

## Spotlight

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### Sabrina Callin and Steve Jones Discuss the Future of Portable Alpha



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For more information, please read "[The Future of Portable Alpha](#)," by Sabrina Callin and Steve Jones, published in the July/August 2009 issue of *Journal of Indexes*.

*The extraordinary challenges of 2008 confirmed that the portable alpha investment application is not as simple in practice as it may sound in theory, with virtually the full spectrum of portable alpha approaches suffering. Despite the recent challenges, we believe the underlying fundamental concepts that support portable alpha as an approach may make a great deal of sense for long-term investors. In the "new normal" financial and economic environment, portable alpha strategies that offer a high degree of liquidity and transparency, modest leverage, prudent alpha-beta combinations and skilled investment and risk management may deliver the right combination for investors. In the following interview, PIMCO's Sabrina Callin and Steve Jones discuss the evolution of portable alpha approaches, the challenges faced in the disruptive environment of 2008 and potential opportunities going forward.*

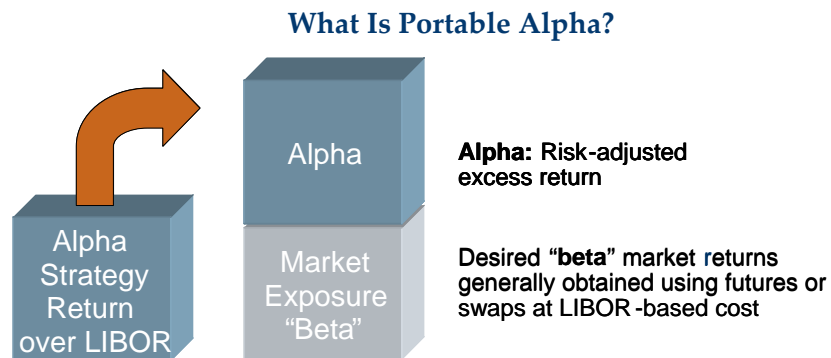
**Q: Could you please begin by giving a quick overview and history of the portable alpha strategy?**

**A:** Portable alpha isn't a new concept; its underlying themes date back to mid-20th-century Modern Portfolio Theory, and the Chicago Mercantile Exchange's introduction of S&P 500 index futures in 1982 really made the strategy possible. Although PIMCO has managed portable alpha products since 1986, interest in the strategy increased significantly following the equity market sell-off in 2000–2002, when investors concerned about meeting high return targets became more open to new approaches that employ the use of derivatives and leverage.

Given the wide variety of approaches within the category broadly termed "portable alpha," it's not surprising that definitions vary somewhat. We define portable alpha as a strategy that replicates market (beta) exposure using derivatives and couples this derivative exposure with a separate and distinct alpha-generating strategy, with the goal of achieving attractive risk-adjusted returns (see Chart 1).

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Source: PIMCO

**Chart 1**

The potentially attractive risk-adjusted excess returns benefit from two potential tailwinds that are unique to portable alpha strategies relative to traditional investment strategies:

1. Potential diversification of beta risk provided by the alpha strategy component
2. Attractive borrowing rates – from the standpoint of long-term investors – available in the liquid derivatives markets

The potential diversification benefit comes from the way an investor’s capital can be invested in alpha-focused assets that are independent from – and in some cases complementary to – the derivatives-based beta exposure. The returns from the two components are additive, while the risk is not entirely additive – as it would be if the two were perfectly correlated. Keep in mind that it can be difficult to predict future correlations: Assets that historically have had little or no correlation during periods of low volatility may turn out to have very high correlation during periods of market stress. Still, as long as the risks in the alpha strategy are transparent and carefully managed, portable alpha investors can potentially capture material benefits from risk diversification.

The borrowing component of portable alpha approaches typically uses index futures or swaps that are designed to provide the total return of the associated market index, less a financing rate, which is consistent with other “buy now, pay later” forms of asset ownership – financing a car or a house, for example. Depending on the availability of cost-effective derivatives to replicate the desired index or beta exposure, the financing cost may be compelling for long-term investors. For example, the financing rate that is typically embedded in 3-month S&P 500 futures contracts is 3-month LIBOR.

