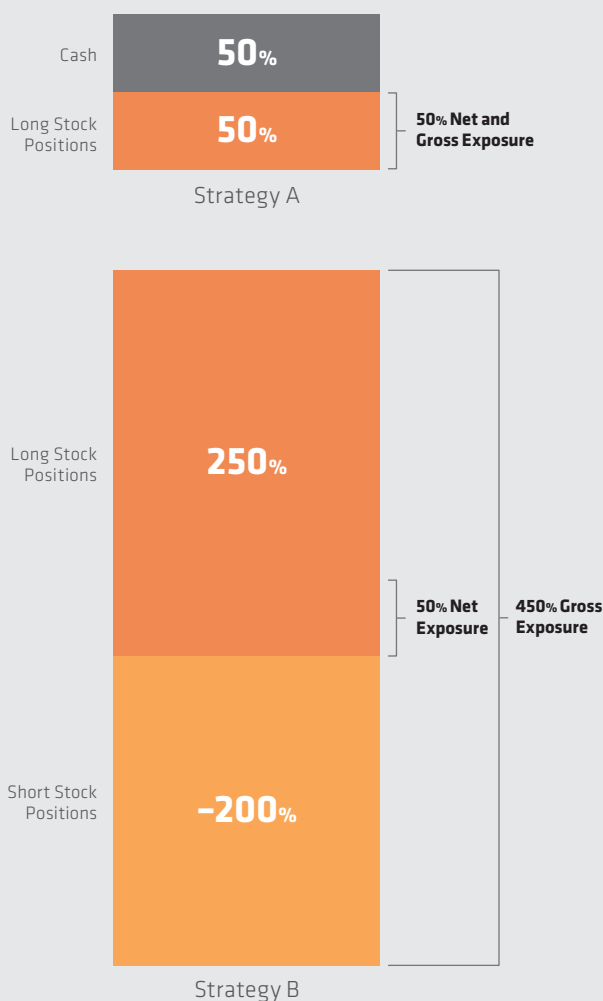
Lever One—Beta Source: The market or segment an alternative strategy operates in defines how market returns influence it. For a strategy like long/short equity, beta can come from any combination of geography, market cap, style...even industry or sector. For a credit long/short strategy, beta can come from geography, a fixed-income sector or credit quality. Some strategies, such as event-driven ones, don't really use the beta lever.

If an alternative taps the MSCI World for opportunities, that strategy will likely decline somewhat if global stocks decline—with the impact defined by the strategy's beta. The goal for investors is to align the alternative's beta source with their portfolios' market exposure.

Lever Two—Beta Level and Variability: How much market risk does a strategy take—and how much does that risk change over time? A typical alternative in the equity-hedge category has a beta of 0.5, but beta for individual strategies can range widely—from below zero to almost 3.0. If two strategies invest in the same market but have different betas, they'll feel very different impacts from the market. Also, some strategies keep their market risk consistent, while others vary it with the environment.

DISPLAY 9: DIFFERENT APPROACHES LEAD TO DIFFERENT BEHAVIORS

Hypothetical Long/Short Equity Comparison



For illustrative purposes only. Data are shown only to illustrate the different approaches to alpha and beta strategies. Data are not based upon an actual portfolio.
Source: AB

Lever Three—Beta/Alpha Mix: Managers can use a variety of investment and risk-hedging strategies. This diversity influences the mix of alpha and beta that drives performance patterns. Even managers whose market risk seems aligned can have very different relative exposures to beta and alpha.

SIMILAR STRATEGIES ON THE SURFACE—BUT VERY DIFFERENT ONES UNDERNEATH

To show how strategies that seem similar can actually be very different, here's a brief example. Two long/short equity strategies own the exact same stocks, and each strategy has a steady beta of 0.5 to the MSCI World.

- + Strategy A achieved its beta by combining 50% long investments in equity securities with 50% cash. This strategy will largely act like the market, because the equities provide market exposure while the cash doesn't. The manager generates some alpha from stock selection.
- + Strategy B has the same 50% net market exposure and beta as Strategy A, but achieved it by combining 250% long equity exposure and 200% short equity exposure. All of Strategy B's short equity positions use individual stocks. This is a very different approach from Strategy A.

These two strategies use the same market and have the same market exposure. In other words, their first two levers are set the same way. But the settings on their third levers are very different. We can see this by comparing the strategies' gross exposures (see "What Net and Gross Exposures Say About Risk," page 7).

Strategy A's gross equity exposure, measured by the combined short and long equity exposures, is 50%—it has 50% long exposure and cash, which isn't long or short. Strategy B's gross exposure, on the other hand, is 450%—nine times as much as A's. The more gross exposure in an alternative strategy, the more alpha drives its returns. The bottom line: for good or bad, A and B both have the same market risk, but A is much more alpha-driven (Display 9).