**Q: How has the portable alpha strategy evolved over time and through different market environments?**

**A:** The introduction of S&P 500 futures contracts gave investors the opportunity to maintain exposure to the equity market at a short-term money market rate cost. Over the years, growing liquidity for a wide variety of other index futures and the deepening of the over-the-counter total return swap market have resulted in a wide variety of market exposure (beta) options. To achieve higher returns than the reference beta or index, the alpha strategy needs to outpace the cost of financing. In many cases, portable alpha

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strategies may benefit from a “time horizon arbitrage” of sorts. This was the idea when PIMCO launched our StocksPLUS strategy in 1986: Capitalize on long-term equity investor horizons by owning equity futures contracts collateralized by a portfolio of liquid, high-quality, short-term fixed income assets, which bear some additional risk, in order to potentially provide a modestly higher incremental yield and expected return over money market rates.

Over the years, investors have gravitated to portable alpha for multiple reasons:

- Portable alpha can help reconcile investors’ desire for higher return potential while offering many of the same advantages as passive index investing. Some of the common benefits can include modest costs, capacity, and diversification.
- Portable alpha may be particularly attractive in segments of the market where traditional managers have trouble producing consistent excess returns, such as U.S. large cap equity space.
- Portable alpha strategies may offer unique and compelling benefits for investors focused on long-term liability matching.
- The substantial growth in the index derivative markets has also intrigued investors – even compared to five years ago, there are many more futures contracts available across broader and more global markets.

The variety of different approaches to porting alpha and the number of providers ballooned in the past decade in particular, with many of the newer approaches implemented in the low- and declining-volatility environment that ended in 2007. Over the past couple of years, however, we’ve seen that portable alpha – like any investment strategy – is not without potential pitfalls, nor is it immune to the return-hungry, risk-agnostic attitude that permeated some parts of the marketplace. Downside risks to the alpha (as well as the beta) component, together with liquidity requirements, were too easily glossed over, with excessive leverage and poor risk evaluation and measurement ultimately contributing to the devastation of certain types of portable alpha strategies.

### **Q: Risk management is clearly critical to the design and execution of portable alpha strategies – how can investors evaluate and control risk?**

**A:** The primary risks of portable alpha strategies can include (1) the potential for underperformance in the collateral (alpha) portfolio, (2) a spike in the financing costs for futures or swaps, (3) margin calls on the derivatives in a falling market, which force the liquidation of the most liquid (and highest-quality) parts of the portfolio, or (4) operational errors.

Counterparty risk assessment is particularly important in strategies that rely on over-the-counter total return swaps for beta exposure. Swaps introduce legal and contractual complexities if the counterparty becomes unable or unwilling to provide the specified index return. Careful counterparty risk assessment is a resource-intensive effort that entails in-depth research and ongoing monitoring to appropriately assess the health of counterparty firms. Because it is certainly possible for a counterparty to fail, it is critically important to have a number of other firms (with related documentation already in order) that can also provide the same swap exposure at a reasonable cost. A worst-case scenario is the loss of market exposure via a total return swap and inability to quickly replace it with another counterparty. While most swap arrangements involve collateral posting processes that limit potentially unrecoverable losses to small amounts, the

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sudden failure of a swap counterparty may delay or complicate processing of final collateral and swap payments.

Importantly, investors need to evaluate the risk of both the derivatives-based index exposure and the alpha strategy. On the alpha side, portfolio liquidity is a key risk factor. Particularly when the derivatives-based beta exposure is an equity index, the actual and potential volatility and downside risk of the equity market is very relevant when considering the appropriate level of liquidity in the collateral alpha strategy – as many who executed portable alpha strategies during the relatively benign low-volatility and positive equity market period from 2003 to mid-2007 can certainly now attest. Also, to gain insight into the alpha portfolio's expected behavior during periods of market stress, investors should analyze the sources of return and the risk factor exposures that drive those returns. In building the portfolio, investors should consider the likely correlation of those risk factors across different market environments and to what extent the risks are identifiable, measurable and diversifiable.

Portable alpha approaches can have risk and return profiles that differ meaningfully from the benchmark passive market indexes. Successful portable alpha implementation over the long term is contingent on appropriate risk management and measurement – which, in turn, requires an appropriate level of transparency. An understanding of the potentially higher downside risk of such a strategy is important at the individual investment, asset class and overall plan levels.

### **Q: What are some key factors in effectively managing the derivatives-based beta component of a portable alpha strategy?**

**A:** Derivative instruments are the principal building block for portable alpha strategies because they allow investors to finance the desired market exposure at what is typically a short-term money market rate. However, regulatory and operational challenges exist even in very liquid futures and swaps markets, and certainly in more complicated market exposures such as multi-sector fixed income indexes. Establishing and maintaining such exposures may involve significant costs and result in additional tracking error or counterparty risk.

Many of the “behind the scenes” efforts related to derivatives management have been tested in the recent market disruptions. Liquidity shrank due to the severe and sustained market declines. At the same time, counterparty risk evaluation became crucial as Wall Street broker-dealers came under tremendous pressure.

When there have been frequent sharp moves in the net assets of the alpha portfolio, investors have had to more regularly adjust the notional value of derivatives to align the value of the beta overlay with the underlying assets. The high level of volatility underscored the challenges of separately managing the alpha and beta components versus a single integrated portfolio.

### **Q: What are some of the particular challenges in implementing a beta component based in the bond markets, and what are some ideas for tackling those challenges?**

**A:** Compared to the wide variety of liquid equity index derivatives, there are fewer liquid or low-cost options for bond market indexes. Historically, the total return swap market has

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not offered reliable, low-cost replication of broad multi-sector bond indexes; nor is there a liquid futures contract on a broad multi-sector index. Investors wishing to be long, for instance, the Barclays Capital Aggregate Index via total return swaps face challenges in obtaining the precise index return at a low cost, in large part because broad market bond indexes contain an enormous quantity of securities (e.g., approximately 9,000 bonds in the Barclays Aggregate).

Innovative approaches can facilitate synthetic (approximate) replication of broad bond indexes using forward-settling liquid instruments and liquid derivatives. Such approaches aim to provide meaningful cost savings relative to expensive total return swap index replication, avoid reliance on any single counterparty for the derivatives-based exposure, and deliver modest performance improvements at the same time.

At PIMCO, we recognized many years ago the merit in using derivatives as part of active bond portfolio management. Fixed income derivatives are often more liquid than the underlying bonds, and in many cases offer opportunities to generate a higher return. Investors seeking to replicate fixed income indexes synthetically (with minimal to moderate cash outlays) can utilize a derivatives-based replication portfolio designed to closely track the return of a broad fixed income index. For managers such as PIMCO, this may be a natural extension of efforts in core-plus bond accounts.

### **Q: Should bonds also play a role in the alpha component of the strategy?**

**A:** Carefully managed high-quality fixed income strategies may be an excellent alpha source when paired with higher-risk market exposures (equities, commodities, etc.). The generally low correlation of high-quality fixed income assets to higher-risk assets may result in risk-reducing diversification. Higher-quality, diversified fixed income strategies may also help preserve capital, offer liquidity and provide potential structural return. Finally, high-quality fixed income yields outside of the Treasury sector remain at elevated levels by most measures, a reflection of the flight to quality during a period of market stress.

Unlike equities and other investments, bonds have the structural benefit of eventually returning the capital invested (at par value) unless defaults occur. Therefore, yield tends to be a reasonable indicator of return over longer periods of time for high-quality fixed income investments. While the shape of the yield curve and yield spreads relative to money market instruments may vary over time, the end result is higher potential returns relative to money market rates across most market environments.

### **Q: Along with many investment strategies, portable alpha struggled in the tremendous market turmoil of 2008. Why is portable alpha still a compelling strategy?**

**A:** Portable alpha strategies were severely tested in 2008, especially those that employed lower-quality, less liquid and/or leveraged investment strategies in the alpha portfolio. A vicious cycle of declining markets and asset prices, beta-related margin calls, forced sales of the most liquid instruments and increased concentration of less liquid assets in the alpha portfolio proved challenging for all and disastrous for some portable alpha strategies. Although most portable alpha approaches probably underperformed in September–November 2008, possibly resulting in underperformance for the entire

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calendar year, the potential long-term value of the concept is still very much alive and well – and perhaps stronger than ever in some cases and approaches.