The very different return profile of Strategy B is a result of different settings for the third lever alone. Imagine the range of return profiles if all three levers were set differently—and, in many cases, altered over time. With all three levers varying independently, there are literally thousands of different approaches to generating combinations of beta and alpha.

In addition to the three levers, other factors help define the differences among alternative strategies. A manager's process and skill in setting the levers and experience in navigating evolving markets can have a big influence, too. The use of leverage can magnify the impact of lever settings a manager chooses.

BUILDING A LONG-TERM ALTERNATIVES ALLOCATION

Investors' specific needs and the three levers of alternative strategies define a stronger framework for conducting due diligence on alternative strategies. Applying the following four-step framework can enhance the process of building an alternatives allocation:

- 1. Define:** What specific objectives do investors have for alternatives? What levels of downside protection, upside participation and correlation do they want? The answers to these questions fill in the "needs" side of the equation discussed in this paper.
- 2. Allocate:** Alternatives allocations can be ready-made—or "bought"—with an experienced hedge-fund manager designing a diversified mix. A second approach is "build your own," with financial advisors designing the mix. The "build your own" approach offers more control over risk and return, but it also puts more responsibility on investors and advisors. Alternatives allocations can include both liquid and illiquid strategies (see "Illiquid Alternatives: How Much and What Types?," page 5).
- 3. Source:** Determine which existing portfolio assets should fund an alternatives allocation: stocks, bonds or both? Often, alternatives are sourced from portfolio allocations with similar risk/return profiles. For example, assets could be shifted from equities into long/short equities or from bonds into market-neutral or nontraditional bond strategies. Diversified alternative allocations could be funded from both stocks and bonds.

- 4. Select:** Which managers should be responsible for running a specific alternative strategy? In this step, whoever is responsible for designing the alternatives mix evaluates the "three levers" part of the balance: beta source, beta level and variability, and the beta/alpha mix. Managers' experience, qualifications, track records and infrastructure are also assessed.

SUMMING IT UP

As years of strong market returns begin to fade, we're likely to see higher volatility and dispersion among asset classes and individual securities. These trends will likely reshape the investing landscape and redefine alternative investing opportunities.

Historically, alternatives have done a very good job of enhancing traditional portfolios, resulting in higher returns and lower risk. But no investment wins all the time, and headwinds have held alternatives back in recent years. Investors' reactions have ranged from satisfaction to disappointment.

We think it's time to reset expectations for the role of alternative investments—and how to choose them. The wide variety in alternatives today makes this a challenge, but we believe that a strong framework can make success and satisfaction more likely.

If this framework is applied consistently and effectively, investors will have a better understanding of why their allocation is designed the way it is—and why it behaves the way it does. This greater transparency will go a long way toward ensuring that alternative investments remain a key long-term component of well-diversified portfolios.

GLOSSARY OF TERMS

Alpha: A measure that helps you understand whether a fund is performing well versus its benchmark given the level of risk the fund is taking. A positive alpha is the extra return awarded to the investor for taking additional risk rather than accepting the benchmark return. Alpha measures more than the difference between the return and the benchmark. It reflects the average of the monthly fund returns, the average of the monthly benchmark returns and the fund's beta.

Beta: A measure of the fund's volatility relative to its benchmark. A fund that has a beta of 1 is as volatile as the market benchmark. Funds with betas higher than 1 are more volatile than the benchmark; funds with betas below 1 are less volatile. A fund with a beta of 1.05 is 5% more volatile than the market.

Downside Capture Ratio: A measure of a fund's overall performance in down markets relative to its benchmark during periods when that benchmark has dropped. Downside capture ratios are calculated by taking the fund's monthly return during the periods of negative benchmark performance and dividing it by the benchmark return. A downside capture ratio of less than 100 has outperformed the index during the down market. For example, a fund with a downside capture ratio of 80 indicates that the fund declined only 80% as much as the benchmark during the period in question.

Investment Grade: Bonds that are rated BBB- or higher by Standard & Poor's.

Linear Regression: Regression is a statistical measure used in finance, investing and other disciplines that attempts to determine the strength of the relationship between one dependent variable (usually denoted by Y) and a series of other changing variables (known as independent variables). Regression helps managers to value assets and understand the relationships between variables, such as commodity prices and the stocks of businesses dealing in those commodities. Linear regression uses one independent variable to explain or predict the outcome of the dependent variable Y, while multiple regression uses two or more independent variables to predict the outcome.

Sharpe Ratio: A measure of how much excess return you are receiving for the extra volatility that you endure for holding a riskier asset. The higher a fund's Sharpe ratio, the better a fund's returns have been relative to the risk it has taken on.

Upside Capture Ratio: A measure of a fund's overall performance in up markets relative to its benchmark. Upside capture ratios for funds are calculated by taking the fund's monthly return during months when the benchmark had a positive return and dividing it by the benchmark return during that same month. An upside capture ratio greater than 100 has outperformed the benchmark during the up market. For example, a fund with an up-market capture ratio of 120 indicates that the fund outperformed the market by 20% during the specified period.