Looking forward, investors are likely to demand transparency in terms of both the risk exposures in the alpha strategy and the collective portable alpha approach – and will likely invest only in strategies where they have a good understanding of the combined risk exposure, the associated investment rationale and also the downside risk over their investment horizons. Some portable alpha approaches may disappear; others are likely to thrive. Successful approaches require several key features:

- In the beta (derivatives exposure) component of the strategy, liquidity and cost efficiency are key.
- In the alpha-generating (collateral/cash investments) component, the approach requires liquidity for margin calls, low correlation with the beta exposure, transparent risk exposures and long-term capital preservation characteristics.
- In terms of strategy implementation, skill and infrastructure are required to effectively manage derivatives and liquidity in addition to providing consolidated risk management, monitoring and reporting.

Approaches that meet these criteria may provide powerful potential return enhancement and diversification benefits to long-term investors in the coming years, particularly those in investment grade fixed income–based collateral alpha strategies, thanks to the current elevated level of yield premiums available from some very high-quality fixed income assets.

Portable alpha management is alive and well at PIMCO, and today's market environment presents a unique opportunity for above-average outperformance. We would suggest contacting your PIMCO representative if you have any questions or would like additional information.

**Thank you both for your time.**

### About the authors:

**Sabrina Callin**, CFA, is a managing director in the Newport Beach office, a member of PIMCO's alternative investment solutions team and a product manager for global portable alpha–based equity and unconstrained bond strategies. Prior to joining PIMCO in 1998, she was a manager in the assurance and business advisory services group at KPMG Peat Marwick. She has 17 years of investment experience and holds an MBA from Stanford University Graduate School of Business. She received undergraduate degrees from Texas Christian University and is also a certified public accountant.

**Steve Jones**, CFA, is a vice president and product manager for PIMCO's portable alpha–based equity strategies in the Newport Beach office. He was previously on the short-term portfolio management team and also held positions in account management. Prior to joining PIMCO in 2000, he was an analyst at Collins Associates, a fund-of-funds investment management firm. He has 11 years of investment experience and holds an MBA from the Paul Merage School of Business at the University of California, Irvine. He received his undergraduate degree from the University of California, Riverside.

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**Past performance is not a guarantee or a reliable indicator of future results.** Investing in the bond market is subject to certain risks including market, interest-rate, issuer, credit, and inflation risk; investments may be worth more or less than the original cost when redeemed. U.S. Government securities are backed by the full faith of the government; portfolios that invest in them are not guaranteed and will fluctuate in value. Commodities contain heightened risk including market, political, regulatory, and natural conditions, and may not be suitable for all investors. Equities may decline in value due to both real and perceived general market, economic, and industry conditions. Derivatives may involve certain costs and risks such as liquidity, interest rate, market, credit, management and the risk that a position could not be closed when most advantageous. Investing in derivatives could lose more than the amount invested. Swaps are a type of privately negotiated derivative; there is no central exchange or market for swap transactions and therefore they are less liquid than exchange-traded instruments.

Alpha is a measure of performance on a risk-adjusted basis calculated by comparing the volatility (price risk) of a portfolio versus its risk-adjusted performance to a benchmark index; the excess return (positive or negative) relative to the benchmark is alpha. Beta is a measure of price sensitivity to market movements. Market beta is 1. Correlation is a statistical measure of how two securities move in relation to each other.

Barclays Capital U.S. Aggregate Index represents securities that are SEC-registered, taxable, and dollar denominated. The index covers the U.S. investment grade fixed rate bond market, with index components for government and corporate securities, mortgage pass-through securities, and asset-backed securities. These major sectors are subdivided into more specific indices that are calculated and reported on a regular basis. Prior to November 1, 2008, this index was published by Lehman Brothers. LIBOR (London Interbank Offered Rate) is the rate banks charge each other for short-term Eurodollar loans. The Standard & Poor's 500 Stock Price Index is an unmanaged market index generally considered representative of the stock market as a whole. The index focuses on the Large-Cap segment of the U.S. equities market. It is not possible to invest directly in an unmanaged index.

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