Volatility: A measure of the historical fluctuations in a fund's price or returns. It measures the difference between the fund's returns and the fund's average rate of return over time. A high level of volatility implies a high level of risk. A volatility of less than five is generally considered low. A volatility of greater than 20 is generally considered high.

Yield: The income return earned on an investment. This includes the interest or dividends received from a security and is usually expressed as an annual percentage based on the investment's cost, its current market value or its face value.

INDEX DEFINITIONS

Bloomberg Barclays Global Aggregate Bond Index: A broad-based measure of the global investment-grade fixed-rate debt markets. The Global Aggregate contains three major components: the US Aggregate, the Pan-European Aggregate, and the Asian-Pacific Aggregate. In addition to securities from these three benchmarks (94.9% of the overall Global Aggregate market value), the Global Aggregate includes Global Treasury, Eurodollar, Euro-Yen, Canadian, and Investment-Grade 144A index-eligible securities not already in the three regional aggregate indices.

Bloomberg Barclays US Aggregate Bond Index: A broad-based benchmark that measures the investment-grade, US dollar-denominated, fixed-rate taxable bond market, including US Treasuries, government-related and corporate securities, mortgage-backed securities (MBS [agency fixed-rate and hybrid ARM pass-throughs]), asset-backed securities (ABS) and commercial mortgage-backed securities (CMBS).

HFRI Equity Hedge Index: A performance index that tracks funds that maintain at least 50% redundant exposure to both long and short positions in primarily equity and equity-derivative securities.

HFRI Event-Driven Index: A performance index that tracks funds that maintain positions in companies currently or prospectively involved in corporate transactions of a wide variety, including, but not limited to, mergers, restructurings, financial distress, tender offers, shareholder buybacks, debt exchanges, security issuance and other capital structure adjustments.

HFRI Fund Weighted Composite Index: A global, equal-weighted index of over 2,000 single-manager funds that are reported by the HFR Database. Constituent funds report monthly net-of-all-fees performance in US dollars and have a minimum of \$50 million under management or a 12-month track record of active performance.

HFRI Macro Systematic Diversified Index: A performance index that tracks funds which have investment processes typically as functions of mathematical, algorithmic and technical models, with little or no influence by individuals over the portfolio positioning.

HFRI Relative Value Index: A performance index that tracks funds in which the investment thesis is predicated on the realization of a valuation discrepancy in the relationship between multiple fixed-income instruments.

MSCI World Index: A free float-adjusted, market capitalization-weighted index that is designed to measure global developed-market equity performance.

MSCI World Local Index (free float adjusted, market capitalization weighted): Represents the equity market performance of developed markets, in local-currency terms.

S&P 500 Index: Includes a representative sample of 500 leading companies in leading industries of the US economy.

VIX: VIX is the ticker symbol for the Chicago Board Options Exchange (CBOE) Volatility Index, which shows the market's expectation of 30-day volatility. It is constructed using the implied volatilities of a wide range of S&P 500 Index options. This volatility is meant to be forward looking, is calculated from both calls and puts, and is a widely used measure of market risk, often referred to as the "investor fear gauge."

RISKS TO CONSIDER

Below-Investment-Grade Risk: Investments in fixed-income securities with lower ratings (commonly known as “junk bonds”) tend to have a higher probability that an issuer will default or fail to meet its payment obligations.

Credit Risk: A bond’s credit rating reflects the issuer’s ability to make timely payments of interest or principal—the lower the rating, the higher the risk of default. If the issuer’s financial strength deteriorates, the issuer’s rating may be lowered and the bond’s value may decline.

Currency Risk: If a security’s trading currency weakens versus an investor’s home currency, its value may be negatively affected when translated back into that home-currency terms.

Derivatives Risk: Investing in derivative instruments such as options, futures, forwards or swaps can be riskier than investing in traditional investments, and may be more volatile, especially in a down market.

Diversification Risk: Portfolios that hold a smaller number of securities may be more volatile than more diversified portfolios, since gains or losses from each security will have a greater impact on the portfolio’s overall value.

Foreign Risk: Investing in some global securities may be more volatile because of political, regulatory, market and economic uncertainties associated with such securities. These risks are magnified in securities of emerging or developing markets.

Inflation Risk: Prices for goods and services tend to rise over time, which may erode the purchasing power of investments.

Interest-Rate Risk: Fixed-income securities may lose value if interest rates rise or fall—long-term securities tend to rise and fall more than short-term securities.

Leverage Risk: Trying to enhance investment returns by borrowing money or using other leverage tools may magnify both gains and losses, resulting in greater volatility.

Market Risk: The market values of the portfolio’s holdings rise and fall from day to day, so investments may lose value.

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